

โครงการเพื่อขอการสนับสนุนงบประมาณส่งเสริมการจัด Virtual Visiting Professor

Visiting Professor for Data sciences, Engineering and Technology

ประจำปีงบประมาณ ๒๕๖๔

ข้อมูลของอาจารย์ผู้ประสานงาน

ดร. อธิพล จีระพันธ์

สาขาวิทยาศาสตร์กายภาพ คณะวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์ วิทยาเขตหาดใหญ่

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ติดต่อ

ศูนย์วิจัยความเป็นเลิศด้านการวิเคราะห์สารปริมาณน้อยและไบโอเซนเซอร์

คณะวิทยาศาสตร์ มหาวิทยาลัยสงขลานครินทร์ ตำบล คอหงส์ อำเภอ หาดใหญ่ จังหวัด สงขลา 90110

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ข้อมูลของอาจารย์ชาวต่างชาติ (Information of the visiting professor)

Arben Merkoçi

Professor

Citations over 26,900

h-index 86

Nanobioelectronics & Biosensors Group, Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC, BIST, Campus UAB, 08193, Bellaterra, Barcelona, Spain

ICREA, Institució Catalana de Recerca i Estudis Avançats, Barcelona, Spain

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<https://icn2.cat/en/nanobioelectronics-and-biosensors-group>

Brief Biosketch

ICREA Research Professor and leader of the ICN2 Nanobioelectronics and Biosensors Group, Arben Merkoçi obtained his PhD at the University of Tirana (Albania) in ion selective electrodes. Since 1992 he has carried out research as postdoctoral fellow and research professor at the Polytechnic University of Budapest (Hungary), University of Ioannina (Greece), Università degli Studi di Padova (Italy), Universitat Politècnica de Catalunya, Universitat Autònoma de Barcelona and New Mexico State University (USA). His research is focused on the integration of biological molecules and other species with micro- and nanostructures of interest in the design of novel (bio)sensors.

Prof. Merkoçi is Co-Editor in Chief of Biosensors and Bioelectronics, the principal international journal devoted to research, design development and application of biosensors and bioelectronics, member of editorial board of Electroanalysis, Microchimica Acta and other journals.

Prof. Merkoçi has published 319 articles (H-index / citations: Google Scholar 84 / 23977; WOS 70 / 17682) and supervised 35 PhD theses. He is also involved in teaching PhD courses in the field of nanomaterial-based biosensors in several Spanish and international centres.

He has been a member of the commission for establishing the new Nanoscience and Nanotechnology undergraduate academic curriculum at the UAB, the first one in Spain, which started during the academic year 2010-2011. He is a member of the Academics Working Group of BIST and coordinator of the Nanodiagnostics module of the Nanotechnology Master at the UAB.

He has got several national and international grants related to nanomaterials application in biosensors and his group is collaborating with several worldwide leading labs in the field of nanobiosensors.

Prof. Merkoçi serves also as scientific evaluator and member of panels of experts of various international governmental and nongovernmental agencies (EU-FP and EU-ERC panels and other panels in Europe, USA and other countries), as a scientific committee member of many international congresses, director of several workshops and other scientific events and have been invited to give plenary lectures, keynote and invited speeches in more than 200 occasions in various countries. Prof. Merkoçi is the co-founder of two spin-off companies: GraphenicaLab, devoted to graphene patterning, and PaperDrop, dedicated to clinical diagnostics.

The Curriculum Vitae (CV) and lists of publications can be found in.

<https://scholar.google.es/citations?user=hF6hPeIAAAAJ&hl=en>

<https://icn2.cat/en/nanobioelectronics-and-biosensors-group?publications>

Expertise Areas:

Engineering and Technology; biosensors and bioelectronics; Nanobiosensors; Nanomaterial-based (bio)sensors; Nanomotors; Lateral flow; analysis; (nano)paper-based sensors; Applications in diagnostics, environmental monitoring or safety and security

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แผนการดำเนินงาน (Plans of Activities)

1. การบรรยายพิเศษ และกิจกรรมหารือทางการวิจัย (A Special Lecture and Research Discussion)

1.1. ชื่อวิชาและข้อมูลวิชา (Subject)

324-544 (Chemical sensors and biosensors)

1.2. เนื้อหาหลัก (Topics)

MICROBiome-based biomarkers to PREDICT decompensation of liver cirrhosis and treatment response and printed electronics research infrastructure

1.3. เนื้อหาย่อ (Abstract)

The healthcare big data including medical history, Physician reports, prescription, parents and family historical diseases, laboratories, and scan reports can help in disease detection and prediction process. The discussion also presents how current technologies can be used to employ streaming data and biosensors for healthcare applications. Big medical data analysis is a big area of research, and the discussion shows some advanced analysis impact on disease detection and predictions.

Biosensors are defined as analytical devices incorporating a biological material, a biologically derived material or a biomimic intimately associated with or integrated within a physicochemical transducer or transducing microsystem, which may be optical, electrochemical, thermometric, piezoelectric, magnetic or micromechanical. Biosensors & Bioelectronics is the principal international journal devoted to research, design, development and application of biosensors and bioelectronics. It is an interdisciplinary journal serving professionals with an interest in the exploitation of biological materials and designs in novel diagnostic and electronic devices including sensors, DNA chips, electronic noses, lab-on-a-chip and μ -TAS. Biosensors usually yield a digital electronic signal which is proportional to the concentration of a specific analyte or group of analytes. While the

signal may in principle be continuous, devices can be configured to yield single measurements to meet specific market requirements. Examples of Biosensors include immunosensors, enzyme-based biosensors, organism- and whole cell-based biosensors. They have been applied to a wide variety of analytical problems including uses in medicine, biomedical research, drug discovery, the environment, food, process industries, security and defence. The design and study of molecular and supramolecular structures with molecular biorecognition and biomimetic properties for use in analytical devices is also included within the scope of the journal. Here the focus is on the complementary intersection between molecular recognition, nanotechnology, molecular imprinting and supramolecular chemistry to improve the analytical performance and robustness of devices.

The emerging field of Bioelectronics seeks to exploit biology in conjunction with electronics in a wider context encompassing, for example, biological fuel cells, bionics and biomaterials for information processing, information storage, electronic components and actuators. A key aspect is the interface between biological materials and micro- and nano-electronics.

คำสำคัญ (Keywords): Data; Engineering; Sensing Technology; Data for Biomedicine; Biosensors and Bioelectronics; Analysis

1.4. วันและเวลา (Date and Time)

We plan to organize a class (special lecture) and a meeting on August 15, 2022 – September 30, 2022.

1.5. ผู้เข้าร่วม (Expected Participants)

1.5.1. Students in PSU

1.5.2. Members of Center of Excellence for Trace Analysis and Biosensor, Thailand

1.5.3. Broad audience

1.6. สถานที่จัด (Location)

Online Only/TBD

1.7. ผลลัพธ์ที่คาดหวัง (Expected Outputs)

This visiting-professor project has 5 specific aims:

- 1.7.1.To introduce students and participants to the range of research methods, analytical approaches, and emerging technology
- 1.7.2.To deepen students' and participants' understanding of principles of electrochemical and biomedical data, sensing technology, and engineering devices
- 1.7.3.To help students and participants learn how to develop good questions and choose methods to tackle research challenges.
- 1.7.4.To encourage the development of critical thinking, experimental observation, and literature review skills.
- 1.7.5.It also opens opportunities to collaborate with Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC, BIST, Campus UAB, 08193, Bellaterra, Barcelona and ICREA, Institució Catalana de Recerca I Estudis Avançats, Barcelona, Spain. This will be beneficial for our PSU. We expect to have a joint journal publication resulting from the collaboration.

ARBEN MERKOÇI Ph.D.

ICREA Research Professor & Group Leader

Nanobioelectronics & Biosensors Group

*Catalan Institute of Nanoscience**and Nanotechnology (ICN2)**Campus de la UAB**08193 Bellaterra (Barcelona)**Spain & CIN2 (ICN-CSIC)*

Barcelona, Catalonia, Spain

www.icn2.catwww.nanobiosensors.orgE-mail: arben.merkoci@icn2.catTel: +34937374604 (Office) +34937372648 (Secretary)

**Mailing address:**

Edifici ICN2, Campus UAB - 08193 Bellaterra (Barcelona) Spain

Born: 14.06.1961 Tirana (Albania)**NATIONALITY:** Spanish **DNI:** 46874595 C

Given for exceptional scientific merits by Spanish government on August 2001.

(See: Press conference report of the minister spokesman of the government, Mr. Pío Cabanillas, after the meeting of the government cabinet <https://www.lamoncloa.gob.es/consejodeministros/ruedas/paginas/2001/r0308010.aspx> in Madrid, August 3, 2001)

Civil Status

Married (to Enkeleda Xhelo Çomo on July 19, 1987) and two sons (Florind, born on 1988 and Silver on 1995).

HIGHLIGHTS OF QUALIFICATIONS

- HI (Web of science): 51; HI (Google scholar): 61, 15.000 citations (February 2018)
- Editor of "The Nanoscience and Nanotechnology Series". A new encyclopedic series launched by John Wiley & Sons to serve as an international forum for the presentation of comprehensive nanoscience principles, nanotechnology tools, nanomaterials, nanobiosensors, nanobiotechnology and nanotechnology applications in the environment, in energy, electronics and computers, including discussion of ethical issues in this frontier science and technology.
- More than 300 referred journal and conference papers, 2 books, 5 book chapters and 6 patents.
- Co-Editor of Special Issue of Lab on a Chip journal on Analytical miniaturization and

nanotechnologies,

- Editor of “Nanobiomaterial Application in Electrochemical Analysis” Special Issue of Electroanalysis on Nanobiomaterials, Wiley InterScience, Volume 19, Issue 7-8, April 2007.
- Editor of “Carbon nanotubes in Chemistry”, Special Issue of Microchimica Acta, 2006
- Co-editor of “Analytical Nanoscience and Nanotechnology”, Special Issue of Contribution to Science, 2005
- Co-Editor of the Book: Electrochemical Sensor Analysis (2007) invited, from Elsevier.
- Guest Editor of the Special Issue of Contribution to Science: Analytical Nanoscience and Nanotechnology in Catalonia”, 2005
- Winner of the Electrochemistry Communications Award 2005, in acknowledgment of high quality papers and the [most cited author in the first 8 years of the Electrochemistry Communications journal](#)
- Member of the commission, nominated by UAB rector, for the creation of Nanoscience and Nanotechnology bachelor studies at Autonomous University of Barcelona (UAB) (From April 2008)
- 20 PhD students already supervised or in supervision process along with more than 10 supervised masters thesis
- Assistant editor of Electroanalysis journal (2002) and reviewer of 14 international journals including Nature journals, ACS Journals, Elsevier journals etc.
- Evaluator of FP6, FP7, H2020 European Projects (IST-NMP3: Information Society Technology and Nanotechnology for health and diagnostics biosensors, NMP projects)
- Director of postgraduate course: “Nanociencia y Nanotecnología: herramientas, materiales y aplicaciones”. Organized by PhD School of UAB.
- IAAM Medal 2011 awarded in recognition of outstanding and notable contribution in the field of Nanomaterials and Nanotechnology. The medal was presented by Prof. Hisatoshi Kobayashi, President of International Association of Advanced Materials (IAAM), at the opening ceremony of the International Conference on Nanomaterials and Nanotechnology (ICNANO-2011) held on 19th Dec. 2011 at the University of Delhi, India.
- The Nano Award-2013 for notable and outstanding research in the field of nanoscience and nanotechnology. Given during the opening ceremony of the Advanced Materials World Congress held on September 2013, in Çesame, Turkey.
- Rudolf Zahradník Award Lecture from the Regional Centre of Advanced Technologies and Materials (RCPTM), Palacký University, Olomouc, Czech Republic, December 14th, 2016.

PROFESSIONAL EXPERIENCE

Sept. 2006 –August 2008, Sept. 2008 - Present
ICREA & INSTITUT CATALA DE NANOTECNOLOGIA
NANOBIOELECTRONICS AND BIOSENSORS GROUP
Campus UAB, Barcelona, Catalonia, Spain

RESEARCH PROFESSOR
GROUP LEADER

The research at Nanobioelectronics & Biosensors Group is focused on the development of state of the art nanomaterials and nanobioelectronics based DNA, protein and cell sensors including lab-on-a-chip for a rapid, low cost and efficient (bio)analysis with interest for diagnostic, food control / safety, security, environmental monitoring and other industries. The developed biodevices are of a great interest for several applications that will significantly improve the quality and security of citizen's life.

MAY 1997 –January 2001; January 2003 – September 2006

GROUP OF SENSORS & BIOSENSORS**DEPARTMENT OF CHEMISTRY, AUTONOMOUS UNIVERSITY OF BARCELONA**

Ramon y Cajal SENIOR SCIENTIST

- Antibodies and DNA biosensors based on labeling with Quantum Dots (QDs) and other nanomaterials including carbon nanotubes.
- Synthesis and characterisation of quantum dots for sensor applications.
- Lab-on-chip technology including nanoparticles and biological molecules
- Carbon nanotube modification and integration into (bio)sensing systems
- Design of automatic FIA biosystems based on magnetic particles
- Development of consolidated biocomposite membrane technology for production of potentiometric sensors and biosensors for D-amygdalin, iodide and cyanide
- Graphite-epoxy composite and surface modified electrodes for their application in voltammetric and stripping techniques.
- Development of amperometric hybridization genosensor based on classical dot-blot format. Its application in detection of a novel determinant of β -lactamase resistance in *Staphylococcus aureus*
- Design of screen-printed enzymatic biosensors for pesticide determination in water and food analysis
- Research coordinator of various national and international projects on the development of new sensors and biosensors based on electroanalytical methods including nanotechnologies.
- Co-director of MSc and PhD thesis in the field of sensors and biosensors
- Developed novel theoretical and practical (workshops) PhD courses for electrochemical sensors and biosensors

FEB 2002 – DEC 2002**SENSOCHIP LABORATORY****DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY, NMSU, NEW MEXICO, USA**

RESEARCH SCIENTIST & LABORATORY MANAGER

- Design of novel nanoparticle-based protocols for detecting DNA hybridization. These protocols are based on magnetically-induced solid-state electrochemical stripping detection of metal tags (CdS, PbS, iron core / gold shell and other kind of nanoparticles.) after the 'magnetic' collection of the magnetic-bead/DNA-hybrid/metal-tracer assembly onto a thick-film
- Developed new sensing systems based on carbon nanotubes for their application as detectors of various electrochemical compounds such as hydrogen peroxide, NADH, ascorbic acid etc.
- Developing of new DNA biosensors based on label-free protocols. Study of new materials that can be used as electrodes that improve the DNA electrochemical detection signal and coupling of DNA electrochemical detection to hand held and user-friendly instrumentation.
- Design of new free-mercury electrodes for remote environmental control based on stripping analysis.

JAN 1994 – JAN 1995**POLYTECHNIC UNIVERSITY OF BARCELONA, BARCELONA, SPAIN.**

POSTDOCTORAL RESEARCHER

- Characterisation of di(2-ethylhexyl)thiophosphoric acid by potentiometric titration and capillary zone electrophoresis
- Determination of chloride complex of Au(III) by capillary zone electrophoresis with direct UV detection
- Comparison of chromium speciation by CZE and ion exchange followed by AAS

APR 1993 – OCT 1994

DIPARTIMENTO DI CHIMICA ANALITICA ED INORGANICA, UNIVERSITA DEGLI STUDI DI PADOVA, ITALY

POSTDOCTORAL FELLOW, CHEMISTRY

- Developed modern computational methods, supported by graphical means, for processing analytical data obtained with electrochemical techniques. The undertaken research and the gained expertise in developing theory, programming related software and applying them in automated instrumentation are of great relevance for the research in Analytical Chemistry
- Studied new electrochemical techniques based on stripping methods with chemically modified electrodes. This represents a modern approach to dynamic electrochemical measurements and includes acceleration of electron-transfer kinetics, preferential accumulation of analytes at the electrode, and selective membrane permeation.

OCT 1992, JAN-MAR 1993

DEPARTMENT OF CHEMISTRY, UNIVERSITY OF IOANNINA, GREECE

POSTDOCTORAL FELLOW, CHEMISTRY

- Research in the kinetic and mechanistic study of complexation phenomena through the use of electrochemical sensors (Supervision of Prof. M. Karayanis)

JUN 1992

DEPARTMENT OF CHEMISTRY, POLYTECHNICAL UNIVERSITY OF BUDAPEST, BUDAPEST, HUNGARY

POSTDOCTORAL FELLOW, CHEMISTRY

- Developed copper ion-selective-electrodes for FIA systems and PVC based ammonium ion-selective electrodes under the supervision of Prof. E. Pungor and Prof. C.Toth

MAY 86 – MAR 1997

DEPARTMENT OF ANALYTICAL CHEMISTRY, UNIVERSITY OF TIRANA, ALBANIA

LECTURER & SCIENTIFIC RESEARCHER

- Co-director of 1 PhD thesis and 8 projects in the field of electroanalytical methods of analysis.
- Developed a new theoretical and practical postgraduate course on electroanalytical methods of analysis
- Lecturer of general analytical chemistry and instrumental methods of analysis. Taught laboratory analytical chemistry
- Developed copper ion selective electrode (Cu-ISE) based on solid state electroactive salts. Application of Cu-ISE in monitoring of samples with environmental interest
- Study of the application of calcium, sodium, potassium and ammonium ion selective electrodes in blood and other physiological samples with interest in clinical analysis. Comparison studies between ISE determinations and the results obtained by Atomic Absorption Spectroscopy (AAS)
- Study of sodium, potassium and chloride determination in soil samples and comparison studies with AAS and other methods.
- Study on the application of potentiometric methods as well as voltammetric stripping techniques for environmental monitoring of acid rains.

EDUCATION

Feb.02-Dec.02	New Mexico State University, NM, Las Cruces, USA, Postdoctoral Fellow , Nanobiochemistry
Jan 94 - Jan 95	Polytechnic University of Barcelona (Spain) Postdoctoral Fellow (Generalitat de Catalunya), Chemistry
Apr 93 - Oct 94	Universita degli Studi di Padova (Italy) Postdoctoral Fellow , Chemistry.
Sep 92 – Mar 93	University of Ioannina (Greece) Postdoctoral Fellow , Chemistry.
Aug 86 - Oct 91	Ph.D. in Chemistry , University of Tirana (16.09.1991), Spanish Equivalency received by Ministerio de Educación Cultura y Deporte, Secretaria General Técnica, Subdirección General de Títulos, Convalidaciones y Homologaciones of Spain (Delivered in Madrid on 16.11.2000)
Sept 81 - Aug 86	B. Sc. degree in Industrial Chemistry , University of Tirana, Albania. Spanish Equivalency received by Ministerio de Educación Cultura y Deporte, Secretaria General Técnica, Subdirección General de Títulos, Convalidaciones y Homologaciones of Spain (Delivered in Madrid on 15.11.2000)

SPANISH (ANECA) & CATALAN (AQU) RESEARCH ACCREDITATIONS

- Acreditació de recerca avançada, AQU, 2005
- Acreditació de recerca, AQU, 2004
- Profesor contractat doctor, ANECA, 2003
- Profesor contractat lector, AQU, 2003
- Profesor contractat colaborador, AQU, 2003

AWARDS AND HONORS

- Member of the Academy of Science of Albania, 2008.
- Winner of the Electrochemistry Communications Award 2005, in acknowledgment of high quality and best cited paper: "Low-potential stable NADH detection at carbon-nanotube modified glassy carbon electrodes, Electrochemistry Communication, 4 743-746 (2002) and [the most cited author in the first 8 years of the Electrochemistry Communications journal](#).
- [Top Referee 2006 – Biosensors and Bioelectronics](#). Selected by the Publisher of Analytical Chemistry, Electrochemistry and Sensors of ELSEVIER.
- Member of Catalan Society of Chemistry, 1998
- Member of New York Academy of Science, 1996
- Member of American Electrochemical Society, 1996
- Member of International Society of Electrochemistry
- Ministry of Science and Education of Spain visiting Professor Scholarships, 2001, 2002, 2003.
- Generalitat of Catalunya Visiting Professor Scholarship, December 2000-December 2001.
- Generalitat of Catalunya postdoctoral Scholarship, January 1995-January 1996
- University of Padova Scholarship, given on the base of competition between researchers of East European Countries and Austria, April 1993-October 1994.
- Hungarian Academy of Sciences Scholarship (by special recommendation of Prof. Pungor), and University of Ioannina (Greece) Scholarship during 1992 – 1993

- IAAM Medal 2011 awarded in recognition of outstanding and notable contribution in the field of Nanomaterials and Nanotechnology. The medal was presented by Prof. Hisatoshi Kobayashi, President of International Association of Advanced Materials (IAAM), at the opening ceremony of the International Conference on Nanomaterials and Nanotechnology (ICNANO-2011) held on 19th Dec. 2011 at the University of Delhi, India.
- Certificate of Appreciation, Presented on december 2011 from ACS Publications in recognition of valuable contribution and dedicated service in the peer review of manuscripts submitted to ACS Journals

RESEARCH GRANTS

- Researcher at Project: Ottimizzazione di tecniche analitiche per studi fondamentali e applicativi: sensori potenziometrici e amperometrici, CNR (Consiglio Nazionale delle Ricerche, Italia) award, (Contract 93.02839. October 1993-October 1995) Principal researcher: Prof. Giorgio Bombi, full professor of Analytical Chemistry, University of Padova, Italy
- Researcher at Project: Ottimizzazione di tecniche analitiche per studi fondamentali e applicativi: sensori potenziometrici e amperometrici, CNR (Consiglio Nazionale delle Ricerche, Italia) award, (Contract 93.01534. October 1994-October 1996) Principal Researcher: Prof. Giorgio Bombi, full professor of Analytical Chemistry, University of Padova, Italy
- Researcher at Project: Rilevamento e distribuzione di tracce in matrici ambientali, National Research Project: "Environmental Chemistry", CNR (Consiglio Nazionale delle Ricerche, Italia) award, October 1994-October 1996) Principal Researcher: Prof. Mario Fiorani, full professor of Analytical Chemistry, University of Padova, Italy
- Researcher at: "Desarrollo de biosensores de afinidad y bioinstrumentación analítica basada en especies inmunológicas y ácidos nucleicos, para su aplicación en análisis clínicos, ambientales y alimentarios", Comisión interministerial de ciencia y tecnología. programa de biotecnología, MEC, Madrid, Spain, Project Bio-99-0751, 1999-2002, Principal Researcher: Esteve Fàbregas.
- Researcher at: "Bioinstrumentación avanzada: biosistemas analíticos integrados, biosensores y sensores biomiméticos aplicados a los campos medioambiental y alimentario", Award from Dirección general de investigación. ministerio de ciencia y tecnología, Madrid, Project Bio2000-0681-C02-01, 2000-2003, Principal Researcher, Prof. Salvador Alegret
- Researcher at: "Cooperación en la formación continua de profesionales de filipinas en el campo de las ciencias experimentales", Awarded from: Agencia española de cooperación internacional, Madrid (2000-01), 2000-2001, Principal Researcher, Salvador Alegret.
- Researcher at: "Characterization of DNA-Linked Nanoparticle Networks", Awarded from: The National Institutes of Health, USA National Science Foundation, Grant No. R01 14549-02, Grant No. CHE-0209707, Principal Researcher: Prof. J. Wang. New Mexico State University, USA
- Researcher at: "Electrochemical DNA hybridization assay", Awarded from: The National Institutes of Health, USA Army Medical Research, Grant No. R01 14549-02, Award No. DAMD 17-00-1-0366; 2001-2004, Principal Researcher: Prof. J.Wang. New Mexico State University, USA
- Researcher at [Real-Time Electrochemical Monitoring of Nitroaromatic Explosive in Marine Environments](#). Work supported by the Navy (Grant number N00014-03-1-0480). Principal Researcher: Prof. J.Wang. New Mexico State University, USA
- Robust chemical sensors and biosensors for rapid on-line identification on freshly collected milk (ROSEFROMILK). European Commission. Directorate E - Life Science. Quality of life and Management Resources Contract No. QLK1-CT-2001-01617. Università degli Studi Tor

Vergata Italy) (coordinator). ENEA (Italy), University of the West of England (UK), Universitat Autònoma de Barcelona (Spain) (Team leader: S.Alegret), Queen Mary and Westfield College (UK), Parmalat (Italy), Siloe Research Institute (UK). 2001-2003 (<http://www.uniroma2.it/dipartim/BEAT/ita/rosepromilk2.htm>)

- Researcher AIASYB: Aplicaciones de la Inteligencia Artificial en los Sensores y Biosensores, Red Tematica Docente, Programa de Cooperación Universitaria con Iberoamérica. Agencia Española de Cooperacion Internacional (AECI). 2003- 2005. Coordinador: Manuel del Valle
- **Principal researcher** at “Simultaneous detection of multiple DNA targets on paramagnetic beads packed in microfluidic channels using quantum dots as electrical tracers , Euroropean Community. Programme: Structuring the European Research Area” - Call identifier: FP6-2002-Mobility-5, 2004-2005. (97.000 Euro)
- **Principal researcher** at “Desarrollo de nuevas bionanoestructuras inteligentes para biosensores moleculares de interes medioambiente, Fundación Ramón Areces, XIII Concurso nacional para la adjudicación de ayudas a la investigación científica y técnica. 2004-2007 (82.000 Euro)
- **Principal researcher** at “Los Quantum Dots modificados biologicamente como bionanoestructuras inteligentes para el desarrollo de nuevos sistemas de detección incluyendo su integracion en un lab-on-a-chip (MEC, MAT2004-05164) (10.000 Euro)
- **Principal researcher** at “Ayuda preparacion propuesta UE: "Design of smart nanobiostructures based on quantum dots and other nanostructured surface materials for DNA and immunoanalytical systems (MEC, BIO2004-0131-E) (5.000 Euro)
- **Principal researcher** at “Nanoparticulas modificadas para analisis proteomico rapido basado en inmunoensayos con tecnologias de codificacion electroquimica multiplex y lab-on-a-chip” (MEC, MAT2005-03553/) (159.460 Euro).
- **Principal researcher** at “[WATER RISK MANAGEMENT IN EUROPE](#)”. Project Acronym: WARMER, Project Reference:FP6-034472-2005-IST-5, Contract Type: Specific Targeted Research, Project (STREP), Start Date: 01/09/2006, Duration: 36 months, End Date: 31/08/2009, Project Cost: 2,449,674 €, Project Funding: 1,826,000 €. Coordinator: Dr. Luca Sanfilippo, Systems Technology Advance Srl, SYSTEA, Italy.
- **Principal researcher** (Group leader) at “NANOTECHNOLOGIES IN BIOMEDICINE”, CONSOLIDER-INGENIO 2010 (Proyecto CSD2006-00012, CONVOCATORIA 2006), COORDINATOR: Manuel Ricardo Ibarra García, Nanoscience Institute of Aragon, Spain.
- **Principal Researcher** “Desarrollo de nuevas alternativas de detección basadas en nanomateriales como plataformas universales y emergentes de interés para biosensores.”, (: Ministerio de Ciencia e Innovación, MAT2008-03079), 242.000 €, (from 01/01/2009 to 31/12/2011)
- **Principal Researcher** Suport a Grups de Recerca (SGR) reconeguts per la Generalitat de Catalunya (grup emergent); Reference: 2009 SGR 076 Funded by: AGAUR (Generalitat de Catalunya) Period: 01/01/2009-31/12/2013
- **Principal Researcher** “Sistema de diagnòstic precoç càncer de mama”, (CIDEM, VALTEC08-1-0007), 76.797 € (from March 2009-February 2010)
- **Principal Researcher** “Multifunctional water treatment system based on ultrasensitive detection and purification nanoplatforms for removal of environmental pollutants”, (MICINN, Spain-Japan collaboration project, PLE2009-0050), 40.000 €, November 2009-October 2012).
- **Principal Researcher** “Nanobiosensores para marcadores tumorales”, (MICINN, Spain-Italy collaboration project, IT2009-0092), 10.000€, (from 1.01.2010 to 31.12.2011)
- **Principal Researcher** “Evaluación del Zn y sustratos bloqueantes de la adhesión microbiana intestinal en la alimentación del lechón postdestete. (ZINBLOC; Ref. AGL2009-0732)”, MICINN (Subcontracted by UAB). 12.000€, (from 1.11.2010 to 30.04.2011)

- **Principal Researcher** “Nanosystems for early Diagnosis of Neurodegenerative Diseases, (NADINE; Reference: 246513)”, FP7 Proposal for a Cooperation Project , NMP-2009-4.0-3, Development of nanotechnology-based systems for molecular diagnostics and imaging. (651.253,44€) (01/09/2010-31/08/2015)
- **Principal Researcher** “Evaluation of the calcium-sensing receptor as a novel candidate tumor suppressor gene and therapeutic target in neuroblastic tumors”, CELLEX Foundation. (100.946,00€) (01/01/2011 - 31/12/2013).
- **Principal Researcher** “Nanoparticle-based Sensors for Detection of Chemical and Biological Threats. (SfP 983807)”, NATO. (115.000€) (22/06/2010 - 21/06/2013).
- **Principal Researcher** “Multifunctional Nanoplatfroms For High Sensitive Pollution Control and Purification of Water”, MICINN, Reference: PIB2010JP-00278 (180.000€) (01/01/2011 - 31/12/2013).
- **Principal Researcher** “Desenvolupament d'un biosensor electroquímic basat en nanopartícules per la detecció ràpida i senzilla de seqüències de DNA.”, subcontracted by VETGENOMICS spin-off. (69.960€) (01/12/2010 - 30/11/2013).
- **Principal Researcher** “NANOHEROES - NANOMaterials for Highly on-off Electroswitchable Recognitions capabilities with Outstanding ElectroBioSensing applications” (MAT2011-25870), MICINN. (150.000€) (01/01/2012 - 31/12/2014).
- **Principal Researcher** “Project full title Point of Care Diagnostics for rapid and cheap pathogen detection of companion animals”, Project acronym POC4PETS, Reference: 315653 Funding scheme Research for SMEs, Work program topic FP7-SME-2012-1, (224.704€) Start date 01/09/2012, End date: 31/08/2014
- **Principal Researcher** “Development of Electrochemical Peptide Nanosensors for protein and antibody detection – PEPTIDE NANOSENSORS”; Reference: 294901 Funded by: European Commission Program: FP7-PEOPLE-2011-IRSES (71.424€) Period: 01/05/2012 – 30/04/2015
- **Principal Researcher** “Sensing toxicants in Marine waters makes Sense using biosensors (SMS)”; Reference: 613844 Funded by: European Commission Program: FP7-OCEAN 2013.1 (485.500€) Period: 01/12/2013 – 31/08/2017
- **Principal Researcher** “Nuevas Soluciones basadas en PRINTED ELECTRONICS para la detección de variables físicas y la liberación de compuestos orgánicos”; Reference: TSI-100101-2013-94 Funded by: Ministerio de Industria, Energía y Turismo (44.625€) Period: 2014-2016
- **Principal Researcher** Suport a Grups de Recerca (SGR) reconeguts per la Generalitat de Catalunya (grup consolidat); Reference: 2014 SGR 260 Funded by: AGAUR (Generalitat de Catalunya) (30.100€) Period: 01/01/2014-31/12/2016
- **Principal Researcher** “SMART PRINTED PAPER: Printed Electronics for new paper functionalities”; Reference: RTC-2014-2619-7 Funded by: Ministerio de Economía y Competitividad (96.456€) Period: 01/02/2014-31/12/2016
- **Principal Researcher** “Development of a novel highly sensitive and interference-free endotoxin detection system using new nanobiomaterials and phenomena”; Reference: BIO2013-49464-EXP Funded by: Ministerio de Economía y Competitividad (102.850€) Period: 01/09/2014-31/08/2016.
- **Principal Researcher** “Nanobioconjugated paper/plastic platforms for improved diagnostics applications (NAP2DIAGNOSTICS)”, Reference: MAT2014-52485-P, Funded by: MINECO (Spanish Government) Period: 01/01/2015 – 31/12/2017. (157.300€)
- **Principal Researcher** “DEVELOPMENT AND APPLICATION OF NOVEL, INTEGRATED TOOLS FOR MONITORING AND MANAGING CATCHMENTS (INTCATCH)”, Reference: 689341, Funded by: European Commission, Period: 01/06/2016 – 31/01/2020, (523.575 €); Official web site of the project: <http://intcatch.eu/>

- **Principal Researcher/Coordinator of EuroNanoMed II Project:** “Development of a Nanodiagnostic platform for monitoring of Cancer cell secreted proteins (NACANCELL), Reference: PCIN-2016-066 Funded by: MINECO (Spanish Government) Period: 01/11/2016 – 30/10/2019 (130.000€) Partners: Fundació Institut Català de Nanociència i Nanotecnologia, University of Bordeaux-Inserm, Institut de Recerca Pediàtrica – Hospital Sant Joan de Déu, Skannex.
- **Principal Researcher** “Integrated smart cost and effective nanodiagnostics (INCOSTNANO)”, Reference: MAT2017-87202-P, Funded by: MINECO (Spanish Government) Period: 01/01/2018 – 31/12/2021 (60.500€)
- **Principal Researcher** “Graphene Flagship Core Project 2”, Funded by: European Commission, Period: 01/04/2018 – 31/03/2020 (218.000€)
- **Principal Researcher** “MICROBiome-based biomarkers to PREDICT decompensation of liver cirrhosis and treatment response (MICROB-PREDICT), Funded by: European Commission, Period: 01/01/2019 – 31/03/2025 (1.089.400€)

REVIEWER OF INTERNATIONAL JOURNALS

- Journal of American Chemical Society
- Analytical Chemistry
- Angew. Chem. Int. Ed.
- Advanced Materials
- Langmuir
- Journal of Nanoscience and Nanotechnology
- Biosensors and Bioelectronics ([*Selected as one of the Top Referees in 2006*](#))
- Electrochemistry Communication
- Trends in Analytical Chemistry
- Analytical Letters
- Sensors & Actuators
- Microchimica Acta
- Analytical Chimica Acta
- Talanta
- Analytical and Bioanalytical Chemistry
- Electroanalysis
- Analyst
- ACS Nano
- Chemistry - A European Journal

ELECTED MEMBER OF BOARDS

Arben Merkoçi, Member of Photonics21 Board (Board of Stakeholders of the European Technology Platform, Photonics21). Novembre 2018.

Arben Merkoçi, Member of Scientific Board of Regional Centre of Advanced Technologies and Materials (RCPTM), Olomouc, Check Republic, 2018

MEMBER OF NATIONAL & INTERNATIONAL COMMISSIONS FOR PROJECTS EVALUATIONS

- Member of the panel of experts to evaluate scientific projects following calls for proposals under the 6th RTD Framework, Second Joint Call IST-NMP-2 on Bio-sensors for Diagnosis and Healthcare of the European Community
- Member of Expert Evaluators Panel for FP7-NMP-2008-SMALL (1,2,3) appointed by EUROPEAN COMMISSION
- Member of Expert Evaluators Panel for FP7-NMP-2007-LARGE-1 appointed by EUROPEAN COMMISSION
- Ad hoc expert reviewer for the United States Department of Agriculture (USDA)
- Member of the scientific committee in the selection of the BioSTIC projects (CNRS France, 2004)
- Member of the panel of experts to evaluate the Spanish projects of nanotechnology (2004-2005)
- Member of scientific commission for the evaluation of projects of the Fund for Scientific Research-FNRSThe Fund for Scientific Research-FNRS, Belgium (Call for Fellowships, spring 2010).
- Projects evaluation expert for Russian Corporation of Nanotechnologies (RUSNANO) projects (2010).
- Projects evaluation expert for NWO-nano programme -of the Netherlands Organisation for Scientific Research (NWO), Netherland.
- Projects evaluation expert for Israeli ministry of Science
- Projects evaluation expert for Czech Science Foundation.
- Projects evaluation expert for “Consejos Superiores del Fondo Nacional de Desarrollo Científico y Tecnológico (FONDECYT)” Chile (Concurso Nacional de Proyectos FONDECYT Regular 2008).
- Projects evaluation expert for “MINISTERIO DE EDUCACIÓN, CIENCIA Y TECNOLOGIA, Agencia Nacional de Promoción Científica y Tecnológica, Fondo para la Investigación Científica y Tecnológica (FONDECYT), Argentina
- Projects evaluation expert for *Agence Nationale de la Recherche (ANR)*, France
- Projects evaluation expert for Innovation and Technology Commission, Hong Kong
- Projects evaluation expert for Foundation for Polish Science (www.fnfp.org.pl).
- Projects evaluation for “Agencia Andaluza de Evaluación”, Spain.
- Evaluator for “Italian Association for Cancer Research (AIRC) Special Program 2011” (Italy)

MEMBER OF SCIENTIFIC COMMITTEES OF CONGRESSES AND OTHER MEETINGS

- Member of the panel of experts to evaluate the oral and poster presentations of the “The 9th World Multi-Conference on Systemics, Cybernetics and Informatics”, July 10-13, 2005 - Orlando, Florida, USA
- Chairman of the conference session at, Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France
- Member of the scientific committee of the “International workshop: Advances in nucleic acid structure, properties and bioelectrochemistry, Smolenice Castle, Slovakia, June 9 – 14, 2006
- Membre of the scientific committee of the Fourth International Iberoamerican Conference on

Sensors (Ibersensors 2004)

- Member of Program Coordination at: International Symposium on Nanotechnology in Environmental Protection and Pollution ISNEPP 2007, 11-13 December 2007, Florida, USA. (<http://www.isnepp.org/ISNEPP07/front1.htm>)
- Session chair at [Biosensors 2006, The ninth world congress on biosensors, 10-12 May, Toronto, Canada](#). Biosensors 2006, (Toronto).
- [Chair of "Nanomaterials & nanoanalytical systems"](#) section at [10th World Congress on Biosensors, Shanghai, China, May 14-16, 2008](#)
- Member of the [Scientific Commitee of "II Workshop NANOCIENCIA Y NANOTECNOLOGÍA ANALÍTICAS"](#), Tarragona, Spain, 25-26 Sept. 2008
- [Member of Scientific Commitee at XXIV Trobades Científiques de la Mediterrània La Física a les Ciències de la Vida, 6-7 October 2008, Menorca, Spain](#)
- [Member of the organizing commitee of 3rd Annual Meeting of Institute Alb-Shkenca IASH 1-3 September 2008, Tirana, Albania](#)
- [Chair at the 'International Projects' Conference at 3rd Annual Meeting of Institute Alb-Shkenca IASH 1-3 September 2008, Tirana, Albania](#)
- Scientific Coordinator of "[XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS](#)", Centre de Congressos d'Andorra la Vella, Andorra, 18-19 de Septiembre de 2008"
- Member of "Nanotech 2010" Physical Sciences Committee and Nanoparticle Symposia Chair of the 2010 edition of Nanotech, California, USA, June 21-25. (<http://www.techconnectworld.com/Nanotech2010/>)
- Member of the International Advisory Board of 2010 International Symposium of Materials on Regenerative Medicine (2010 ISOMRM) on November 3-5, 2010 in Zhunan, Taiwan, ROC http://2010isomrm.nhri.org.tw/organization_1.asp
- Director of "III International Workshop on Analytical Miniaturization and NANOTEchnologies", WAM-NANO2012, Barcelona, Spain
- A.Merkoçi, Organizing committee of 3rd Bioanalytical Nanotechnology School, 29 January to 1 February 2014 (<http://www.bantschool.org>)
- A.Merkoçi, Member of scientific committee of Elecnano6, Electrochemistry at the nanoscale from basic aspect to applications, May 26th - 28th 2014 in Paris (<http://elecnano.univ-paris-diderot.fr/>)
- A.Merkoçi, Coordinator of 1st WORKSHOP ON NANOBIOSENSORS FOR WATER MONITORING, March 24-26, 2015, ICN2, Bellaterra (Barcelona), Spain
- A.Merkoçi, Co-Coordinator (with Prof. Stephan Roche) of the ICREA WORKSHOP on Graphene Nanobiosensors, May 25-26, 2015 – Barcelona.
- A.Merkoçi, Membre of Organizing &Scientific Committee, Biosensors 2016, 26th Anniversary World Congress on Biosensors, 25-27 May 2016, Gothenburg, Sweden
- A.Merkoçi, Coordinator of ALBNANO 2016, Workshop on NANOTECHNOLOGY AND BIOSENSORS Impact in health, environment, safety and security of Albania, A collaboration event between Albania and Spain, May 29- 31 2016 in Tirana, Albania
- A.Merkoçi, Chairman of International Symposium on Sensor Science (I3S) 2017, Dates: 27 - 29 September 2017, Barcelona, Spain
- A.Merkoçi, Organizer (with Prof. Paul Yager, Univ. of Washington, USA) of the Pre-Congress School on Paper-based (Bio)Sensors, 12 June 2018 | Miami, Florida, USA
- A.Merkoçi, Membre of Scientific Committee, Graphene 2018 Conference, 26 June 2018 - 29

June 2018, Dresden, Germany.

- A.Merkoçi, Organizer, with T.Turner of the Editorial Session: ELSEVIER BIOSENSORS AND BIOELECTRONICS, at Euroanalysis Conference, Istanbul, Turkey, September 4, 2019
- A.Merkoçi, Organizer of the Biosensors Workshop at “International Conference on Smarter Catchment Monitoring, Cleaner waters”, London 6th September 2019

MEMBER OF PhD EVALUATION COMMISSIONS

- The thesis: "New techniques for the fabrication of biosensors based on NAD(P)+ dependent dehydrogenases", by Valeri Pavlov, at Departament d'Enginyeria Química, Universitat de Tarragona (28.01.2005)
- The thesis: "Desenvolupament de biosensors amb enzims oxidoreductases basats en transductors amperomètrics modificats químicament", by Beatriu Prieto Simón, Universitat Autònoma de Barcelona, (21.07.2005)
- The thesis: "Llengües electròniques voltamètriques", by Albert Gutés Regidor, Universitat Autònoma de Barcelona, (31.01.2006)
- The thesis: "Aurotiomolato de sodio como marca electroquímica en la construcción de biosensores", by Alfredo de la Escosura Muñiz, Universidad de Oviedo, (30.06.2006)
- The thesis: "ELECTROCHEMICALLY CONTROLLED PATTERNING FOR BIOSENSOR ARRAYS" by SRUJAN KUMAR DONDAPATI, Universitat de Tarragona, (14.12.2006)
- The thesis: "Diseño de nuevos materiales de afinidad univesal. Aplicación en sensores" by Emanuela Zacco, Universitat Autònoma de Barcelona, (18.12.2006).
- The thesis: "Oligonucleotide based-biosensors for label-free electrochemical protein and dna detection" by Mònica Mir Llorente, Universitat de Tarragona (24.11.2006).
The thesis: "Llengües electròniques automatitzades emprant Anàlisi per Injecció Seqüencial (SIA)", by Montserrat Cortina Puig, Universitat Autònoma de Barcelona, (29.01.2007)
- The thesis: "Microcanales y microchips de electroforesis capilar con detección electroquímica: Diseño, construcción y aplicaciones" By MARIO CASTAÑO ALVAREZ Universidad de Oviedo (7.07.2008).
- The thesis: "Detección de ADN (hibridación y mutaciones) con biosensores" By Laura Garcia Carrascosa, Universidad Autonoma de Madrid, (17.07.2008)
- The thesis "Design of biosensors exploiting proteins and DNA-aptamer as biorecognition Elements", Frank Jeyson Hernández, at Departament d'Enginyeria Química, Universitat de Tarragona (23.10.2008).
- The thesis "Preparación de biosensores enzimáticos e inmunosensores basados en electrodos modificados con nanopartículas de oro" by Verónica Carralero Sanz, Departamento de Química Analítica, Universidad Complutense de Madrid., (31.10.2008)
- The thesis "Biosensors based on carbon nanotube field effect transistors (CNTFETs) for detecting pathogenic microorganisms", A dissertation presented by Raquel Amanda Villamizar Gallardo at Universitat Rovira i Virgili de Tarragona (14.12.2009).
- The thesis "Design of biosensors exploiting conformational changes in biomolecules", by Frank Jeyson Hernández at Universitat Rovira i Virgili de Tarragona (17.12.2009).
- The thesis: "Nanotecnología en Biomedicina: evaluación de la biocompatibilidad de nanoestructuras y su aplicación en el desarrollo de vacunas y biosensores", by Belén Díaz Freitas, Universidad de Vigo (22.12.2009)
- Evaluator of the Master Project "Design of nano-structures for cellular interaction", by Mr.

Johann Osma, Centro de Microelectrónica (CMUA) Universidad de los Andes, 2004

- Member of the Scientific Committee at “NANOTECHNOLOGIES IN BIOMEDICINE”, CONSOLIDER-INGENIO 2010, CONVOCATORIA 2006.
- The thesis “Investigation of a novel electrocatalyst for hydrogen peroxide reduction and its application to sensing and biosensing” by Laura Gonzalez-Macia, Dublin City University, Ireland (Directors: Prof. M.Smith; Prof. A.Killard) (March 2011)
- The thesis: “Nueva estrategia miniaturizadas basadas en inmunoanálisis electroquímico soportado sobre partículas magnéticas para la detección y el control de la micotoxina zearalenona” by Mirian Hervás Yela, Universidad de Alcalá, 19.07.2011 (Director: Dr. A.Escarpa)
- Universidad de Concepción, Dirección de Postgrado, Facultad de Farmacia - Programa de Ciencias Farmacéuticas, “DESARROLLO DE SUPERFICIES ELECTRÓDICAS DE ÚLTIMA GENERACIÓN PARA EL DISEÑO DE BIOSENSORES ELECTROQUÍMICOS NANOESTRUCTURADOS PARA LA DETERMINACIÓN DE MOLÉCULAS BIOACTIVAS DE RELEVANCIA ACTUAL EN EL ÁREA FARMACÉUTICA Y CLÍNICA” by RODOLFO ANDRÉS MUNDACA URIBE CONCEPCIÓN-CHILE, November 2012
- The thesis: “Autonomous voltammetric and potentiometric sensors: toward long-term monitoring of sulphur biogeochemical dynamics at redox-interfaces” THESE DE DOCTORAT DE L'UNIVERSITE PIERRE ET MARIE CURIE, Spécialité Science de l'Environnement (ED 129) by M. Leonardo Contreira Pereira, Laboratoire d'Ecogéochimie des Environnements Benthiques CNRS UPMC UMR8222 (LECOB), 4/12/12, à Banyuls sur mer, France
- Opponent of the PhD thesis of Onur Parlak (Prof. A.Turner's PhD student), Biosensors Centre, Linköping University, Sweden, Sept. 2015.

MEMBER OF EDITORIAL ADVISORY BOARDS

- Member of the Editorial Advisory Board of the The Open Analytical Chemistry Journal (<http://www.bentham.org/open/toacj/EBM.htm>)
- Member of the Editorial Advisory Board of the Recent Patents on Electrical Engineering (<http://bentham.org/eeng/>)
- Member of the Editorial Advisory Board of the The Open Process Chemistry Journal <http://www.bentham.org/open/tocpj/EBM.htm>
- Member of Advisory Editorial Board of Microchimica Acta, An International Journal on Micro and Trace Chemistry, Springer Wien. <http://www.springer.com/springerwiennewyork/chemistry/journal/604?detailsPage=editorialBoard>
- Member of the Editorial Advisory Board of the journal Cancer Nanotechnology, Translational and Clinical Research, ISSN: 1868-6958 (print version), Journal no. 12645, Springer Wien (<http://www.springer.com/springerwiennewyork/chemistry/journal/12645?detailsPage=editorialBoard>)
- Associate Editor of Nano-bio-analysis (<http://www.nwpii.com/nba/editors.htm>)

MEMBER OF UNIVERSITY PROGRAMME STUDIES COMMISSION

- Member of the commission, nominated by UAB rector, for the creation of Nanoscience and Nanotechnology bachelor studies at Autonomous University of Barcelona (UAB) (From April 2008)

THEORETICAL COURSES, SEMINARIES AND WORKSHOPS ORGANIZED IN VARIOUS UNIVERSITIES & RESEARCH CENTERS

- Electrochemical sensors & biosensors (PhD program in biotechnology), S.Alegret, A.Merkoçi, Universidad Técnica Federico Santa Maria, Universidad Católica de Valparaíso, Chile, November 1999
- Design, construction and evaluation of electrochemical Sensors & Biosensors. Theoretical & Practical course, S.Alegret, A.Merkoçi, Centro de Investigación y de estudios avanzados del I.P.N. , Mexico, D.F., México, 19-23 Jun 2000
- [Seminar/Workshop on Electrochemical Sensors for environmental, Biomedical and Industrial Measurements](#), S.Alegret, F.Sevilla, A.Merkoçi, J.Bergantin, University of Santo Tomas, Manila, Philipines, 16-20 January 2001
- [Seminar/Workshop on Electrochemical Sensors for environmental, Biomedical and Industrial Measurements](#), S.Alegret, F.Sevilla, A.Merkoçi, J.Bergantin, Aquinas University, Legazpi City, Philipines, 22-26 January 2001
- [Seminar/Workshop on Electrochemical Sensors for environmental, Biomedical and Industrial Measurements](#), S.Alegret, F.Sevilla, A.Merkoçi, J.Bergantin, University of San Agustin, Iloilo City, Philipines, 29 January-2 February 2001
- [Seminar/Workshop on Electrochemical Sensors for environmental, Biomedical and Industrial Measurements](#), S.Alegret, F.Sevilla, A.Merkoçi, J.Bergantin, Holy Trinity College, Puerto Princesa City, Philipines, 5-9 February 2001
- Coordinator of the course "[Nanoscience and Nanotechnology](#)" ([Curso de formación, Escola de postgrau, UAB](#))
- Lecture: [Aplicación de nanomateriales para el diseño de nuevos sensores y biosensores electroquímicos](#)
[Jornada: La Energía nuclear a debate, Nanomateriales semiconductores y magnéticos: Propiedades y aplicaciones](#). 16-18 de Mayo, 2005, Universidad Complutense de Madrid, Spain.
- Coordinator of the workshop "[Nanoparticles for DNA and Immunosensing](#)" organized in Barcelona from January 24-25, 2007 in the framework of [Forum 2007](#) and [Converging Technologies Initiative](#) from the University Autònoma of Barcelona (UAB), Spain .
- [Seminar on Electronic tongues & Nanomaterial-based sensors](#), A.Merkoçi, M. del Valle, 9 June 2007 / 8:30 a.m. – 4:30 p.m. Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philipines.
- "[Nanopartículas para genosensores e inmunosensores eletroquímicos](#)", A.Merkoçi, Nanotecnologías en Biomedicina, Jaca (Huesca), del 9 al 13 de julio de 2007, Organizado por la Universidad de Zaragoza
- Coordinator of the Workshop "[NANOBIOSENSORES PARA APLICACIONES BIOMÉDICAS / NANOBIOSENSORS FOR BIOMEDICAL APPLICATIONS](#)", Organized by [Nanoaracat](#) on 19 y 20 de diciembre de 2007, Hotel Campus Serhs UAB CAMPUS Bellaterra. (Barcelona).
- 213th ECS Meeting, Phoenix, AZ, USA, May 18-22, 2008, Short Course #3 Electrochemical Biosensors Based on Nanomaterials, Arben Merkoci, Instructor. The aim of this course is to show some aspects of the implementation of nanoscience and nanotechnology, in bioanalysis in general, and in biosensors in particular. It will explain several strategies related to the integration of nanomaterials into biosensor systems. This represents one of the hottest topics today in nanotechnology and nanoscience, due to the capacity of nanomaterials to provide special optical or electrical properties, improve stability, and minimize surface fouling of the sensing systems. After participating in this course, researchers interested in biosensors will

learn about the advantages of nanomaterials compared to other conventional materials but also will get inside the response mechanisms related to such improvements.

- “[NANOTECNOLOGÍAS EN BIOMEDICINA Biosensores electroquímicos basados en nanopartículas](#)”, Course “Els Juliolls”, Organized by University of Barcelona & CONSOLIDER Project, 18.07.2008.
- “Nanotubs de Carboni”, [Seminari permanent de física i química curs 2008-09](#), 3^a Sessió, TEMA: NOTECNOLOGIA, 30 de gener de 2009, CDEC Barcelona, <http://www.xtec.net/cdec/>
- “Nanomaterials for Biosensors”, Short Course / Summer School on NANOBIOSSENSORS, Jointly organised by Glasgow University, the Institute of Nanotechnology and Cranfield University, 25 May 2010, Medical School, Glasgow University, Glasgow, UK
- Nanotechnology, nanomaterials and applications in various industries with focusing to biosensors, Postgraduate Theoretical Course (6 hours) as a preliminary activity of “CONGRESO INTERNACIONAL DE DOCENCIA E INVESTIGACIÓN EN QUÍMICA”. Universidad Autónoma Metropolitana Unidad Azcapotzalco, Ciudad de México, Mexico, Oct. 25th, 2010.
- Director of the workshop NANOJASP 2010, Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life, Workshop: SPAIN-JAPAN. Casa de Convalecencia, Barcelona, Novembre 28, 29, 2010
- Lectures “Bioanalytical nanosystems. Building nanoblocks (I). Metal nanoparticles (MNP). Quantum dots. Carbon nanotubes. Applications in electrochemical and optical methods. At ”BIOANALYTICAL NANOTECHNOLOGY SCHOOL, 31 January – 4 February 2011, University of Santo Tomas, Manila, Philipines.
- A.Merkoçi, 3h Lectures: Building nanoblocks (I). Metal nanoparticles (MNP). Quantum dots. Carbon nanotubes. Applications in electrochemical and optical methods, BIOANALYTICAL NANOTECHNOLOGY SCHOOL, Universidad Autónoma Metropolitana, Azcapotzalco, Mexico DF, Mexico, October 1-6, 2011
- A. Merkoçi, Tutorial: NANOBIOSSENSORS BASED ON NANOMATERIALS, THEME 1. General overview on nanomaterials and their application in biosensors; THEME 3. Nanoparticles for electrochemical biosensors. EUROMAT 2013, Seville, Spain, Septembre 8th, 2013
- A.Merkoçi, Lecture 5, Bioanalytical nanosystems. Building nanoblocks (I): Metal nanoparticles; (MNP). Quantum dots. Carbon nanotubes and graphene. Applications in electrochemical and optical methods. Lecture 6. Building nanoblocks (II). Nanochannels, lab-on-a-chip, paper based platforms and nanomotors use in biosensing. 3rd Bioanalytical Nanotechnology School, 29 January to 1 February 2014 (<http://www.bantschool.org>)
- Member of the scientific committee of the sixth edition of Electrochemistry in Nanoscience meeting. PARIS (University Paris Diderot) from May 26th to 28th 2014. Organized by Electrochemistry Group of the French Chemical Society and the electrochemists of the University Paris Diderot (www.elecnano.fr) an ISE-supported meeting.
- Member of the scientific committee of the 24th World Anniversary Congress on Biosensors (), Melbourne, Australia, 27-30 May, 2014. <http://www.biosensors-congress.elsevier.com/conference-committee.html>
- A.Merkoçi, PRECONGRESS COURSE, “Nanotechnology, nanomaterials and applications”, (8 hours), Topics: General considerations on nanotechnology; Main research fields and applications in various industries; Nanomaterials and applications in biosensors: from optical to electrical detection platforms. VI Congreso Internacional de Docencia e Investigación en Química, Universidad Autónoma Metropolitana, Unidad Azcapotzalco, 21 & 22, 2015
- A.Merkoçi, Title of the course "Nanotechnology and nanomaterials-based sensors and applications in diagnostics". Day 1 (2 hours): Nanotechnology and nanomaterials. General introduction. Research topics in nanotechnology. Nanoparticles, general properties and applications; Day 2 (2 hours): Nanomaterials-based electrochemical and optical sensors.

Research and applications; Day 3 (2 hours): Microfluidics, paper/graphene-based sensors and applications. Université Tunis El-Manar, Faculté des Sciences de Tunis, Département de Chimie, Campus Universitaire de Tunis El-Manar, Tunis, Tunisia, May 16-19th, 2016

PATENTS

1 Title registered industrial property: Methods for detecting target DNA sequences

Inventors/authors/obtainers: Laura Altet; Lorena Serrano; Olga Francino; Alfredo de la Escosura-Muñiz; Arben Merkoçi Entity holder of rights: FUNDACION PRIVADA INSTITUT CATALA DE NANOTECNOLOGIA N° of application: EP14382266.6 (ref. P10398EP00) Country of inscription: Spain, Catalonia Date of register: 09/07/2014

2 Title registered industrial property: Method of forming an electronic device on a flexible substrate

Inventors/authors/obtainers: Luis Miguel Baptista Pires; Carmen C. Mayorga; Arben Merkoçi Entity holder of rights: FUNDACION PRIVADA INSTITUT CATALA DE NANOTECNOLOGIA N° of application: P3046EP00 Country of inscription: Spain, Catalonia Date of register: 20/06/2014

3 Title registered industrial property: Sensitive qualitative bioassay using graphene oxide as analyte revealing agent

Inventors/authors/obtainers: Arben Merkoçi; Eden Morales Narváez Entity holder of rights: FUNDACION PRIVADA INSTITUT CATALA DE NANOTECNOLOGIA N° of application: EP 13188693.9 Country of inscription: Spain Date of register: 15/10/2013

4 Title registered industrial property: Method for cell identification and quantification with gold nanoparticles through hydrogen ion reduction

Inventors/authors/obtainers: Arben Merkoçi; Alfredo de la Escosura Muñiz; África González Fernández; Belen Díaz Freitas; Christian Sánchez Espinel Entity holder of rights: FUNDACION PRIVADA INSTITUT CATALA DE NANOTECNOLOGIA N° of application: P200803275 Country of inscription: Spain Date of register: 12/11/2008 Conferral date: 20/05/2010

5 Title registered industrial property: Method for cell identification and quantification with gold nanoparticles through hydrogen ion reduction

Inventors/authors/obtainers: Arben Merkoçi; Alfredo de la Escosura Muñiz; África González Fernández; Belen Díaz Freitas; Christian Sánchez Espinel Entity holder of rights: FUNDACION PRIVADA INSTITUT CATALA DE NANOTECNOLOGIA N° of application: PCT/ES2009/070489 Country of inscription: Spain Date of register: 10/11/2009 Conferral date: 20/05/2010

6. Inventors/authors/obtainers: Arben Merkoçi, Ruslan Alvarez, Jahir Orozco, Title registered industrial property: "A SYSTEM FOR DETECTING AN ANALYTE FROM A SAMPLE IN AN ANALYTICAL TEST SUBSTRATE AND A PORTABLE DEVICE FOR CARRYING OUT SAID DETECTION", European Patent Application P30540EP00, Country of inscription: Spain, Catalonia Date of register: 24/02/2017

PUBLICATIONS

Articles

[1.](#) A.Merkoci, "On the preparation of the copper ion-selective electrode with solid membrane and the determination of its characteristics", *Bulletin of Natural Science* (Albania), 2 37- 42 (1990)

[2.](#) S.Buzo, A.Merkoci, A.Seiti, "Some problems in the determination of potassium concentration by macro ISE adapted for micro volumes"., *Medical Magazine* (Albania), 6 70-74 (1990)

-
- [3.](#) A.Merkoçi, B.Baraj, S.Buzo, "Determination of total and free calcium in serum by a macro measurement ion-selective electrode and a micro reference electrode". *Japanese Journal of Clinical Laboratory Automation*, 17 92-96 (1992)
 - [4.](#) A.Merkoçi, V.Çoçoli, B.Baraj, S.Buzo, " Determination of Ammonium ion in urine using an ammonium ion-selective electrode", *Acta Chimica Hungarica-Models in Chemistry* 130 19-24 (1993)
 - [5.](#) B.Baraj, A.Merkoçi, F.Livardjani, A. Jaeger, M.J.F Leroy, "On the interference of Fe(III) in the spectrophotometric determination of Mn as MnO₄⁻", *Analisis* 22 408-409 (1994)
 - [6.](#) M.I.Karayannis, P.G.Veltsistas, A.Merkoci, "Kinetic and mechanistic study of the oxamate copper (II) complexation, monitored by the Cu(II) ISE", *Electroanalysis*, 7 109-113 (1995)
 - [7.](#) C.Maccà, A.Merkoçi, "Potentiometric characterization of weak acids by multiple sample additions. I. Linear equations and intrinsic performance of the method", *Talanta*, 41 2033-2042 (1994)
 - [8.](#) C.Maccà, A.Merkoçi, "Potentiometric characterization of weak acids by multiple sample additions. II. The effect of chemical interferences and the practical performance of linearization methods", *Talanta*, 42 1433-1445 (1995).
 - [9.](#) B.Baraj, A.Sastre, A.Merkoçi, M.Martinez, "Determination of chloride complex of Au(III) by capillary zone electrophoresis with direct UV detection", *Journal of Chromatography A*, 718 227-232 (1995)
 - [10.](#) A.Sastre, A.Merkoçi, B.Baraj, "Characterisation of di(2-ethylhexyl)thiophosphoric acid by potentiometric titration and capillary zone electrophoresis", *Fresenius Journal of Analytical Chemistry*, 358 489-492 (1997)
 - [11.](#) C.Maccà, M.Bradshaw, A.Merkoçi, G.Scollary, "Stripping potentiometry of lead, cadmium and copper at a Nafion coated glassy carbon electrode with encapsulated mercury acetate", *Analytical Letters*, 30 1223-1234 (1997)
 - [12.](#) A.Merkoçi, E.Fàbregas, S.Alegret, "Consolidated biocomposite membrane technology for production of potentiometric biosensors", *Sensors and Actuators B* 60 97-105 (1999)
 - [13.](#) A.Merkoçi, E.Fàbregas, S.Alegret, "A practical approach to potentiometric biosensors based on consolidated composites. Construction and evaluation of a D-amygdalin biosensor", *The Chemical Educator* 4, 137-140 (1999)
 - [14.](#) A.Merkoçi, S.Braga, E.Fàbregas, S.Alegret, "A potentiometric biosensor for D-amygdalin based on a consolidated biocomposite membrane", *Analytical Chimica Acta* , 391 65-72 (1999)
 - [15.](#) S.Alegret, E.Fàbregas, F.Céspedes, A.Merkoçi, S.Solé, M.Albareda, M.I.Pividori, "The strategy of renewing biosensor surface: past, present and future. A review", *Química Analítica* , 18 (suppl. 1), 23-29 (1999)
 - [16.](#) M.Vasjari, A.Merkoçi, E. Fàbregas, S.Alegret, "Potentiometric characterisation of acid rains using corrected linear plots", *Analytica Chimica Acta* 405 173-178 (2000)
 - [17.](#) M.Vasjari, A.Merkoçi, E. Fàbregas, S.Alegret, "Determination of Pb and Cu by anodic stripping voltammetry using glassy carbon electrodes modified with mercury or mercury nafion films", *Microchimica Acta*, 135 29-33 (2000)
 - [18.](#) M.I.Pividori, A.Merkoçi, S.Alegret, "Electrochemical genosensor design. Immobilization of

oligonucleotides onto transducer surfaces and detection", *Biosensors & Bioelectronics*, 15 291-303 (2000)

[19.](#) M.I.Pividori, A.Merkoçi, S.Alegret, "Classical dot-blot format implemented as an amperometric hybridisation genosensor", *Biosensors & Bioelectronics*, 16 1133-1142 (2001)

[20.](#) M. Albareda, A.Merkoçi and S. Alegret, "Configurations used in the design of screen-printed enzymatic biosensors. A review", *Sensors and Actuators B*, 69 153-163 (2000)

[21.](#) B. Baraj, L. F. Hax Niencheski, J. A. Soares, M. Martinez, A. Merkoçi, "Comparison of chromium speciation by CZE and ion exchange followed by AAS", *Fresenius Journal of Analytical Chemistry*, 367 12-16 (2000)

[22.](#) S.Solé, A.Merkoçi, S.Alegret, "New materials for electrochemical sensing. III. Beads", *Trends in Analytical Chemistry*, 20 102-110 (2001)

[23.](#) M. Albareda-Sirvent, A. Merkoçi and S. Alegret, "Pesticide determination in tap water and juice samples using disposable amperometric biosensors designed by thick-film technology", *Analytica Chimica Acta*, 442 35-44 (2001)

[24.](#) S. Solé, A. Merkoçi and S. Alegret, "Determination of toxic substances based on enzyme inhibition. Part I: Electrochemical biosensors for the determination of pesticides using batch procedures", *Critical Reviews in Analytical Chemistry*, 33(2) 89-126 (2003)

[25.](#) S. Solé, A. Merkoçi and S. Alegret, "Determination of toxic substances based on enzyme inhibition. Part II: Electrochemical biosensors for the determination of pesticides using flow systems", *Critical Reviews in Analytical Chemistry*, 33(2) 127-143 (2003)

[26.](#) M. Albareda-Sirvent, A. Merkoçi and S. Alegret, "Thick-film biosensors for pesticides produced by screen-printing of graphite-epoxy composite and biocomposite pastes", *Sensors and Actuators B*, 79 48-57 (2001)

[27.](#) M.I.Pividori, A.Merkoçi, S.Alegret, "Dot-blot amperometric genosensor for detecting a novel determinant of β -lactamase resistance in *Staphylococcus aureus*", *The Analyst*, 126 1551-1557 (2001)

[28.](#) M. Serradell, S. Izquierdo, L. Moreno, A. Merkoçi, S. Alegret, "A free-mercury PSA of heavy metals using graphite-epoxy composite electrodes", *Electroanalysis*, 14 1281-1287 (2002)

[29.](#) L. Moreno, A. Merkoçi, S. Alegret, Graphite-epoxy composite as an alternative material to design mercury free working electrodes for stripping voltammetry". *Electrochimica Acta*, 48 2599-2605 (2003)

[30.](#) A.Merkoçi, S.Alegret, "New materials for electrochemical sensing. IV. Molecular imprinted polymers", *Trends in Analytical Chemistry*, 21 717-725 (2002)

[31.](#) M.I.Pividori, A.Merkoçi, S.Alegret, "Graphite-epoxy composites as a new transducing material for electrochemical genosensing", *Biosensors & Bioelectronics*, 19, 473-484 (2003)

[32.](#) Joseph Wang, Guodong Liu, Ronen Polsky and Arben Merkoçi, "Electrochemical stripping detection of DNA hybridization based on cadmium sulfide nanoparticle tags" *Electrochemistry Communication*, 4 722-726 (2002)

[33.](#) Joseph Wang, Mustafa Musameh, Arben Merkoçi, Yuehe Lin "Low-potential stable NADH detection at carbon-nanotube modified glassy carbon electrodes, *Electrochemistry Communication*, 4 743-746 (2002).

- [34.](#) M. Vasjari, A. Merkoci, S. Alegret, "Some problems arising during the application of biocomposite based glucose biosensor in real blood samples", *Albanian Journal of Natural and Technical Sciences*, 14 83-92 (2003)
- [35.](#) M.I.Pivadori, A.Merkoçi, S.Alegret, "PCR-genosensor rapid test for detecting Salmonella" *Electroanalysis*, 15, 1815-1823 (2003)
- [36.](#) E. Williams, M.I.Pivadori, A.Merkoçi, R. J. Forster, S.Alegret, "Rapid electrochemical genosensor using a streptavidin-carbon-polymer composite", *Biosensors & Bioelectronics*, 19 165-175 (2003)
- [37.](#) Dongchan Shin, Donald A. Tryk, Akira Fujishima, Arben Merkoçi, Joseph Wang, "Resistance to Surfactant and Protein Fouling Effects at Conducting Diamond Electrodes", *Electroanalysis*, 17, 305-311 (2005)
- [38.](#) Joseph Wang, Guodong Liu, and Arben Merkoci, "Particle-based Detection of DNA Hybridization using Electrochemical Stripping Measurements of an iron Tracer", *Analytical Chimica Acta*, 482 149-155 (2003)
- [39.](#) J. Tan, A. Merkoçi, S. Alegret and F. Sevilla, "All-solid-state potentiometric sensor for iodide and cyanide based on a mixed AgI/Ag₂S/Epoxy membrane", *Kimika*, 18 23-28 (2002)
- [40.](#) Joseph Wang, Ronen Polsky, Arben Merkoci and Kathy L. Turner, "Electroactive beads for ultrasensitive DNA detection" *Langmuir*, 19 989-991 (2003)
- [41.](#) S. Alegret and A. Merkoçi, "Composite and biocomposite materials for electrochemical sensing", S. Alegret, ed., [Integrated analytical systems](#), Amsterdam, Elsevier, 2003, pp 377-412 ISBN: 0-444-51037-0 (NL)
- [42.](#) Joseph Wang, Guodong Liu, and Arben Merkoçi, "Electrochemical Coding Technology for simultaneous detection of multiple DNA targets". *Journal of American Chemical Society*, 125 3214-3215 (2003)
- [42.](#) [Supporting information](#)
- [43.](#) S.Carrévalo, A. Merkoçi, S. Alegret, "Application of Graphite-Epoxy Composite Electrodes in Differential Pulse Anodic Stripping Voltammetry of Heavy Metals", *Microchimica Acta* 147, 245–251 (2004)
- [44.](#) L. Moreno, A. Merkoçi, S. Alegret, S. Hernández-Cassou, J. Saurina, "Analysis of amino acids in complex samples by using voltammetry and multivariate calibration methods", *Analytica Chimica Acta* 507 247–253 (2004)
- [45.](#) J. Tan, A. Merkoçi, S. Alegret and F. Sevilla, Oil dispersion of AgI/Ag₂S salts as a new electroactive material for potentiometric sensing of iodide and cyanide, *Sensors and Actuators B* 101 57–62 (2004)
- [46.](#) A.Merkoçi, S. Alegret, "Toward nanoanalytical chemistry. Case of nanomaterial integration into (bio)sensing systems" *Contribution to Science*, 3 (1), 57–66 (2005)
- [47.](#) X. Llopis, A.Merkoçi, M. del Valle, S.Alegret, "Integration of a glucose biosensor based on an epoxy-graphite-TTF-TCNQ-GOD biocomposite into a FIA system", *Sensors and Actuators B*, 107 742–748 (2005)
- [48.](#) S. Alegret, A. Merkoçi, M.I. Pivadori and M. del Valle, Chapter: "Electrochemical (bio)sensors based on rigid conducting carbon-polymer composites", *Encyclopedia of Sensors*, Edited by: Craig A. Grimes, Elizabeth C. Dickey, and Michael V. Pishko. The Pennsylvania State University, University Park, USA. Forwarded by: Professor Rudolph A. Marcus, Nobel Prize Laureate.

<http://www.aspbs.com/eos/>, [Volume 3](#), 23-44, 2006.

[49.](#) A. Merkoçi, M. Aldavert, S. Marín, S. Alegret, "New materials for electrochemical sensing. V. Nanoparticles for DNA labelling", *Trends in Analytical Chemistry*, 24 341-349 (2005)

[50.](#) S.Alegret, A.Merkoçi, "Nanoscience and nanotechnology in Catalonia", *Special Issue of Contribution to Science*, Printed by Institut d'Estudis Catalans, Barcelona, 2005.

[51.](#) M. Vasjari, A. Merkoçi, J. P. Hart, S. Alegret, "Amino acid determination using screen-printed electrochemical sensors", *Microchimica Acta*, 150 233-238 (2005)

[52.](#) A. Merkoçi, M. Aldavert, Gema Tarrasón, Ramon Eritja, S. Alegret, "Toward an ICPMS-linked DNA assay based on gold nanoparticles immunoconnected through peptide sequences", *Analytical Chemistry*, 77,6500-6503 (2005)

[52.](#) Supporting information

[53.](#) J. Tan, J. Bergantin, A. Merkoçi, S. Alegret and F. Sevilla, All-solid-state potentiometric sensor for iodide based on the oil dispersion of mixed AgI/Ag₂ salts, *AsiaSENSE*, 129-133 (2003)

[54.](#) Ülkü Anık Kırköz, Sergi Marín, Martin Pumera, Arben Merkoçi, Salvador Alegret, "Stripping voltammetry with bismuth modified graphite-epoxy composite electrodes", *Electroanalysis*, 17, 881-886 (2005)

[55.](#) Laura Moreno-Barón; Arben Merkoçi; Salvador Alegret; Lorenzo Leija; Pablo.R.Hernandez; Roberto Muñoz; Raul Cartas, "Application of the wavelet transform coupled with artificial neural networks in a voltammetric electronic tongue", *Sensors & Actuators B*, 113 487–499 (2006)

[56.](#) Martin Pumera, Marta Aldavert, Cris Mills Arben Merkoçi, Salvador Alegret, "Direct voltammetric determination of gold nanoparticles using graphite-epoxy composite electrode", *Electrochimica Acta*, 50 3702–3707 (2005)

[57.](#) Martin Pumera, Arben Merkoçi, Salvador Alegret, "Carbon nanotube-epoxy composites for electrochemical sensing" *Sensors & Actuators B*, 113 617–622 (2006)

[58.](#) Salvador Alegret, Manel del Valle, Arben Merkoçi, *Sensores Electroquímicos* (In Spanish; 172 pp).Printed 2004, Catalunya, Publisher: Universitat Autònoma de Barcelona, Servei de publicacions, ISBN: 84-490-2361-0

[59.](#) A.Merkoçi, M.del Valle, S. Alegret, "Bionanostructures and their integration into electrochemical sensing system. A review of DNA applications" *Revista Mexicana de Física S* 52 (2) 1–5 (2006)

[60.](#) Arben Merkoçi, Martin Pumera, Xavier Llopis, Briza Perez, Manuel del Valle, Salvador Alegret, "New materials for electrochemical sensing VI. Carbon nanotubes", *Trends in Analytical Chemistry*, 24, 826-838 (2005) (**Top 10 cited articles published since 2005 in TRAC**)

[61.](#) M.T. Castañeda, B. Pérez, M. Pumera, M. del Valle, A.Merkoçi, S. Alegret, "Sensitive stripping voltammetry of heavy metals by using a composite sensor based on a built-in bismuth precursor", *Analyst*, 130, 971 – 976 (2005)

[62.](#) Martin Pumera, Maria Teresa Castañeda, Maria Isabel Pividori, Ramon Eritja, Arben Merkoçi, Salvador Alegret, "Magnetically triggered direct electrochemical detection of DNA hybridization based Au67 Quantum Dot – DNA – paramagnetic bead conjugate", *Langmuir* 21, 9625-9629 (2005)

[62.](#) Supporting information

[63.](#) Martin Pumera, Arben Merkoçi, Salvador Alegret, "Microchip Capillary Electrophoresis-Electrochemistry with Rigid Graphite-Epoxy Composite Detector", *Electroanalysis*, 18, 207 – 210

(2006)

[64.](#) Briza Pérez, Martin Pumera, Manel del Valle, Arben Merkoçi, Salvador Alegret, "Glucose Biosensor Based on Carbon Nanotube Epoxy Composites", *Journal of Nanoscience and Nanotechnology*, 5, 1694–1698 (2005)

[65.](#) Martin Pumera, Arben Merkoçi, Salvador Alegret, "New materials for electrochemical sensing VII. Chip microfluidic platforms" *Trends in Analytical Chemistry*, 25, 219-235 (2006)

[66.](#) Arben Merkoçi "Carbon nanotubes in analytical sciences. A review" *Microchimica Acta*, 152, 157–174 (2006)

[67.](#) Martin Pumera, Xavier Llopis, Arben Merkoçi, Salvador Alegret "Microchip Capillary Electrophoresis with a Single-Wall Carbon Nanotube/Gold Electrochemical Detector for Determination of Aminophenols and Neurotransmitters" *Microchimica Acta*, 152, 261–265 (2006)

[68.](#) Arben Merkoçi, Sergio Marín, María Teresa Castañeda, Martin Pumera, Josep Ros, Salvador Alegret, "Crystal and electrochemical properties of water dispersed CdS nanocrystals obtained via reverse micelles and arrested precipitation", *Nanotechnology* 17 2553–2559 (2006)

[68.](#) [Supporting information](#)

[69.](#) S. Alegret, A. Merkoçi, M.I. Pividori and M. del Valle, Chapter: "Electrochemical (bio)sensors based on rigid conducting carbon-polymer composites", *Enciclopedia of Sensors*, 2004, Edited by: Craig A. Grimes, Elizabeth C. Dickey, and Michael V. Pishko. The Pennsylvania State University, University Park, USA. Forwarded by: Professor Rudolph A. Marcus, Nobel Prize Laureate. <http://www.aspbs.com/eos/> (In press) 2005

[70.](#) Arben Merkoçi, "Application of nanomaterials in the design of new electrochemical sensors and biosensors", Chapter at *Desafíos de la sociedad Científico Tecnológico Actual*, 2006, p. 361-385, Editor: Ana Cremades Rodríguez, Fundación General de la Universidad Complutense de Madrid, ISBN 84-608-0418-6

[71.](#) Arben Merkoçi, Maria Teresa Castañeda, Salvador Alegret, "Stripping analysis of heavy metals by using mercury free composite based sensors" . Chapter at '*Pure & Applied Analytical Chemistry*', Edited by Research SignPost, E. Palomar, p.1-22, 2005.

[72.](#) Arben Merkoçi, "DNA detection platforms by using nanoparticles as quantitation tags or encoded hosts", *G.I.T. Laboratory Journal Europe*, 9 48-50 (2005)

[73.](#) Martin Pumera, Arben Merkoçi, Salvador Alegret. "Microchip electrophoresis with wall-jet electrochemical detector: Influence of detection potential upon resolution of solutes", *Electrophoresis* 27, 5068–5072 (2006)

[74.](#) Ülkü Anık Kırğöz, Dilek Odacı, Suna Timur, Arben Merkoçi, Nurdan Pazarlıoğlu, Azmi Telefoncu, Salvador Alegret, "Graphite epoxy composite electrodes modified with bacterial cells", *Bioelectrochemistry*, 69 128–131 (2006).

[75.](#) Laura Moreno-Barón, Raul Cartas, Arben Merkoçi, Salvador Alegret, Juan M.Gutierrez, Lorenzo Leija, Pablo R.Hernandez, Roberto Muñoz, Manuel del Valle, Data compression for a voltammetric electronic tongue modelled with artificial neural networks, *Analytical Letters*, 38, 2189–2206 (2005)

[76.](#) Martin Pumera, Arben Merkoçi, Salvador Alegret, "Carbon nanotube detectors for microchip CE: Comparative study of single-wall and multiwall carbon nanotube, and graphite powder films on glassy carbon, gold, and platinum electrode surfaces", *Electrophoresis* 2007, 28, 1274–1280

[77.](#) Arben Merkoçi ed., "Carbon Nanotubes: Exciting New Materials for Microanalysis

and Sensing”, *Special Issue in Microchimica Acta*, Springer Verlag Wien, 152, 2006.

[78.](#) Arben Merkoçi, Salvador Alegret, “Graphite-epoxy electrodes for stripping analysis”, Chapter 7 at Volume 49 “Electrochemical Sensor Analysis”, Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., p.143-161, 2007

[79.](#) A. Merkoçi, U.Kirkoz, S.Alegret, “Determination of lead and cadmium in tap water and soils by stripping analysis using mercury-free graphite–epoxy composite electrodes”, Procedure 7 at Volume 49 “Electrochemical Sensor Analysis” Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., e47-52, 2007

[80.](#) M.Pumera, A.Merkoçi, S.Alegret, “Microchip electrophoresis/electrochemistry systems for analysis of nitroaromatic explosives”, Chapter 35 at Volume 49 “Electrochemical Sensor Analysis”, Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., p.873-884, 2007

[81.](#) M.Pumera, A.Merkoçi, S.Alegret, “Analysis of nitroaromatic explosives with microchip electrophoresis using a graphite–epoxy composite detector”, Procedure 49 at Volume 49 “Electrochemical Sensor Analysis”, Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., e351-355, 2007

[82.](#) Ülkü Anık Kirgöz, Dilek Odacı, Suna Timur, Arben Merkoçi, Salvador Alegret, Nurgün Beşün and Azmi Telefoncu, “A biosensor based on graphite epoxy composite electrode for aspartame and ethanol detection” *Analytica Chimica Acta*, 570, 165–169 (2006).

[83.](#) M.T. Castañeda, A. Merkoçi, M. Pumera, S. Alegret, Electrochemical genosensors for biomedical applications based on gold nanoparticles, *Biosensors and Bioelectronics* 22 (2007) 1961–1967

[84.](#) Arjan Durresi, Arben Merkoçi, Mimoza Durresi, Leonard Barolli, “Integrated Biomedical System for Ubiquitous Health Monitoring”. Chapter at: T. Enokido, L. Barolli, and M. Takizawa (Eds.): *NBiS 2007* (Springer-Verlag Berlin Heidelberg 2007), LNCS 4658, pp. 397–405, 2007.,

[85.](#) Arben Merkoçi, Luiz Humberto Marcolino-Junior, Sergio Marín, Orlando Fatibello-Filho, Salvador Alegret, “Detection of cadmium sulphide nanoparticles by using screen-printed electrodes and a handheld device”. *Nanotechnology* 18 (2007) 035502 (6pp)

[85.](#) [Supporting information](#)

[86.](#) Arben Merkoçi, “Nanoscience and nanotechnology. Applications in different fields including that of biosensors.” (In albanian). ANASH (ISBN: 0101062006_0136) 1, 4-8 (2006).

[87.](#) Arben Merkoçi, “ Electrochemical biosensing with nanoparticles”, *FEBS Journal* 274 310–316 (2007) (Invited review for the [MINIREVIEW SERIES Nanobiotechnology by Itamar Willner](#))

[88.](#) S. Alegret, A.Merkoçi ed., “Electrochemical Sensor Analysis”, Alegret and Merkoçi (Eds), Volume 49, Comprehensive Analytical Chemistry, Elsevier B.V., 2007

[89.](#) Ülkü Anık (Kırgöz), Suna Timur, Meliha Çubukçu, Arben Merkoçi, “The Usage of Bismuth Film Electrode as Transducer in Glucose Biosensing”, *Microchim Acta* (2008) 160: 269–273

[90.](#) Briza Pérez, Joan Sola, Salvador Alegret, Arben Merkoçi, “A Carbon Nanotube PVC Based Matrix Modified with Glutaraldehyde Suitable for Biosensor Applications”. *Electroanalysis* 20, 2008, No. 6, 603 – 610

[91.](#) Maria Teresa Castañeda, Salvador Alegret, Arben Merkoçi, “Electrochemical Detection of DNA Hybridization Using Micro and Nanoparticles” Chapter 9 at Avraham Rasooly and Keith E. Herold (eds.), [Methods in Molecular Biology: Biosensors and Biodetection](#), © Humana Press

(DOI:10.1007/978-1-60327-569-9_9) 2009, Vol. 504, p. 127-143.

[92.](#) M.T. Castañeda, S. Alegret, A. Merkoçi, "Gold nanoparticles in DNA and protein analysis", Chapter 38 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., p.941-958, 2007

[93.](#) Arben Merkoçi, Ed., "Nanobiomaterial Application in Electrochemical Analysis" Special Issue of Electroanalysis on Nanobiomaterials, Wiley InterScience, Volume 19, Issue 7-8, April 2007.

[94.](#) Arben Merkoçi, Editorial, "Nanobiomaterials in Electroanalysis", Electroanalysis 19, 2007, 739 – 741

[95.](#) Ülkü A. KIRGOZ, Suna TIMUR, Dilek ODACI, Briza PÉREZ, Salvador ALEGRET, Arben MERKOÇI, "Carbon nanotube composite as novel platform for microbial biosensor", Electroanalysis 19, 2007, 893 – 898

[96.](#) G. Alarcon Angeles, B. Pérez López, M. Palomar-Pardave, M. T. Ramírez-Silva, S. Alegret, A. Merkoçi, "Enhanced host guest electrochemical recognition of dopamine using cyclodextrin in the presence of carbon nanotubes", Carbon 46 (2008) 898–906

[97.](#) Briza Pérez, Arben Merkoçi, "Application of carbon nanotubes in analytical chemistry", Chapter at "Chemistry of Carbon Nanotubes" (V.A. Basiuk and E.V. Basiuk, Eds.). American Scientific Publishers. 2008

[98.](#) M.T.Castañeda, S.Alegret, A.Merkoçi "Electrochemical sensing of DNA using gold nanoparticles", Electroanalysis 19, 2007, 743 – 753.

[\(the most often downloaded article in Electroanalysis from January through October 2007\)](#)

[99.](#) Adriano Ambrosi, Maria Teresa Castañeda, Anthony J. Killard, Malcolm R. Smyth, Salvador Alegret, Arben Merkoçi, "Double-Codified Gold Nanolabels for Enhanced Immunoanalysis", Analytical Chemistry, 2007, 79, 5232-5240

[99. Supporting Information](#)

[100.](#) A.Merkoçi, S.Alegret, "Quantum dots (QDs) as tracers for DNA electrochemical sensing systems". Chapter 26 at: Nanotechnology in Biology and Medicine. Methods, Devices and Applications, 2007, p. 26-1 to 26-16, Editor: [Tuan Vo-Dinh, CRC Press](#), ISBN 0-8493-2949-3

[101.](#) M.T. Castañeda, M. Pumera, S. Alegret, A. Merkoçi, "DNA analysis by using gold nanoparticle labels", Procedure 53 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., e381-388, 2007

[102.](#) Arben Merkoçi, "Nanobiotechnology – drug delivery, imaging and nanobiosensors using nanomaterials", DOI: 10.2436/20.1501.02.44 Les biotechnologies (Pere Puigdomènech i Francesc Gòdia, ed.), Treballs de la SCB. Vol. 58 (2007) 51-62

[103.](#) Briza Pérez, Manel del Valle, Salvador Alegret, Arben Merkoçi, "Carbon nanofiber vs. carbon microparticles as modifiers of glassy carbon and gold electrodes applied in electrochemical sensing of NADH". Talanta 74 (2007) 398–404.

[104.](#) Alfredo de la Escosura-Muñiz, Marisa Maltez-da Costa, Arben Merkoçi, Controlling the electrochemical deposition of silver onto gold nanoparticles: Reducing interferences and increasing the sensitivity of magnetoimmuno assays", Biosensors & Bioelectronics, 24 (2009) 2475–2482

[105.](#) Fraser Douglas, Ramon Yanez, Josep Ros, Sergio Marín, Alfredo de la Escosura, Salvador Alegret, Arben Merkoçi, "Silver, gold and the corresponding core shell nanoparticles for sensing applications". Journal of Nanoparticle Research, (2008) 10, 97–106

106. Arben Merkoçi, "Biosensing using Nanomaterials", Wiley Series in Nanoscience and Nanotechnology, Arben Merkoçi, Series Editor, A John Wiley & Sons, Inc, Publication, 2009

[107.](#) Alfredo de la Escosura, Adriano Ambrosi, Salvador Alegret, Arben Merkoçi, "Electrochemical Immunosensing Using Micro and Nanoparticles", Chapter 10 at Avraham Rasooly and Keith E. Herold (eds.), [Methods in Molecular Biology: Biosensors and Biodetection](#), © Humana Press (DOI:10.1007/978-1-60327-569-9_9) 2009, Vol. 504, p. 145-155

[108.](#) Alfredo de la Escosura-Muñiz, Christian Sánchez-Espinel, Belén Díaz-Freitas, África González-Fernández, Marisa Maltez-da Costa, Arben Merkoçi, "Rapid identification of tumour cells using a novel electrocatalytic method based in gold nanoparticles". *Analytical Chemistry*, 2009, 81, 10268–10274

[108 Supporting Information](#)

[109.](#) Alfredo de la Escosura-Muñiz, Adriano Ambrosi, Arben Merkoçi, "Electrochemical analysis with nanoparticle based biosystems", *Trends in Analytical Chemistry*, 27, p. 568-584. 2008.

[110.](#) Roza Allabashi, Wolfgang Stach, Alfredo de la Escosura-Muñiz, Leticia Liste Calleja, Arben Merkoçi, "ICP-MS - a powerful technique for quantitative determination of gold nanoparticles without previous dissolving" *Journal of Nanoparticles Research*, 11, 2003-2011. (2009).

[111.](#) Raquel Güell, Gemma Aragay, Clàudia Fontàs, Enriqueta Anticó, Arben Merkoçi "Sensitive and stable monitoring of lead and cadmium in seawater using screen-printed electrode and electrochemical stripping analysis" *Anal. Chim. Acta* 627 (2008) 219–224

[112.](#) B. Pérez López , A. Merkoçi, "Improvement of the electrochemical detection of catechol by the use of a carbon nanotube based biosensor", *Analyst*, 2009, 134, 60–64

113. Adriano Ambrosi, Maria Teresa Castañeda, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Gold nanoparticles a powerful label for affinity electrochemical biosensors", Chapter 6, "BIOSENSING USING NANOMATERIALS – BIONANO", pp 177-197, Edited by Arben Merkoçi, Wiley-Interscience, 2009

114. Arben Merkoçi, Roza Allabashi, Alfredo de la Escosura-Muñiz, "Inductively coupled plasma mass spectroscopy of nanoparticles. New horizons for biosensing applications", Chapter 12, "Biosensing using Nanomaterials", Wiley Series in Nanoscience and Nanotechnology, Arben Merkoçi, Series Editor, A John Wiley & Sons, Inc, Publication, 2009

[115.](#) Xavier Llopis, Martin Pumera, Salvador Alegret, Arben Merkoçi, "Lab-on-a-chip for ultrasensitive detection of carbofuran by enzymatic inhibition with replacement of enzyme using magnetic beads", *Lab Chip*, 2009, 9, 213–218.

[Back cover article at Lab Chip.](#)

[116.](#) Sergio Marin, Arben Merkoçi, "Direct electrochemical stripping detection of cystic fibrosis related DNA linked through cadmium sulphide quantum dots", *Nanotechnology* 20 (2009) 055101 (6pp) doi:10.1088/0957-4484/20/5/055101

[116. Supporting Information](#)

[117.](#) Serge Cosnier, Shou-Nian Ding, Aymeric Pellissier, Karine Gorgy, Michael Holzinger, Briza Pérez López, Arben Merkoçi, "Permeability Improvement of Electropolymerized Polypyrrole Films in Water Using Magnetic Hydrophilic Microbeads", *Electroanalysis* 2009, 21, No. 7, 887 – 890

[118.](#) R. Cartas, L. Moreno-Barón, A. Merkoçi, S. Alegret, M. del Valle, J.M. Gutiérrez, L. Leija, P.R. Hernandez, R. Muñoz, "Multivariate Calibration Model for a Voltammetric Electronic Tongue Based on a Multiple Output Wavelet Neural Network", 137, Chapter 9, p.137-164, Agustín Gutiérrez and Santiago Marco (Eds.), [Biologically Inspired Signal Processing for Chemical Sensing](#), Studies in Computational Intelligence, Volume 188, 2009.

- [119.](#) Aitor Mimendia; Andrey Legin; Arben Merkoçi; Manel del Valle, "Use of Sequential Injection Analysis to construct a Potentiometric Electronic Tongue: Application to the Multidetermination of Heavy Metals", *Sensors and Actuators B* 146 (2010) 420–426
- [120.](#) Arben Merkoçi, "Nanotecnologia i diagnòstic in vitro", *In vitro veritas* 2009;10: <http://www.acclcat.invitroveritas/vol10/art109.html>
- [121.](#) Gemma Aragay, Anna Puig-Font, Miquel Cadevall, and Arben Merkoçi, "Surface Characterizations of Mercury Based Electrodes with the Resulting Micro and Nano Amalgam Wires and Spheres Formations May Reveal Both Gained Sensitivity and Faced Non-Stability in Heavy Metal Detection", *Journal of Physical Chemistry C*, 2010, 114, 9049–9055
- [122.](#) Sergio Marín, Silvia Pujals, Ernest Giralt, Arben Merkoçi, "Electrochemical interrogation of endocytosis of quantum dots modified with cell penetrating peptides", *Bioconjugate Chemistry*, *Bioconjugate Chem.* 2011, 22, 180–18. ([Cover page article](#))
- [123.](#) A. Merkoçi, A. Ambrosi, A. de la Escosura, B. Pérez, M. Guix, M. Maltez, S. Marin, "Nanomaterials for Electroanalysis" in *Encyclopedia of Analytical Chemistry*, eds R.A. Meyers, John Wiley: Chichester. DOI: 10.1002/9780470027318.a9077. Published 15 June 2010
- [124.](#) G. Alarcón, M. Guix, A. Ambrosi, M.T. Ramirez Silva, M.E. Palomar Pardave, A. Merkoçi, "STABLE AND SENSITIVE FLOW THROUGH MONITORING OF PHENOL USING A CARBON NANOTUBE BASED SCREEN PRINTED BIOSENSOR", *Nanotechnology* 21 (2010) 245502.
- [125.](#) Guix M., Pérez-López B., Sahin M., Roldán M., Ambrosi A., Merkoçi A., "Structural characterization by confocal laser scanning microscopy and electrochemical study of multi-walled carbon nanotube tyrosinase matrix for phenol detection", *Analyst*, 2010, 135, 1918–1925.
- [126.](#) Adriano Ambrosi, Federico Airò, Arben Merkoçi, "Enhanced Gold Nanoparticle based ELISA for Breast Cancer Biomarker", *Analytical Chemistry*, 2010, 82, 1151–1156
- [127.](#) Gemma Aragay, Josefina Pons, Josep Ros, Arben Merkoçi, "Aminopyrazole based ligand induces gold nanoparticle formation and remains available for heavy metals sensing. A simple 'mix and detect' approach." *Langmuir*, 2010, 26 10165–10170.
- [128.](#) Arben MERKOÇI, Ulku ANIK, Serdar ÇEVIK, Meliha ÇUBUKÇU, Maria GUIX-NOGUERA, Bismuth Film Combined with Screen-Printed Electrode as Biosensing Platform for Phenol Detection, *Electroanalysis*, 2010, 22, No. 13, 1429 – 1436
- [129.](#) A. de la Escosura-Muñiz, A. Merkoçi "Electrochemical detection of proteins using nanoparticles: applications to diagnostics", *Expert Opinion on Medical Diagnostics* 4(1) (2010) 21-37.
- [130.](#) Alfredo de la Escosura-Muñiz, Claudio Parolo, Flavio Maran, Arben Merkoçi, "Size-dependent direct electrochemical detection of gold nanoparticles: application in magnetoimmunoassays", *Nanoscale*, 2011, 3 (8), 3350 – 3356
- [131.](#) Marisa Maltez-da Costa, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Electrochemical quantification of gold nanoparticles based on their catalytic properties on hydrogen formation: application in magneto immunoassays", *Electrochemistry Communications* 12 (2010) 1501–1504
- [132.](#) Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Label-free voltammetric immunosensor using a nanoporous membrane based platform", *Electrochemistry Communications* 12 (2010) 859–863
- [133.](#) Alfredo de la Escosura-Muñiz, Mariana Medina, Arben Merkoçi, "New trends in DNA sensors for environmental applications. Nanomaterials, miniaturisation and lab-on-a-chip technology",

Chapter 8 at "Nucleic Acid Biosensors for Environmental Monitoring", Edited by Ilaria Palchetti and Marco Mascini, Published by the Royal Society of Chemistry, www.rsc.org, p143-166, 2011

[134.](#) Adriano Ambrosi, Maria Guix, Arben Merkoçi, "Magnetic and electrokinetic manipulations on a microchip device for bead-based immunosensing applications", Electrophoresis, 32 (8), 861-869, 2011.

[135.](#) Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Nanoparticle based enhancement of electrochemical DNA hybridization signal using nanoporous electrodes", Chem. Commun., 2010, 46 (47), 9007 - 9009

[136.](#) Alfredo de la Escosura-Muñiz, Marisa Maltez-da Costa, Christian Sánchez-Espinel, Belén Díaz-Freitas, Jonathan Fernández-Suarez, África González-Fernández, Arben Merkoçi, "Gold nanoparticle-based electrochemical magneto immunosensor for rapid detection of anti-hepatitis B virus antibodies in human serum", Biosensors and Bioelectronics, 26 (2010) 1710–1714

[137.](#) Arben Merkoçi, Nanoparticles-based strategies for DNA, protein and cell sensors, Biosensors and Bioelectronics 26 (2010) 1164–1177

[138.](#) G. Alarcón, M. Guix, W. C. Silva, A. M. T. Ramirez Silva, M. Palomar Pardave, A. Merkoçi, "Enzyme entrapment by β -cyclodextrin electropolymerization onto carbon nanotube modified screen-printed electrode", Biosensors and Bioelectronics 26 (2010) 1768–1773

[139.](#) Pinar Kara, Alfredo de la Escosura-Muñiz, Marisa Maltez-da Costa, María Guix, Mehmet Ozsoz, Arben Merkoçi, "Aptamers based electrochemical biosensor for protein detection using carbon nanotubes platforms", Biosensors and Bioelectronics 26 (2010) 1715–1718

[140.](#) Alfredo de la Escosura-Muñiz, Claudio Parolo, Arben Merkoçi, "Immunosensing using nanoparticles", Materials Today, 13 (2010) 24-34.

[141.](#) Welter C. Silva, Maria Guix, Georgina A. Angeles, Arben Merkoçi, "Compact Microcubic Structures Platform based on Self-Assembly Prussian Blue Nanoparticles with Highly Tuneable Conductivity", Phys. Chem. Chem. Phys., 2010, 12 (47), 15505 - 15511

[142.](#) A. De la Escosura-Muñiz, A. Merkoçi "A nanochannel / nanoparticle based filtering and sensing platform for direct detection of a cancer biomarker in blood", Small, 2011, 7, 675–682 (Highlighted by By Michael Berger. Copyright 2011 Nanowerk: <http://www.nanowerk.com/spotlight/spotid=20257.php>)

[143.](#) Briza Pérez-López, Arben Merkoçi, "Magnetic Nanoparticles Modified with Carbon Nanotubes for Electrocatalytic Magnetoswitchable Biosensing Applications", Advanced Functional Materials, 2011, 21, 255–260.

[144.](#) Marisa Maltez-da Costa, Alfredo de la Escosura-Muñiz, Arben Merkoçi. "Nanoparticles-induced catalysis for electrochemical DNA biosensors, Chapter at book: Electrochemical DNA Biosensors, edited by M. Oszos, published by Pan Stanford. Year: 2012, Chapter: 5, Pages: 141-162 ISBN 978-981-4241-77-9 (Hardcover); ISBN 978-981-4303-98-9 (eBook)

[145.](#) Briza Pérez-López, Arben Merkoçi, "Nanomaterials based biosensors for food analysis applications", Trends in Food Science & Technology, 22 (2011) 625-639

146. Mariana Medina, Arben Merkoçi, "Micro and Nanomaterials based detection systems applied in lab-on-a-chip technology", Chapter 18 (pages 389–405) at Handbook of Green Analytical Chemistry (edited by Professor Miguel de la Guardia and Professor Salvador Garrigues), Edition John Wiley & Son, Published Online: 14 MAR 2012, DOI: 10.1002/9781119940722.ch18, Copyright © 2012 John Wiley & Sons, Ltd

- [147.](#) Gemma Aragay, Josefina Pons, Arben Merkoçi, “Enhanced electrochemical detection of heavy metals at heated graphite nanoparticle-based screen-printed electrodes”, *Chemistry of Materials*, 2011, 21, 4326-4331
- [148.](#) Briza Pérez, Arben Merkoçi, Nanoparticles for the development of improved (bio)sensing systems, *Analytical and Bioanalytical Chemistry*, (2011) 399:1577–1590
- [149.](#) Gemma Aragay, Josefina Pons, Arben Merkoçi, “Recent Trends in Macro, Micro and Nanomaterials Based Tools and Strategies for Heavy Metals Detection”, *Chemical Reviews*, 111 (5), 3433-3458, 2011.
- [150.](#) Gemma Aragay, Georgina Alarcón, Josefina Pons, Mercè Font-Bardía, Arben Merkoçi, “Medium dependent dual Turn-ON/Turn-OFF fluorescence system for heavy metal ions sensing”, *Journal of Physical Chemistry, C*, 116 (2), 1987–1994 (2012)
- [151.](#) Gemma Aragay, Helena Montón, Josefina Pons, Mercè Font-Bardía, Arben Merkoçi, “Rapid and high sensitive detection of mercury ions using a fluorescence based paper test strip with a N-alkylaminopyrazole ligand as receptor”, *Journal of Materials Chemistry*, 22, 5978-5983 (2012)
- [152.](#) Sergio Marín, Arben Merkoçi “Electrochemical detection of DNA using nanomaterials based sensors”. Chapter 8 (pages 185-202) of the book “Detection of non amplified genomic DNA”. Ed. Giuseppe Spoto, and Roberto Corradini, Springer, Series: Soft and Biological Matter, ISBN: 978-94-007-1225-6, 2012
- [153.](#) Maëlle Perfezou, Anthony Turner, Arben Merkoçi, CANCER DETECTION USING NANOPARTICLE-BASED SENSORS, *Chem. Soc. Rev.*, 2012, 41, 2606–2622
- [154.](#) Tiziana Placido, Gemma Aragay Esteve, Josefina Pons, Roberto Comparelli, M. Lucia Curri, Arben Merkoçi, Ion-Directed Assembly of Gold Nanorods: A Strategy for Mercury Detection, *ACS Appl. Mater. Interfaces*, 2013, 5, 1084-1092
- [155.](#) Miguel Guerrero, Josefina Pons, Josep Ros, Mercé Font-Bardía, Oriol Vallcorba, Jordi Rius, Vicenc Branchadell, Arben Merkoçi, Variable behaviour of flexible N,O-mixed pyrazole ligand towards Zn(II), Cd(II) and Hg(II) ions. Synthesis, crystal structure and fluorescent properties. *CrystEngComm*, 2011, 13 (21), 6457 - 6470
156. Eden Morales-Narváez, Arben Merkoçi, Medical Nanobiosensors, in *Nanomedicine: principles and perspectives*, Eds. Yi Ge, Songjun Li, Shenqi Wang, Richard Moore, Springer, New York, 2012. Ch 7, ISBN: 978-1-4614-2139-9.
- [157.](#) Eden Morales-Narváez, Briza Pérez-López, Luis Baptista Pires, Arben Merkoçi, Ultrahigher quantum dot quenching efficiency by graphene oxide in comparison to other carbon structures, *Carbon*, 50 (2012) 2987 – 2993
- [158.](#) Briza Pérez-López, Arben Merkoçi, Nanomaterials-based (bio)sensing systems for safety and security applications, Chapter 3 at “Biosensors for safety and security applications”, D.P. Nikolelis (ed.), *Portable Chemical Sensors: Weapons Against Bioterrorism*, 43 NATO Science for Peace and Security Series A: Chemistry and Biology, DOI 10.1007/978-94-007-2872-1_3, © Springer Science+Business Media B.V. 2012, pp. 43-61.
- [159.](#) Sergio Marin, Arben Merkoçi, Nanomaterials based electrochemical sensing applications for safety and security, *Electroanalysis* 2012, 24, No. 3, 459 – 469
- [160.](#) Carmen C. Mayorga-Martinez, Maria Guix, Rossana E. Madrid, Arben Merkoçi, “Bimetallic Nanowires as Electrocatalyst for Nonenzymatic Real Time Impedancimetric Detection of Glucose”. *Chem. Commun.*, 2012, 48, 1686–1688

- [161.](#) Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Nanoparticles for DNA, protein and cells electrochemical detection", Chapter chapter 6, page 209, at Nanomaterials for electrochemical sensing and biosensing, Published by Pan Stanford Publishing, Ed. M.Pumera., 2014
- [162.](#) Gemma Aragay, Arben Merkoçi, "Nanomaterials application in electrochemical detection of heavy metals", *Electrochimica Acta* 84 (2012) 49–61
- [163.](#) Susana Campuzano, Jahir Orozco, Daniel Kagan, Maria Guix, Wei Gao, Sirilak Sattayasamitsathit, Jonathan C. Claussen, Arben Merkoçi and Joseph Wang, "Bacterial Isolation by Lectin-Modified Microengines". *Nano Letters*, 2012, 12 (1), pp 396–401
- [164.](#) Alfredo de la Escosura-Muñiz, Arben Merkoçi, Nanoparticles for Proteins and Cells Detection. Novel Tools for Clinical Diagnostics, G.I.T. Laboratory Journal 1-2/2012, p. 21. (2012)
- [165.](#) Mariana Medina-Sánchez, Sandrine Miserere, Sergio Marín, Gemma Aragay, Arben Merkoçi, "On-chip electrochemical detection of CdS quantum dots using normal and multiple recycling flow through modes", *Lab Chip*, 2012, 12, 2000–2005
- [166.](#) Mariana Medina-Sánchez, Sandrine Miserere, Arben Merkoçi, "Nanomaterials and lab-on-a-chip technologies", *Lab Chip*, 2012, 12, 1932–1943 (Cover article)
- [167.](#) André S. Afonso, Briza P. López, Ronaldo C. Faria, Luiz H. C. Mattoso, Maria M. H. Herrero, Artur X. R. Sagués, Marisa Maltez-da Costa, Arben Merkoçi, "Electrochemical Detection of Salmonella using Gold Nanoparticles", *Biosensors and Bioelectronics* 40 (2013) 121–126.
- [168.](#) Eden Morales-Narváez, Arben Merkoçi, "Graphene oxide as an optical biosensing platform", *Advanced Materials*, 2012, 24, 3298–3308 (Cover image of the issue)
- [169.](#) Marisa Maltez-da Costa, Alfredo de la Escosura-Muñiz, Carme Nogués, Leonard Barrios, Elena Ibáñez, Arben Merkoçi, "Detection of Circulating Cancer Cells Using Electrocatalytic Gold Nanoparticles", *Small* 2012, 8, No. 23, 3605–3612
- [170.](#) Marisa Maltez-da Costa, Alfredo de la Escosura-Muñiz, Carme Nogués, Leonard Barrios, Elena Ibáñez, Arben Merkoçi, "Simple Monitoring of Cancer Cells Using Nanoparticles", *Nano Lett.*, 2012, 12 (8), pp 4164–4171
- [171.](#) A. López-Marzo, Josefina Pons, A. Merkoçi "Controlled formation of nanostructured CaCO_3 -PEI microparticles with high biofunctionalizing capacity", *J. Mater. Chem.*, 2012, 22, 15326.
- [172.](#) Eden Morales-Narváez, Helena Montón, Anna Fomicheva, Arben Merkoçi, "Signal Enhancement in Antibody Microarrays Using Quantum Dots Nanocrystals: Application to Potential Alzheimer's Disease Biomarker Screening", *Analytical Chemistry*, 2012, 84, 6821–6827
- [173.](#) Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Nanochannels Preparation and Application in Biosensing", *ACS Nano* 2012, 2012, 6 (9), pp 7556–7583
- [174.](#) Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Gemma González-Ortiz, Susana M. Martín-Orúe, José Francisco Pérez, Arben Merkoçi, "Casein modified gold nanoparticles for future theranostic applications", *Biosensors and Bioelectronics* 40 (2013) 271–276.
- [175.](#) Carmen C. MAYORGA-MARTINEZ, Miquel CADEVALL, Maria GUIX, Josep ROS, Arben MERKOÇI, "Bismuth nanoparticles for phenolic compounds biosensing application" *Biosensors and Bioelectronics* 40 (2013) 57–62
- [176.](#) Alfredo de la Escosura-Muñiz, Wilanee Chunglok, Werasak Surareungchai, Arben Merkoçi, "Nanochannels for diagnostic of thrombin-related diseases in human blood", On-line published, *Biosensors and Bioelectronics* 40 (2013) 24–31.

- [177](#). Maria Guix, Jahir Orozco, Miguel García, Wei Gao, Sirilak Sattayasamitsathit, Arben Merkoçi, Alberto Escarpa, Joseph Wang, "Superhydrophobic Alkanethiol-Coated Microsubmarines for Effective Removal of Oil", *ACS Nano*, 2012, 6 (5), pp 4445–4451
- [178](#). Claudio Parolo, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Enhanced lateral flow immunoassay using gold nanoparticles loaded with enzymes", *Biosensors and Bioelectronics* 40 (2013) 412–416
- [179](#). Raquel Güell, Clàudia Fontàs, Gemma Aragay, Arben Merkoçi, Enriqueta Anticó, "Screen-printed electrodes incorporated in a flow system for the decentralized monitoring of lead, cadmium and copper in natural and wastewater samples", *International Journal of Environmental Analytical Chemistry*, 93 (8), 872-883 (2013).
180. Jordi Pascual, Arben Merkoçi, Daniel MasPOCH, Victor Puntès, Aurora Conill, "Capítulo 1: Nanotecnología: concepto y fundamentos", Chapter 1 at "Nanotecnología en Medicina", by E. Cortés, Editorial Médica Transworld Editors. 2013
- [181](#). Arben Merkoçi, Jörg P. Kutter, "Analytical miniaturization and nanotechnologies", Editorial, *Lab Chip*, 2012, 12, 1915–1916
- [182](#). Briza Pérez-López, Arben Merkoçi, "Carbon Nanotubes and Graphene in Analytical Sciences", *Microchim Acta* 2012, 179,1–16.
183. Claudio Parolo, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Electrochemical DNA Sensors based on Nanoparticles", p.195-216, Chapter Seven at *Electrochemical Biosensors* by Serge Cosnier 2014-08-31, Print ISBN: 9789814411462; eBook ISBN: 9789814411479; DOI: 10.4032/9789814411479
- [184](#). Claudio Parolo, Arben Merkoçi, "Paper based nanobiosensors for diagnostics", *Chem. Soc. Rev.*, 2013, 42, 450—457
- [185](#). Gemma Aragay, Flavio Pino, Arben Merkoçi, "Nanomaterials for Sensing and Destroying Pesticides", *Chemical Reviews*, 2012, 112 (10), pp 5317–5338 |
- [186](#). Arben Merkoçi, "Nanoparticles based electroanalysis in diagnostics applications", *Electroanalysis* 2013, 25, No. 1, 15 – 27
- [187](#). Abdelmoneim Mars, Claudio Parolo, Nouredine Raouafi, Khaled Boujlel, Arben Merkoçi, "Gold nanoparticles decorated with a ferrocene derivative as a potential shift-based transducing system of interest for sensitive immunosensing", *J. Mater. Chem. B*, 2013,1, 2951-2955.
- [188](#). Claudio Parolo, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Simple paper architecture modifications lead to enhanced sensitivity in nanoparticle based lateral flow immunoassay", *Lab Chip*, 2013, 13, 386–390.
- [189](#). Alfredo de la Escosura-Muñiz, Arben Merkoçi, "APPLICATION OF NANOMATERIALS FOR DNA SENSING", Chapter 12, pp 305-331, at "Nucleic Acids Nanotechnology" book, Edited by Elena Ferapontova et al. J. KJEMS et al. (eds.), *Nucleic Acid Nanotechnology*, Nucleic Acids and Molecular Biology 29, DOI 10.1007/978-3-642-38815-6_12, © Springer-Verlag Berlin Heidelberg 2014
- [190](#). Claudio Parolo, Mariana Medina-Sánchez, Helena Montón, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Paper-based electrodes for nanoparticles detection", *Particle & Particle System Characterisation*, 2013, 30, 662–666.
191. Helena Montón; Mónica Roldán; Arben Merkoçi; Emma Rossinyol; Onofre Castell; Carme

Nogués, "The use of quantum dots for immunochemistry applications", *Methods in Molecular Biology* 2012; 906, 185-192.

[192.](#) Miguel García, Jahir Orozco, Maria Guix, Wei Gao, Sirilak Sattayasamitsathit, Alberto Escarpa, Arben Merkoçi, Joseph Wang, "Micromotor-Based Lab-on-Chip Immunoassays", *Nanoscale*, 2013, 5, 1325–1331

[193.](#) An integrated phenol 'sensoremoval' microfluidic nanostructured platform, Carmen C. Mayorga-Martinez, Lenka Hlavata, Sandrine Miserere, Adaris López-Marzo, Jan Labuda, Josefina Pons, Arben Merkoçi, *Biosensors and Bioelectronics*, 55, 2014, 355–359.

[194.](#) Adaris M. Lopez_Marzo, Josefina Pons, Diane A. Blake, Arben Merkoçi, "High sensitive gold-nanoparticle based lateral flow Immunodevice for Cd²⁺ detection in drinking waters", *Biosensors and Bioelectronics* 47(2013)190–198

[195.](#) Adaris M. Lopez_Marzo, Josefina Pons, Diane A. Blake, Arben Merkoçi, "All-Integrated and Highly Sensitive Paper Based Device with Sample Treatment Platform for Cd²⁺ Immunodetection in Drinking/Tap Waters", *Anal. Chem.*, 2013, 85 (7), pp 3532–3538

[196.](#) Anna T. B. Silva; Andreane G. Coelho; Lourdes C. da S. Lopes; Marccus V. A. Martins; Frank N. Crespihlo; Arben Merkoçi; Welter C. da Silva, "Nano-Assembled Supramolecular Films from Chitosan-Stabilized Gold Nanoparticles and Cobalt(II) Phthalocyanine", *J. Braz. Chem. Soc.* 2013;24(8):1237-1245

[197.](#) Carmen C. Mayorga-Martinez, Lenka Hlavata, Sandrine Miserere, Adaris López-Marzo, Jan Labuda, Josefina Pons, Arben Merkoçi, Nanostructured CaCO₃-PEI microparticles for phenol sensing in fluidic microsystem, *Electrophoresis*, 2013, 34, 2011–2016

[198.](#) Flavio PINO, Tribidasari A. IVANDINI2, Kazuya NAKATA, Akira FUJISHIMA, Arben MERKOÇI, Yasuaki EINAGA, "Magnetic Enzymatic Platform for Organophosphate Pesticide Detection Using Boron-doped Diamond Electrodes", *Analytical Sciences*, 31 (2015) 1061-1068.

[199.](#) Arben Merkoçi, "Keith R Fox and Town Brown (Eds): DNA conjugates and Sensors", Book review, *Anal Bioanal Chem* (2013) 405:5367–5368

[200.](#) Abdel-Rahim Hussein Abdel-Azzem Hassan, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Highly Sensitive and Rapid Determination of Escherichia coli O157:H7 in Minced Beef and Water using Electrocatalytic Gold Nanoparticle Tags", Abdel-Rahim Hussein Abdel-Azzem Hassan, Alfredo de la Escosura-Muñiz, Arben Merkoçi. *Biosensors and Bioelectronics*, 2015, 67, 511-515.

[201.](#) A. López_Marzo, Josefina Pons, Arben Merkoçi, "Multifunctional system based on hybrid calcite-PEI nanostructured-rods formation, for Pb²⁺ 'sensoremoval' applications", *J.Mater.Chem.A*, 2013, 1, 13532–13541

[202.](#) Eden Morales-Narváez, Abdel-Rahim Hassan, Arben Merkoçi, "Graphene oxide as a pathogen-revealing agent: sensing with a digital-like response", *Angew.Chem.Int.Ed.* 2013, 52, 13779 –13783.

[203.](#) Claudio Parolo, Alfredo de la Escosura-Muñiz, Ester Polo, Valeria Grazú, Jesús M. de la Fuente, Arben Merkoçi, "Design, Preparation, and Evaluation of a Fixed-Orientation Antibody/Gold-Nanoparticle Conjugate as an Immunosensing Label", *ACS Appl. Mater. Interfaces*, 2013, 5 (21), 10753–10759

[204.](#) Mariana Medina-Sánchez, Sandrine Miserere, Eden Morales-Narváez, Arben Merkoçi, "On-chip magneto-immunoassay for Alzheimer's biomarker electrochemical detection by using Quantum Dots as labels", *Biosensors and Bioelectronics*, 54, 2014, 279–284.

- [205.](#) Luis Baptista-Pires, B. Pérez-López, Carmen C. Mayorga-Martinez, Eden Morales-Narváez, Neus Domingo, Maria Jose Esplandiu, Francesc Alzina, Clivia M. Sotomayor Torres, Arben Merkoçi "Electrocatalytic tune of biosensing response through electrostatic or hydrophobic enzyme – graphene oxide interactions", *Biosensors & Bioelectronics* Volume, 2014, 61,655–662
- [206.](#) Tiziana Placido, Roberto Comparelli, Marinella Striccoli, Angela Agostiano, Arben Merkoçi, M. Lucia Curri, "Assembly of Gold Nanorods for Highly Sensitive Detection of Mercury Ions", *IEEE SENSORS JOURNAL*, VOL. 13, NO. 8, 2013, 2834-2841
- [207.](#) Maria Guix, Carmen Mayorga-Martínez, Arben Merkoçi, "Nano/micro motors in (bio)chemical science applications", *Chemical Reviews*, 2014, 114 (12), pp 6285–6322
- [208.](#) A. López_Marzo, Josefina Pons, Arben Merkoçi, "Extremely fast and high Pb²⁺ removal capacity via use of a hybrid nanostructured vaterite", *J. Mater. Chem. A*, 2014,2, 8766-8772.
209. Alarcon-Angeles, G., Álvarez-Romero, G.A. and Merkoçi, A. (2014) Graphene and Carbon Nanotube-based Electrochemical Biosensors for Environmental Monitoring, in *Advanced Carbon Materials and Technology* (eds A. Tiwari and S.K. Shukla), John Wiley & Sons, Inc., Hoboken, NJ, USA. doi: 10.1002/9781118895399.ch3
210. Briza Pérez-López, Arben Merkoçi, "Electrochemical genosensors", p. 295-311, Chapter 10 at "Agricultural and Food Electroanalysis", (Wiley), Ed. A.Escarpa, M.C.Gonzalez, M.A.López, 2015.
- [211.](#) Ruslán Álvarez-Diduk, María Teresa Ramírez-Silva, Annia Galano, Arben Merkoçi, "Deprotonation Mechanism and Acidity Constants in Aqueous Solution of Flavonols: a Combined Experimental and Theoretical Study", *J. Phys. Chem. B*, 2013, 117 (41), pp 12347–12359
- [212.](#) Alain WALCARIUS, Shelley D. MINTEER, Joseph WANG, Yuehe LIN, Arben MERKOÇI, Nanomaterials for bio-functionalized electrodes: recent trends, *J. Mater. Chem. B*, 2013,1, 4878-4908
- [213.](#) Miquel Cadevall, Josep Ros, Arben Merkoçi, "Bismuth nanoparticles integration into heavy metal electrochemical stripping sensor", *Electrophoresis* 2015, 36, 1872–1879
- [214.](#) Eden Morales-Narváez, Maria Guix, Mariana Medina-Sánchez, Carmen C. Mayorga-Martinez, Arben Merkoçi, "Micromotor Enhanced Microarray Technology for Protein Detection", *Small* Volume 10, Issue 13, pages 2542–2548, 2014.
- [215.](#) Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Alejandro Chamorro, Carmen de Torres, Arben Merkoçi, "Nanochannel array device operating through Prussian blue nanoparticles for sensitive label free immunodetection of a cancer biomarker", *Biosensors and Bioelectronics* 67(2015)107–114.
- [216.](#) Mariana Medina-Sánchez, Carmen C. Mayorga-Martinez, Takeshi Watanabe, Tribidasari A. Ivandini, Yuki Honda, Flavio Pino, Kazuya Nakata, Akira Fujishima, Yasuaki Einaga, Arben Merkoçi, "Microfluidic platform for environmental contaminants sensing and degradation based on boron-doped diamond electrodes", *Biosensors and Bioelectronics*, 75 (2016), 365–374.
- [217.](#) Carmen C. Mayorga-Martinez, Alejandro Chamorro, Arben Merkoçi, "Electrochemical Impedance Spectroscopy (bio)sensing through hydrogen evolution reaction induced by gold nanoparticles", *Biosensors and Bioelectronics* 67 (2015) 53–58
- [218.](#) Ali Fattah, Saeid Khatami, Carmen C. Mayorga-Martinez, Mariana Medina, Luis Pires, Arben Merkoçi, "Graphene/Silicon Heterojunction Schottky Diode for Vapors Sensing Using Impedance Spectroscopy", *Small*, 2014. 10, No. 20, 4193–4199
219. Miquel Cadevall, Josep Ros, Arben Merkoçi, "Bismuth based nanomaterials and platforms for

sensing and biosensing applications”, Chapter 8 p.159-174, at “Functional and Physical Properties of Polymer Nanocomposites”, Edited by Aravind Dasari and James Njuguna, John Wiley & Sons Ltd, 2016, DOI: 10.1002/9781118542316.ch8.

[220.](#) Manuel Palomar-Pardavé, Silvia Corona-Avendaño, Mario Romero-Romo, Georgina Alarcón-Angeles, Arben Merkoçi, M. Teresa Ramírez-Silva, “Supramolecular Interaction of Dopamine with β -Cyclodextrin: An Experimental and Theoretical Electrochemical Study”, Journal of Electroanalytical Chemistry 717-718 (2014) 103–109

[221.](#) Lourdes Rivas, Alfredo de la Escosura-Muñiz, Josefina Pons, Arben Merkoçi, “Alzheimer disease biomarker detection through electrocatalytic water oxidation induced by iridium oxide nanoparticles”, Electroanalysis, Special Issue: Electroanalysis-Based Clinical Diagnostics Volume 26, Issue 6, pages 1287–1294. 2014

222. Lourdes Rivas, Alfredo de la Escosura-Muñiz, Josefina Pons, Arben Merkoçi, CHAPTER 13: LATERAL FLOW BIOSENSORS BASED ON GOLD NANOPARTICLES, Book “Gold Nanoparticles in Analytical Science and Technology” of Elsevier CAC series, Edited by. M.Valcarcel. 2014.

223. Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Arben Merkoçi, “Nanoparticle/Nanochannels-Based Electrochemical Biosensors”, Chapter 9, p.205-223, “Electrospinning for High Performance Sensors” Editors: Macagnano, Antonella, Zampetti, Emiliano, Kny, Erich (Eds.), Springer, 2015

[224.](#) Carmen C. Mayorga-Martinez, Flavio Pino, Sevinc Kurbanoglu, Lourdes Rivas, Sibel A. Ozkan, Arben Merkoçi, “Iridium oxide nanoparticle induced dual catalytic/inhibition based detection of phenol and pesticide compounds”, J.Mater.Chem.B, 2014, 2, 2233–2239

[225.](#) Mariana Medina-Sánchez, Carme Martínez-Domingo, Eloi Ramon, and Arben Merkoçi, “An Inkjet-Printed Field-Effect Transistor for Label-Free Biosensing”, Advanced Functional Materials, 2014, 24, 6291–6302.

226. Sandrine Miserere, Arben Merkoçi, “Microfluidic electrochemical biosensors; fabrication and applications”, Chapter at “Lab-on-a-Chip and Micro Total Analysis Systems – A Practical Guide”, p. 141-160, Editors: Jaime Castillo and Winnie E. Svendsen, Springer, 2015

[227.](#) G.A. Álvarez-Romero, G. Alarcon-Angeles, A. Merkoçi, Graphene: Insights of its Application in Electrochemical Biosensors for Environmental Monitoring, Ashutosh Tiwari and Anthony P.F. Turner (eds.) Biosensors Nanotechnology, (109–140) 2014, © Scrivener Publishing LLC

[228.](#) Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Madoka Hasegawa, Laetitia Philippe, Arben Merkoçi, Nanoparticles-based Nanochannels onto a Plastic Flexible Substrate for Label-Free Immunosensing, Nano Research 2015, 8(4): 1180–1188

[229.](#) Gisele Elias Nunes-Pauli, Alfredo de la Escosura-Muñiz, Claudio Parolo, Ivan Helmuth-Bechtold, Arben Merkoçi, “Lab-in-a-syringe using gold nanoparticles for rapid immunosensing of protein biomarkers”, Lab Chip, 2015, 15, 399–405.

[230.](#) Anderson F. M. Santos; Lucyano J. A. Macedo; Mariana H. Chaves; Marisol Espinoza-Castañeda; Arben Merkoçi; Francisco das Chagas A. Lima; Welter Cantanhêde, “Hybrid Self-Assembled Materials Constituted by Ferromagnetic Nanoparticles and Tannic Acid: a Theoretical and Experimental Investigation”, J. Braz. Chem. Soc., JOURNAL OF THE BRAZILIAN CHEMICAL SOCIETY, 2016, 27, 727-734

[231.](#) Everson T. S. G. da Silva, Sandrine Miserere, Lauro T. Kubota, and Arben Merkoçi. “Simple on-plastic/paper inkjet-printed solid-state Ag/AgCl pseudo-reference electrode”, Analytical Chemistry, 86 (21), pp 10531–10534 (2014)

- [232.](#) Arben Merkoçi, Editorial: Electroanalysis-Based Clinical Diagnostics, *Electroanalysis* 2014, 26, 1110
- [233.](#) Sevinc Kurbanoglu, Carmen C. Mayorga-Martinez, Mariana Medina-Sánchez, Lourdes Rivas, Sibel A. Ozkan, Arben Merkoçi, "Antithyroid drug detection using an enzyme cascade blocking in a nanoparticle-based lab-on-a-chip system", *Biosensors and Bioelectronics* 67 (2015) 670–676
- [234.](#) Lourdes Rivas, Mariana Medina-Sánchez, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Improving sensitivity of gold nanoparticles-based lateral flow assays by using wax-printed pillars as delay barriers of microfluidics", *Lab Chip*, 14, 4406-4414. 2014.
- [235.](#) Alfredo de la Escosura-Muñiz, Zdeněk Plichta, Daniel Horák, Arben Merkoçi. "Alzheimer's disease biomarkers detection in human samples by efficient capturing through porous magnetic microspheres and labelling with electrocatalytic gold nanoparticles", *Biosensors and Bioelectronics*, 67 (2015) 162–169
- [236.](#) Eden Morales-Narváez, Hamed Golmohammadi, Tina Naghdi, Hossein Yousefi, Uliana Kostiv, Daniel Horak, Nahid Pourreza, and Arben Merkoçi, "Nanopaper as an Optical Sensing Platform" *ACS Nano*, 2015, 9 (7), pp 7296–7305
- [237.](#) Helena Montón, Claudio Parolo, Antonio Aranda-Ramos, Arben Merkoçi, Carme Nogués, "Annexin-V/quantum dot probes for multimodal apoptosis monitoring in living cells: improving bioanalysis using electrochemistry". *Nanoscale*. 2015 Mar 7;7(9):4097-104
- [238.](#) Lourdes Rivas, Carmen C. Mayorga-Martínez, Daniel Quesada-González, Alejandro Zamora, Alfredo de la Escosura-Muñiz and Arben Merkoçi. "Label-free Impedimetric Aptasensor for Ochratoxin-A Detection Using Iridium Oxide Nanoparticles", *Anal. Chem.*, 2015, 87 (10), pp 5167–5172
- [239.](#) Daniel Quesada-González, Arben Merkoçi, "Nanoparticle-based lateral flow biosensors", *Biosensors and Bioelectronics* 73 (2015) 47–63
- [240.](#) Eden Morales-Narváez, Tina Naghdi, Erhan Zor, and Arben Merkoçi, "Photoluminescent Lateral-Flow Immunoassay Revealed by Graphene Oxide: Highly Sensitive Paper-Based Pathogen Detection", *Anal. Chem.*, 2015, 87 (16), pp 8573–8577
- [241.](#) Alfredo M. Gravagnuolo, Eden Morales-Narváez, Sara Longobardi, Everson T. da Silva, Paola Giardina, and Arben Merkoçi, "In Situ Production of Biofunctionalized Few-Layer Defect-Free Microsheets of Graphene", *Adv. Funct. Mater.* 2015, 25, 2771–2779
- [242.](#) Carmen C. Mayorga-Martinez, Alejandro Chamorro-García, Lorena Serrano, Lourdes Rivas, Daniel Quesada-Gonzalez, Laura Altet, Olga Francino, Armand Sanchez, Arben Merkoçi, "An iridium oxide nanoparticle and polythionine thin film based platform for sensitive Leishmania DNA detection", *J.Mater.Chem.B*, 2015, 3, 5166-5171
243. Ravalli, A.; Rivas, L.; De La Escosura-Muñiz, Alfredo; Pons, J.; Merkoçi, A.; Marrazza, G., "A DNA Aptasensor for Electrochemical Detection of Vascular Endothelial Growth Factor", *Journal of Nanoscience and Nanotechnology*, 15, 2015, 3411-3416(6)
244. Briza Pérez-López and Arben Merkoçi, Chapter 10, "Electrochemical Genosensors", pages 295–316, Book: *Agricultural and Food Electroanalysis*, Editor (s): Alberto Escarpa, María Cristina González, Miguel Ángel López, John Wiley & Sons, Ltd, 2015.
- [245.](#) Protein and DNA Electrochemical Sensing Using Anodized Aluminum Oxide Nanochannel Arrays, Alfredo de la Escosura-Muñiz, Marisol Espinoza-Castañeda, Arben Merkoçi, Chapter 9, at Dusan Losic, Abel Santos Editors, *Nanoporous Alumina Fabrication, Structure, Properties and*

Applications, Springer Series in Materials Science 219, © Springer International Publishing Switzerland 2015, DOI 10.1007/978-3-319-20334-8, 2015

[246.](#) Alfredo M. Gravagnuolo, Eden Morales-Narváez, Charlene Regina Santos Matos, Sara Longobardi, Paola Giardina, and Arben Merkoçi, "On-the-Spot Immobilization of Quantum Dots, Graphene Oxide, and Proteins via Hydrophobins", *Adv. Funct. Mater.* 2015, 25, 6084–6092

[247.](#) Erhan Zor, Eden Morales-Narváez, Alejandro Zamora-Gálvez, Haluk Bingol, Mustafa Ersoz, and Arben Merkoçi, "Graphene Quantum Dots-based Photoluminescent Sensor: A Multifunctional Composite for Pesticide Detection", *ACS Appl. Mater. Interfaces* 2015, 7, 20272–20279

[248.](#) Mariana Medina-Sánchez, Miquel Cadevall, Josep Ros, Arben Merkoçi, "Eco-friendly electrochemical lab-on-paper for heavy metal detection", *Anal Bioanal Chem* (2015) 407:8445–8449 (ABC Highlights: authored by Rising Stars and Top Experts)

[249.](#) Andrzej Chałupniak, Eden Morales-Narváez, Arben Merkoçi, "Micro and nanomotors in diagnostics", *Advanced Drug Delivery Reviews*, Volume 95, 1 December 2015, Pages 104-116 (in news at: <https://www.acs.org/content/acs/en/pressroom/cutting-edge-chemistry/nanomotors-have-places-to-go.html>)

[250.](#) Mariana Medina-Sánchez, Sandrine Miserere, Miquel Cadevall, Arben Merkoçi, "Enhanced detection of quantum dots labelled protein by simultaneous bismuth electrodeposition into microfluidic channel", *Electrophoresis* 2016, 37, 432–437

[251.](#) Lourdes Rivas, Alfredo de la Escosura-Muñiz, Lorena Serrano, Laura Altet, Olga Francino, Armand Sánchez, Arben Merkoçi, "Triple lines gold nanoparticle-based lateral flow for enhanced and simultaneous Leishmania DNA detection and endogenous control", *Nano Research* 2015, 8(11): 3704–3714

[252.](#) Alfredo de la Escosura-Muñiz, Luis Baptista-Pires, Lorena Serrano, Laura Altet, Olga Francino, Armand Sánchez, Arben Merkoçi, "Magnetic bead/gold nanoparticle double-labeled primers for electrochemical detection of isothermal amplified Leishmania DNA", *Small* 2016, 12, No. 2, 205–213

[253.](#) Alejandro Chamorro-Garcia, Alfredo de la Escosura-Muñiz, Marisol Espinosa-Castañeda, Carlos J. Rodriguez-Hernandez, Carmen de Torres, Arben Merkoçi, "Detection of Parathyroid Hormone-like Hormone in Cancer Cell Cultures by Gold Nanoparticle-based Lateral Flow Immunoassays", *Nanomedicine: Nanotechnology, Biology, and Medicine* 12 (2016) 53–61

[254.](#) Luis Baptista Pires, Carmen C. Mayorga-Martínez, Mariana Medina Sanchez, Helena Monton, Arben Merkoçi, "Water Activated Graphene Oxide Transfer Using Wax Printed Membranes for Fast Patterning of a Touch Sensitive Device", *ACS Nano* 2016, 10, 853–860

[255.](#) Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Nanochannels for electrical biosensing", *TrAC Trends in Analytical Chemistry*, Volume 79, May 2016, Pages 134–150

[256.](#) Abdelmoneim Mars, Claudio Parolo, Alfredo de la Escosura-Muñiz, Nouredine Raouafi, Arben Merkoçi, "Control of Electron-transfer in Immunonanosensors by Using Polyclonal and Monoclonal Antibodies", *Electroanalysis* 2016, 28, 1 – 9

[257.](#) Jahir Orozco, Luiza A. Mercante, Roberto Pol, Arben Merkoçi, "Graphene-based Janus Micromotors for Dynamic Removal of Pollutants", *J. Mater. Chem. A*, 2016, 4, 3371–3378

[258.](#) Alejandro Zamora-Gálvez, Abdellatif Ait-Lahcen, Luiza A. Mercante, Eden Morales-Narváez, Aziz Amine, Arben Merkoçi, "Molecularly Imprinted Polymer-decorated Magnetite Nanoparticles for Selective Sulfonamide Detection", *Analytical Chemistry*, 2016, 88, 3578–3584.

- [259.](#) B. Heli, E. Morales-Narváez, H. Golmohammadi, A. Aji, A. Merkoçi, "Modulation of population density and size of silver nanoparticles embedded in bacterial cellulose via ammonia exposure: visual detection of volatile compounds in a piece of plasmonic nanopaper", *Nanoscale*, 2016, 8, 7984–7991
- [260.](#) Amal Rabti, Carmen C. Mayorga–Martinez, Luis Baptista–Pires, Nouredine Raouafi, Arben Merkoçi, "Ferrocene–functionalized graphene electrode for biosensing applications", *Analytica Chimica Acta*, 926, 2016, 28–35
- [261.](#) A. Merkoçi, G. Alarcon-Angeles, G.A. Álvarez-Romero "Emerging nanomaterial for analytical detection, Chapter at Comprehensive Analytical Chemistry, Volume 74Volume 74. Biosensors for Sustainable Food - New Opportunities and Technical Challenges, 1st Edition, 2016, Print ISBN 9780444635792 Electronic ISBN 9780444635808
- [262.](#) Adaris M. López_Marzo and Arben Merkoçi, "Paper-based sensors and assays: a success of the engineering design and the convergence of knowledge areas", *Lab Chip*, 2016, 16, 3150–3176
- [263.](#) Amal Rabti, Nouredine Raouafi, Arben Merkoçi, "Bio(Sensing) devices based on ferrocene–functionalized graphene and carbon nanotubes", *Carbon* 108 (2016) 481-514
- [264.](#) Erhan Zor, Eden Morales-Narváez, Sabr Alpaydin, Haluk Bingol, Mustafa Ersoz, Arben Merkoçi, "Graphene-based hybrid for enantioselective sensing applications", *Biosensors and Bioelectronics* 87 (2017) 410–416
- [265.](#) Sevinc Kurbanoglu, Lourdes Rivas, Sibel A.Ozkan, Arben Merkoçi, "Electrochemically reduced graphene and iridium oxide nanoparticles for inhibition-based angiotensin-converting enzyme inhibitor detection", *Biosensors and Bioelectronics* 88 (2017)122–129
- [266.](#) F. Pino, C.C. Mayorga-Martinez, A.Merkoçi, "High-performance sensor based on copper oxide nanoparticles for dual detection of phenolic compounds and a pesticide", *Electrochemistry Communications* 71 (2016) 33–37
- [267.](#) Arben Merkoçi and Alejandro Chamorro-Garcia, "Nanobiosensors in diagnostics", *Nanobiomedicine, Special Issue: Meeting the Needs of Health Care across the Globe, Volume 3: 1–26*, 2016
- [268.](#) Sevinc Kurbanoglu, Sibel A. Ozkan, Arben Merkoçi, "Nanomaterials-based enzyme electrochemical biosensors operating through inhibition for biosensing applications", *Biosensors and Bioelectronics*, 89, 2017, 886–898
- [269.](#) Mohga Khater, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Biosensors for plant pathogen detection", *Biosensors and Bioelectronics*, 93, 2017, 72-86.
- [270.](#) Daniel Quesada, Arben Merkoçi, "Mobile phone-based biosensing: an emerging "diagnostic and communication" technology", *Biosensors and Bioelectronics*, Volume 92, 15 June 2017, Pages 549–562
- [271.](#) Eden Morales-Narváez, Luis Baptista-Pires, Alejandro Zamora-Gálvez and Arben Merkoçi, "Graphene-based biosensors: Going simple", *Advanced Materials*, 2017, 29, 1604905
- [272.](#) Andrzej Chałupniak and Arben Merkoçi, "Towards Integrated Detection and Graphene-based Removal of Contaminants in Lab-on-a-chip Platform", *Nano Research*, 2017, doi:10.1007/s12274-016-1420-3
- [273.](#) Eden Morales-Narváez, Livia Florio Sgobbi, Sergio Antonio Spinola Machado, Arben Merkoçi, "Graphene-encapsulated materials: synthesis, applications and trends", *Progress in Materials Science*, *Progress in Materials Science* 86 (2017) 1–24

- [274.](#) Jie Liu, Eden Morales-Narváez, Jahir Orozco, Teresa Vicent, Guohua Zhong, Arben Merkoçi, Bioluminescent Nanopaper for the Fast Screening of Toxic Substances, *Nano Research*, 2018, Volume 11, Issue 1, pp 114–125
- [275.](#) Ruslan Álvarez-Diduk, Jahir Orozco, Arben Merkoçi, “Paper strip-embedded graphene quantum dots: a screening device with a smartphone readout”, *Scientific Reports*, 7, 976, DOI:10.1038/s41598-017-01134-3
- [276.](#) Helena Montón, Mariana Medina-Sánchez, Joan Antoni Soler, Andrzej Chalupniak, Carme Nogués, Arben Merkoçi, Rapid on-chip apoptosis assay on human carcinoma cells based on annexin-V/quantum dot probes, *Biosensors and Bioelectronics* 94 (2017) 408–414
- [277.](#) Hamed Golmohammadi, Eden Morales-Narváez, Tina Naghdi, and Arben Merkoçi, “Nanocellulose in (bio)sensing”, *Chem.Mater.* 2017, 29, 5426–5446
- [278.](#) Helena Montón, Claudio Parolo, Carme Nogués, Arben Merkoçi, “Nanotecnología: concepto y fundamentos. Puntos cuánticos como nueva herramienta en nanomedicina”, Capítulo 1, *Nanotecnología en Medicina*, Segunda edición, Editor Javier Cortés Castán, Transworld Editors 2016, ISBN 978-84-941494-5-0
- [279.](#) Alejandro Zamora-Gálvez, Eden Morales-Narváez, Javier Romero, Arben Merkoçi, Photoluminescent lateral flow based on non-radiative energy transfer for protein detection in human serum, *Biosensors and Bioelectronics* 100 (2018) 208–213
- [280.](#) Alejandro Zamora-Gálvez, Carmen C. Mayorga-Matinez, Claudio Parolo, Josefina Pons, Arben Merkoçi, “Magnetic nanoparticle-molecular imprinted polymer: A new impedimetric sensor for tributyltin detection”, *Electrochemistry Communications*, 82, 2017, 6-11
- [281.](#) Nopchulee Cheeveewattanagul, Eden Morales-Narváez, Abdel-Rahim H. A. Hassan, José Francisco Bergua, Werasak Surareungchai, Mithran Somasundrum, and Arben Merkoçi, “Straightforward Immunosensing Platform Based on Graphene Oxide-Decorated Nanopaper: A Highly Sensitive and Fast Biosensing Approach”, *Adv. Funct. Mater.* 2017, 1702741
- [282.](#) Marialuisa Siepi, Eden Morales-Narváez, Neus Domingo, Daria Maria Monti, Eugenio Notomista, Arben Merkoçi, Production of biofunctionalized MoS₂ flakes with rationally modified lysozyme: a biocompatible 2D hybrid material, *2D Mater.* 4 (2017) 035007
- [283.](#) Alarcon-Angeles, G.; Álvarez-Romero, G. A.; Merkoçi, A. 2018. Electrochemical Biosensors: Enzyme Kinetics and Role of Nanomaterials. In: Wandelt, K., (Ed.) *Encyclopedia of Interfacial Chemistry: Surface Science and Electrochemistry*, vol. 7, pp 140–155.
284. Andrzej Chalupniak, Arben Merkoçi. “Graphene Oxide–Poly(dimethylsiloxane)-Based Lab-on-a-Chip Platform for Heavy-Metals Preconcentration and Electrochemical Detection”, *ACS Appl. Mater. Interfaces* 2017, 9, 44766–44775
- [285.](#) Majlinda VASJARI, Arben MERKOÇI, “NANOTECHNOLOGY AND BIOSENSORS: IMPACT IN HEALTH, ENVIRONMENT, SAFETY AND SECURITY OF ALBANIA”, Special Issue of Journal of Natural and Technical Sciences (JNTS), No 43 / 2017 (XXII), PUBLISHED BY THE ACADEMY OF SCIENCES OF ALBANIA JNTS JOURNAL OF NATURAL AND TECHNICAL SCIENCES
286. Baptista-Pires L., Orozco J., Guardia P., Merkoçi A. “Architecting Graphene Oxide Rolled-Up Micromotors: A Simple Paper-Based Manufacturing Technology”, *Small*; 14 (3, 1702746) 2018. 10.1002/smll.201702746.
- [287.](#) Sevinc Kurbanoglu, Sibel A. Ozkan, Arben Merkoçi, “Electrochemical biosensors in pharmaceutical analysis”, Chapter 8, *Recent Advances in Analytical Techniques*, 2018, Vol. 2,

302-353.

288. Alarcon-Angeles G., Palomar-Pardavé M., Merkoçi A. "2D Materials-based Platforms for Electroanalysis Applications", *Electroanalysis*; 30 (7): 1271 - 1280. 2018. 10.1002/elan.201800245.

289. Liu J., Morales-Narváez E., Orozco J., Vicent T., Zhong G., Merkoçi A., "Bioluminescent nanopaper for rapid screening of toxic substances", *Nano Research*; 11 (1): 114 - 125. 2018. 10.1007/s12274-017-1610-7. IF: 7.354

290. Nagar B., Dubal D.P., Pires L., Merkoçi A., Gómez-Romero P., "Design and Fabrication of Printed Paper-Based Hybrid Micro-Supercapacitor by using Graphene and Redox-Active Electrolyte", *ChemSusChem*; 11 (11): 1849 - 1856. 2018. 10.1002/cssc.201800426.

291. Capoferri D., Álvarez-Diduk R., Del Carlo M., Compagnone D., Merkoçi A., "Electrochromic Molecular Imprinting Sensor for Visual and Smartphone-Based Detections", *Analytical Chemistry*; 90 (9): 5850 - 5856. 2018. 10.1021/acs.analchem.8b00389.

292. De la Escosura-Muñiz A., Espinoza-Castañeda M., Chamorro-García A., Rodríguez-Hernández C.J., de Torres C., Merkoçi A., "In situ monitoring of PTHLH secretion in neuroblastoma cells cultured onto nanoporous membranes", *Biosensors and Bioelectronics*; 107: 62 - 68. 2018. 10.1016/j.bios.2018.01.064.

293. Liu J., Morales-Narváez E., Vicent T., Merkoçi A., Zhong G.-H., "Microorganism-decorated nanocellulose for efficient diuron removal", *Chemical Engineering Journal*; 354: 1083 - 1091. 2018. 10.1016/j.cej.2018.08.035.

294. Quesada-González D., Merkoçi A. Nanomaterial-based devices for point-of-care diagnostic applications, *Chemical Society Reviews*; 47 (13): 4697 - 4709. 2018. 10.1039/c7cs00837f.

295. Yakoh A., Álvarez-Diduk R., Chailapakul O., Merkoçi A., "Screen-Printed Electroluminescent Lamp Modified with Graphene Oxide as a Sensing Device", *ACS Applied Materials and Interfaces*; 10 (24): 20775 - 20782. 2018. 10.1021/acsami.8b04883.

296. Russo L., Merkoçi F., Patarroyo J., Piella J., Merkoçi A., Bastús N.G., Puentes V., "Time- and Size-Resolved Plasmonic Evolution with nm Resolution of Galvanic Replacement Reaction in AuAg Nanoshells Synthesis", *Chemistry of Materials*; 30 (15): 5098 - 5107. 2018. 10.1021/acs.chemmater.8b01488.

297. Russo L., Puentes V., Merkoçi A., "Tunable electrochemistry of gold-silver alloy nanoshells", *Nano Research*, 11, pp 6336–6345, 2018.

298. Daniel Quesada-González, Grace A. Jairo, Robert C. Blake II, Diane A. Blake, Arben Merkoçi, "Uranium (VI) detection in groundwater using a gold nanoparticle/paper-based lateral flow device" *Scientific Reports*, volume 8, Article number: 16157 (2018)299. Mohga Khater, Alfredo de la Escosura-Muñiz, Daniel Quesada-González, Arben Merkoçi "Electrochemical detection of plant virus using gold nanoparticle-modified electrodes", *Analytica Chimica Acta*, 1046, 123-131.2019.

300. Baptista-Pires L. de la Escosura-Muñiz A., Balsells M., Zuaznabar-Gardona J.C., Merkoçi A., "Production and printing of graphene oxide foam ink for electrocatalytic applications", *Electrochemistry Communications*, 98, 6-9. 2019

301. Nagar B., Balsells M., de la Escosura-Muñiz A., Gomez-Romero P., Merkoçi A., "Fully printed one-step biosensing device using graphene/AuNPs composite", *Biosensors and Bioelectronics*, 129, 238-244. 2019.

From the above list:

Books

1. Salvador Alegret, Manel del Valle, Arben Merkoçi, [Sensores Electroquímicos](#) (In Spanish; 172 pp). Printed in Catalunya; Publisher: Universitat Autònoma de Barcelona, Servei de publicacions, ISBN: 84-490-2361-0
2. Salvador Alegret, Arben Merkoçi, ed. "[Electrochemical sensor analysis](#)", Volume 49 of Comprehensive Analytical Chemistry, Elsevier B.V., p.143-161, 2007 ([See ECSA News Letter](#))
3. Arben Merkoçi, "[BIOSENSING USING NANOMATERIALS](#) ", Edited by Arben Merkoçi, Wiley-Interscience, 2009.

Book Chapters

1. Arben Merkoçi, Ana Sastre, Besnik Baraj, Jose L. Cortina, Carlo Macca, "Characterization of Di(2-Ethylhexyl) thiophosphoric acid by potentiometric titration and capillary zone electrophoresis" New directions in electroanalytical chemistry, ISBN:1566771617. Leddy, Johna /Publisher:Electrochemical Society Published 1996/09, p.397-404 (<https://bookweb.kinokuniya.co.jp/guest/cgi-bin/booksea.cgi?ISBN=1566771617>)
2. S. Alegret and A. Merkoçi, "[Composite and biocomposite materials for electrochemical sensing](#)", S. Alegret, ed., Integrated analytical systems, Amsterdam, Elsevier, 2003, pp 377-412 ISBN: 0-444-51037-0 (NL)
3. S. Alegret, A. Merkoçi, M.I. Pividori and M. del Valle, Chapter: "[Electrochemical \(bio\)sensors based on rigid conducting carbon-polymer composites](#)", Enciclopedia of Sensors, 2004, Edited by: Craig A. Grimes, Elizabeth C. Dickey, and Michael V. Pishko. The Pennsylvania State University, University Park, USA. Forwarded by: Professor Rudolph A. Marcus, Nobel Prize Laureate. <http://www.aspbs.com/eos/> (In press) 2005
4. A.Merkoçi, S.Alegret, "Quantum dots (QDs) as tracers for DNA electrochemical sensing systems". Chapter 26 at: Nanotechnology in Biology and Medicine. Methods, Devices and Applications, 2007, p. 26-1 to 26-16, Editor: [Tuan Vo-Dinh, CRC Press](#), ISBN 0-8493-2949-3
5. Arben Merkoçi, Maria Teresa Castañeda, Salvador Alegret, [Stripping analysis of heavy metals by using mercury free composite based sensors](#), 'Pure & Applied Analytical Chemistry', Edited by Research SignPost, E. Palomar, 2005
6. Briza Pérez, Arben Merkoçi, "Application of carbon nanotubes in analytical chemistry", Chapter at "Chemistry of Carbon Nanotubes" (V.A. Basiuk and E.V. Basiuk, Eds.). American Scientific Publishers. 2008.
7. Arben Merkoçi, Salvador Alegret, "Graphite-epoxy electrodes for stripping analysis", Chapter 7 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., p.143-161, 2007
8. A. Merkoçi, U.Kirköz, S.Alegret, "Determination of lead and cadmium in tap water and soils by stripping analysis using mercury-free graphite-epoxy composite electrodes", Procedure 7 at Volume 49 "Electrochemical Sensor Analysis" Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., e47-52, 2007
9. M.Pumera, A.Merkoçi, S.Alegret, "Analysis of nitroaromatic explosives with microchip electrophoresis using a graphite-epoxy composite detector", Procedure 49 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., e351-355, 2007

10. M.T. Castañeda, M. Pumera, S. Alegret, A. Merkoçi, "Procedure 53. DNA analysis by using gold nanoparticle labels", Procedure 53 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., e381-388, 2007
11. M.Pumera, A.Merkoçi, S.Alegret, "Microchip electrophoresis/electrochemistry systems for analysis of nitroaromatic explosives", Chapter 35 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., p.873-884, 2007
12. Arjan Durresi, Arben Merkoci, Mimoza Durresi, Leonard Barolli, "Integrated Biomedical System for Ubiquitous Health Monitoring". Chapter at: T. Enokido, L. Barolli, and M. Takizawa (Eds.): NBiS 2007 (Springer-Verlag Berlin Heidelberg 2007), LNCS 4658, pp. 397–405, 2007.
13. M.T. Castañeda, S. Alegret, A. Merkoçi, "Chapter 38. Gold nanoparticles in DNA and protein analysis", Chapter 38 at Volume 49 "Electrochemical Sensor Analysis", Alegret and Merkoçi (Eds), Comprehensive Analytical Chemistry, Elsevier B.V., p.941-958, 2007
14. Maria Teresa Castañeda, Salvador Alegret, Arben Merkoçi, "Electrochemical Detection of DNA Hybridization Using Micro and Nanoparticles" Chapter 9 at Avraham Rasooly and Keith E. Herold (eds.), [Methods in Molecular Biology: Biosensors and Biodetection](#), © Humana Press (DOI:10.1007/978-1-60327-569-9_9) 2009, Vol. 504, p. 127-143.
15. Alfredo de la Escosura, Adriano Ambrosi, Salvador Alegret, Arben Merkoçi, "Electrochemical Immunosensing Using Micro and Nanoparticles", Chapter 10 at Avraham Rasooly and Keith E. Herold (eds.), [Methods in Molecular Biology: Biosensors and Biodetection](#), © Humana Press (DOI:10.1007/978-1-60327-569-9_9) 2009, Vol. 504, p. 145-155
16. Adriano Ambrosi, Maria Teresa Castañeda, Alfredo de la Escosura-Muñiz, Arben Merkoçi, "Gold nanoparticles a powerful label for affinity electrochemical biosensors", Chapter 6, "BIOSENSING USING NANOMATERIALS – BIONANO", Edited by Arben Merkoçi, Wiley-Interscience, 2009
17. Arben Merkoçi, Roza Allabashi, Alfredo de la Escosura-Muñiz, "Inductively coupled plasma mass spectroscopy of nanoparticles. New horizons for biosensing applications", Chapter 12, "BIOSENSING USING NANOMATERIALS – BIONANO", Edited by Arben Merkoçi, Wiley-Interscience, 2009.
18. R. Cartas, L. Moreno-Barón, A. Merkoçi, S. Alegret, M. del Valle, J.M. Gutiérrez, L. Leija, P.R. Hernandez, R. Muñoz, "Multivariate Calibration Model for a Voltammetric Electronic Tongue Based on a Multiple Output Wavelet Neural Network", 137, Chapter 9, p.137-164, Agustín Gutiérrez and Santiago Marco (Eds.), [Biologically Inspired Signal Processing for Chemical Sensing](#), Studies in Computational Intelligence, Volume 188, 2009.

Special Journal Issues Editions

1. A.Merkoçi, S.Alegret, "Analytical Nanoscience and Nanotechnology", Guest Editors of the Special Issue of Contribution to Science, 2005
2. A.Merkoçi, Ed. "Carbon nanotubes in Chemistry", Special Issue of Microchimica Acta, 2005
3. Arben Merkoçi, Ed., "Nanobiomaterial Application in Electrochemical Analysis" Special Issue of Electroanalysis on Nanobiomaterials, Wiley InterScience, Volume 19, Issue 7-8, April 2007.

Invited talks and plenary lectures in congress, meetings and research institutes, centers.

Arben Merkoçi, "Paper-based nanobiosensors", Invited talk at Editorial Session: ELSEVIER BIOSENSORS AND BIOELECTRONICS, at Euroanalysis Conference, Istanbul, Turkey, September 2-5, 2019

Arben Merkoçi, "Graphene-based biosensors", Plenary lecture at Euroanalysis Conference, Istanbul, Turkey, September 2-5, 2019

Arben Merkoçi, "Nanobiosensors for diagnostics: from health, environment to safety and security applications", Keynote talk at CIS2019 Conference "Chemistry meets Industry and Society", Salerno, Italy, 28-30 August 2019

Arben Merkoçi, "Graphene-based platforms for diagnostics", Invited presentation at "9th Edition of European Conference in Graphene and 2D Materials", June 25-28 2019, Rome, Italy.

Arben Merkoçi, "Nanobiosensors for Diagnostics Applications", Keynote talk at Point-of-Care, Biosensors & Mobile Diagnostics Europe 2019, 18 June 2019, Rotterdam, Netherland.

Arben Merkoçi, "Nanobiosensors for Diagnostics Applications", Invited at The Hong Kong University of Science and Technology, Hong Kong, June 13d, 2019

Arben Merkoçi, "Integrated Smart Effective Nanodiagnostics", Invited Talk at "WuHan University of Science and Technology", Wuhan, China, June, June 12, 2019

Arben Merkoçi, "Smartphone coupled paper-based nanobiosensor for cancer biomarkers detection", Invited talk at 5th EuroNanoMed Review seminar for funded projects, May 28th and 29th 2019, Bratislava, Slovakia

Arben Merkoçi, "Nanomaterial-based devices for diagnostics applications", Invited talk at Okinawa Institute of Science and Technology Graduate University, Okinawa, Japan April 18th, 2019,

Arben Merkoçi, "Nanobiosensors for diagnostics applications", Invited Lecture at Department of Chemistry, Keio University, Japan, April 15th 2019

Arben Merkoçi, "Nanobiosensors for diganpostics applications", Invited talk at London Centre for Nanotechnology, UCL, London, UK, March 18th 2019.

Arben Merkoçi, "Graphene-based biosensors for diagnostics", Keynote lecture at Graphene for US, New York, USA, Febr. 14-15th, 2019

Arben Merkoçi, "Nanomaterial-based devices for diagnostics applications", Invited talk at Advanced Science Research Center (ASRC) at the CUNY Graduate Center, New York, USA, Febr. 11th, 2019

Arben Merkoçi, Invited Lecture, "Nanobiosensors for diagnostics applications", Invited lecture, Department of Information Engineering, Universita degli Studi di Padova, Italy, January 17th, 2019.

Arben Merkoçi, "Nanobiosensors for safety and security applications", Keynote lecture, NanoSD2018 Security & Defense, December 11 & 12, 2018, Madrid, Spain.

Arben Merkoçi, "Nanomaterials-based biosensors for diagnostics applications", Distinguished lecture in biological engineering, EPFL, Lausanne, Switzerland, Dec. 10th, 2018.

Arben Merkoçi, "Heavy Metals Detection using Screen printed Carbon electrodes", Oral presentation First Scientific Symposium on Health and Climate Change 2018 - Istituto Superiore di

Sanità, December 3-5, 2018, Rome, Italy.

Arben Merkoçi, "Graphene-Based Biosensors", EU-Japan Symposium on Application of Graphene and Related 2D Materials, organized by AIST Graphene Consortium. Tokyo, Japan, Nov. 22d. 2018

Arben Merkoçi, "Graphene-based biosensors for diagnostics", Invited talk, 3rd Japan-EU Flagship Workshop on Graphene & 2D Materials, Tohoku University, Sendai, Japan, Nov. 19th ~ 21st, 2018

Arben Merkoçi, "Nanobiosensors design and applications in diagnostics" Invited Talk, Department of Chemistry and Biochemistry, Mendel University in Brno, Czech Republic, No. 6th, 2018.

Arben Merkoçi, "Nanomaterials-based biosensors for diagnostics applications", Invited "Frontiers of Science (FoS) seminar", BioCity and Åbo Akademi University, Turku, Finland, October 11th, 2018.

Arben Merkoçi, "Cost-effective and Globally Deployable Mobile Diagnostics Using Paper-Based Nanobiosensors", Keynote presentation, Select Biosciences Point-of-Care Diagnostics and Biosensors World Congress 2018 — 1-3 October 2018, Coronado Island/San Diego, California, USA.

Arben Merkoçi, "Nanobiosensors in diagnostics", Invited lecture, 1st Global Congress of Pharmacy Faculties. Innovation in Pharmacy: Advances and perspectives, Salamanca, Spain, 25th-28th September 2018

Arben Merkoçi, "Graphene-based biosensors", Invited talk, International Graphene Innovation Conference (GRAPCHINA), September 19-21, 2018, Xi'an, China.

Arben Merkoçi, "Graphene-based biosensors for diagnostics", Keynote talk, Graphene Week 2018, 10-14 September, San Sebastian, Spain

Arben Merkoçi, "Nanobiosensors designs and applications in health diagnostics, environment monitoring, safety and security", Invited talk. 28th Summer PhD School of Information Engineering (SSIE), Brixen, Italy, 23rd to the 27th of July 2018.

Arben Merkoçi, "Nanobiosensors in diagnostics applications" Invited Talk, The 43d Federation of European Biochemical Societies (FEBS) Congress, 7-12 July 2018, Prague, Check Republic.

Arben Merkoçi, "Diagnostics using paper-based platforms", Plenary Talk, 12 International Symposium on Pharmaceutical Sciences, June 26-29, Ankara, Turkey.

Arben Merkoçi, "Biosensors @ ICN2", Invited Talk, 2018 BIST Conference, June 27, Barcelona, Spain.

Arben Merkoçi, Graphene-based bisoensors", Keynote Talk, 28th Anniversary World Congress on Biosensors (Biosensors 2018) taking place in Miami, Florida, USA, June 12-15, 2018

Arben Merkoçi, "Nanobiosensors Design and Applications in Diagnostics", Keynote Presentation, Select Biosciences Point-of-Care Diagnostics and Biosensors Europe 2018 — 5-6 June 2018, Rotterdam, The Netherlands.

Arben Merkoçi, "Nanobiosensors for diagnostics applications", Invited Talk, Istituto Italiano di Tecnologia (IIT), Genova, Italy, May 31st, 2018

Arben Merkoçi, "Nanobiosensors for diagnostics", Invited Talk, Catalan Institute for Water Research (ICRA), Girona, Spain, March 1st, 2018

Arben Merkoçi, "Nanobiosensors for diagnostics applications", Invited talk, INL - Lyon Institute of

Nanotechnology, Lion, France, Febr. 8th, 2018

Arben Merkoçi, Invited Lecture, "Nanobiosensors for diagnostics applications", Invited lecture, Department of Information Engineering, Università degli Studi di Padova, Italy, January 17th, 2018.

Arben Merkoçi, "Nanobiosensors for diagnostics", Invited talk at BioSystems S.A., 29.11.2017, (www.biosystems.es), Barcelona, Spain

Arben Merkoçi, "Nanobiosensors for diagnostics", Invited talk at European Foundation for the Study of Chronic Liver Failure - EF Clif, Barcelona, Spain, November 28th 2017

Arben Merkoçi, "Health and environment diagnostics using paper-based nanobiosensors", Keynote Talk, NanoBioMed Conference, 22-24 Nov. 2017, Barcelona, Spain

Arben Merkoçi, "Graphene-based platforms for biosensing applications", Invited Talk, Graphene Connect workshop - Biomedical Technologies, 16 November 2017, Dusseldorf, Germany.

Arben Merkoçi, "Paper-based Nanobiosensors: Diagnostics Going Simple", Keynote Talk, Lab-on-a-Chip & Microfluidics World Congress 2017, Coronado Island, California, USA, October 2-4, 2017

Arben Merkoçi, "Diagnostics with paper-based sensors using nanomaterials as signalling tools", Keynote talk, NanoBioSensor Conference, Dresden, Germany, Sept., 4-5, 2017

Arben Merkoçi, "Nanomaterials-based sensors for diagnostics" Invited talk at Instituto de Química Orgánica General, CSIC, Madrid, Spain, May 31st, 2017, Madrid, Spain.

Arben Merkoçi, "Nanobiosensors based on printing onto paper or plastic platforms", Keynote talk at General Assembly of ESMA 2017 (www.esma.com), Lisbon (Portugal), 24th of March 2017.

Arben Merkoçi, Diagnostics using nanobiosensors, Invited talk in Beijing Institute of Technology, Beijing, China, March 15th, 2017

Arben Merkoçi, Diagnostics using nanobiosensors, Invited talk in School of Biological Sciences & SynthSys, University of Edinburgh, Edinburgh, UK, February 23^d, 2017

Arben Merkoçi, "Nanobiosensors for diagnostics", Invited lecture, Universidad de Alicante, Departamento de Química Física, Instituto Universitario de Materiales, Alicante, Spain, February 21st, 2017

Arben Merkoçi, "Promoting the establishment of Centres of Excellence in Albania and the impacts on promoting Albanian young scientists", Invited panel discussion, Workshop: Capacity Building and Knowledge Transfer in Albania, February 16-17, 2017, Tirana, Albania

Arben Merkoçi, Invited Lecture, "Nanobiosensors for diagnostics: from plastic to simple paper-based platforms", Invited lecture, Department of Information Engineering, Università degli Studi di Padova, Italy, January 19th, 2017.

Arben Merkoçi, Rudolf Zahradník Award Lecture, "Nanobiosensors for diagnostics: from plastic to simple paper-based platforms", Olomouc University, Czech Republic, December 14th, 2016.

Arben Merkoçi, "Paper-based nanobiosensors in diagnostics: from health, safety and security to environment monitoring", Invited speaker at NanoBioMed Conference, Barcelona, November 23^d, 2016.

Arben Merkoçi, "Nanobiosensors in Diagnostics", Invited talk at 2nd Annual Bioelectronics & Biosensors Congress, November 2016, London, UK

Arben Merkoçi, "Graphene-based platforms for (bio)sensing applications", Invited Talk at Graphene & 2-D Materials Conference: From Research to Applications, NPL UK, 16 & 17 November 2016

Arben Merkoçi, "Paper-based nanobiosensors: simple biosensing platforms compatible with smart phones", Plenary talk at: Rapid Methods Europe, The RME Conference Series, 11th Conference Food, Feed, Water Analysis, Animal Human Diagnostics, 7-9 November 2016, Amsterdam, Netherland.

Arben Merkoçi, "Nanobiosensors for diagnostics applications", Invited talk at Institute of Aquaculture, University of Stirling, Stirling, Scotland, UK, November 3d, 2016

Arben Merkoçi, "Paper-based biosensors for diagnostics" Invited talk at 2nd Microfluidics Congress UTILISING MICROFLUIDIC TECHNOLOGIES AS A TOOL FOR PROGRESSING MEDICAL RESEARCH AND PATIENT CARE, 20-21 October, 2016, London, UK

Arben Merkoçi, "Nanomaterial-based biosensors", Invited talk at FIRST WORKSHOP ON ELECTROCHEMISTRY DEVICES: (Bio)Sensors – Porto, Portugal, October 13-14, 2016

Arben Merkoçi, "Nanomaterials-based sensors for diagnostics applications", Plenary talk at 3rd International Congress on Biosensors, Ankara, Turkey, 5th-7th October 2016.

Arben Merkoçi, "Graphene-based biosensors", Invited Talk at "International Graphene Innovation Conference (GRAPCHINA 2016), Gingdao, China, Sept. 24th, 2016

Arben Merkoçi, "Nanobiosensors for diagnostics applications", Keynote Lecture at AACC CPOCT INTERNATIONAL SYMPOSIUM, The Benefits and Challenges of Point-of-Care Testing Across the Clinical Spectrum, September 21-24, 2016, Copenhagen, Denmark

Arben Merkoçi, "Paper-based sensors", Invited talk at Sensors STRATEGIC WORKSHOP, National Institute of R&D for Technical Physics, September 20-21, 2016, Iasi, Rumania.

Arben Merkoçi, "Paper-based sensors for diagnostics", Invited talk at National Center for NanoSci & Tech, Beijing, China, July 25th, 2016

Arben Merkoçi, "Paper-based sensors for diagnostics", Plenary talk at "Optofluidics 2016", Beijing, China, July 25-27, 2016

Arben Merkoçi, "Nanobiosensors-based diagnostics", Invited talk at University of Alcalá de Henares in the framework of PhD School of Chemistry, Juny 24th, 2016

Arben Merkoçi, "Nanobiosensors-based diagnostics", Invited talk at Institute for Materials Science and Max Bergmann Center of Biomaterials, Dresden University of Technology, Dresden, Germany, June 16th, 2016

Arben Merkoçi, "Graphene-based Platforms for Biosensing Applications", Plenary Talk, Nanotech France 2016, Nanotech France 2016 International Conference and Exhibition, 01 Jun - 03 Jun 2016, Paris- France

Arben Merkoçi, Invited talk, "Paper-based nanobiosensors" ALBNANO 2016, Workshop on NANOTECHNOLOGY AND BIOSENSORS Impact in health, environment, safety and security of Albania, A collaboration event between Albania and Spain, May 29-31 2016 in Tirana, Albania

Arben Merkoçi, Plenary lecture, "Nanotechnology and Biosensors: Opportunities in Albania" Academy of Sciences of Albania, Preconference of ALBNANO 2016, Workshop on NANOTECHNOLOGY AND BIOSENSORS Impact in health, environment, safety and security of Albania, A collaboration event between Albania and Spain, May 29-31 2016 in Tirana, Albania

Arben Merkoçi, "From paper to nanopaper-based biosensors. Current challenges and future perspectives", Keynote talk, Biosensors 2016, 26th Anniversary World Congress on Biosensors, 25-27 May 2016, Gothenburg, Sweden

Arben Merkoçi, "Graphene-based Platforms for Biosensing Applications", Invited talk at "Graphene and related materials: properties and applications, GM-2016" International Conference, Paestum, Italy, May 23 - 27, 2016

Arben Merkoçi, "NANOBIOSSENSORS FOR DIAGNOSTICS", Invited talk Université Tunis El-Manar, Faculté des Sciences de Tunis, Département de Chimie, Campus Universitaire de Tunis El-Manar, Tunis, Tunisia, May 19th, 2016

Arben Merkoçi, "NANOBIOSSENSORS-BASED DIAGNOSTICS", Invited talk at Institute of Chemistry - UNICAMP, Campinas-SP, Brazil, April 28th, 2016

Arben Merkoçi, "NANOBIOSSENSORS-BASED DIAGNOSTICS", Invited talk at School of Bioanalytical Chemistry, University – Unicamp, Campinas, Brazil, April 26th, 2016

Arben Merkoçi, "Graphene biosensors in diagnostics", Invited talk at 6th edition of Graphene Conference Series, European Event in Graphene and 2D Materials, Genoa, Italy, 19th - 22th of April 2016.

Arben Merkoçi, "Diagnostics using nanobiosensors", Kenote lecture at: BioNanoMed 2016 - Nanotechnologyenables Personalized Medicine, April 6-8, 2016, Krems /Austria

Arben Merkoçi, GRAPHENE-BASED PLATFORMS FOR BIOSENSING APPLICATIONS, Keynote at: 2-D Materials Workshop, Organized by The Karlsruhe Institute of Technology (KIT), the National Institute of Standards and Technology (NIST), the Swiss Federal Laboratories for Materials Science and Technology (Empa) and the Federal Institute for Materials Research and Testing Germany (BAM), March 21-23 2016, Switzerland.

<http://www.nanomat.de/2DMat2016.php>

A.Merkoçi, "DIAGNOSTIC DEVICES USING GRAPHENE AND OTHER NANOMATERIALS", Invited Talk at NanoSpain2016 - www.nanospainconf.org/2016 Logroño (Spain) - March 15-18, 2016

A.Merkoçi, "NANOBIOSSENSORS IN DIAGNOSTICS APPLICATIONS", Invitet talk at Tor Vergata University, Department of Chemistry, March 9th, 2106

A.Merkoçi, "NANOBIOSSENSORS FOR DIAGNOSTICS APPLICATIONS", Key Note Lecture at: CONFERENCE ADVANCED FUNCTIONAL & INDUSTRIAL PRINTING, 2-3 MARCH 2016 - RADISSON BLU SCANDINAVIA, DÜSSELDORF, GERMANY

A.Merkoçi, "PAPER-BASED OPTICAL BIOSSENSORS FOR ACCURATE ENOUGH DIAGNOSTICS. A hot topic of nowadays research and development with interest for technology transfer to the market", Research trend presentation at Photonics PPP Annual Meeting 2016 in Brussels (WG3, Health), Brussel, March 2d, 2016.

A.Merkoçi, "NANOMATERIALS-BASED BIOSSENSORS: FROM HEALTH TO SAFETY AND SECURITY APPLICATIONS", Invited talk at: National Institute of Biology (NIB), Ljubljana, Slovenia, February 24th, 2016.

A.Merkoçi, "NANOMATERIALS-BASED BIOSSENSORS: FROM HEALTH TO SAFETY AND SECURITY APPLICATIONS", Invited talk at: National institute of biology, Marine biology station Piran, Piran, Slovenia, February 23^d, 2016.

A.Merkoçi, "BUILDING SIMPLE PLASTIC AND PAPER-BASED DIAGNOSTIC DEVICES USING GRAPHENE AND OTHER NANOMATERIALS", Invited Talk at Cambridge Graphene Centre, University of Cambridge, United Kingdom, January 28th, 2016.

A.Merkoçi, "Nanomaterials-based biosensors and applications", Invited talk at "SHORT COURSE ON RAPID SCREENING OF AQUATIC ORGANIC POLLUTION AND TOXICITY USING BIOASSAYS AND BIOSENSORS" (organized by the coordinators of GLOBAQUA FP7 EU, project grant agreement N°603629), Barcelona, 26-27 November 2015

A.Merkoçi, "Biosensors performance enhancement using nanomaterials", Kynote Lecture, The Seventh International Workshop on Biosensors for Food Safety and Environmental Monitoring, Erfoud (Morocco), from 19th to 21st November, 2015.

A.Merkoçi, "Graphene-based platforms for sensing and biosensing", Invited Lecture, 2015' International Graphene Innovation Conference (GRAPCHINA 2015), 28-30 October, 2015 Qingdao China.

A.Merkoçi, "Paper/plastic nanobiosensors for food and environmental applications", Invited lecture, Chemical Engineering department, Polytechnique Montreal, October 17th, 2015

A.Merkoçi, "Diagnostics with graphene-based materials", Invited Lecture, 1st edition of the Graphene & 2D Materials International Conference and Exhibition, Montreal, Canada, October 14-16, 2015.

A.Merkoçi, "Paper/Plastic-based Nanomicrofluidics and Nanobiosensing Enhancement Opportunities", Keynote presentation, Point-of-Care Diagnostics & Global Health World Congress, 28-30 September 2015, San Diego, California, USA

A.Merkoçi, "Graphene-based platforms for biosensing applications", MAGISTERIAL LECTURE, VI Congreso Internacional de Docencia e Investigación en Química, Universidad Autónoma Metropolitana, Unidad Azcapotzalco, Mexico DF, Mexico, 23 September 2015

A.Merkoçi, "NANOMATERIALS-BASED BIOSENSORS: FROM HEALTH TO SAFETY AND SECURITY APPLICATIONS", Invited talk at the Biosensors & Bioelectronics Centre, IFM, Linköping University, Sweden. September 8th, 2015.

A.Merkoçi, "Development of simple paper/plastic-based nanobiosensors for diagnostics Applications", Invited Lecture, at The Gwent Group, Pontypool, United Kingdom, July 20th, 2015

Arben Merkoçi "Development of simple paper/plastic-based nanobiosensors for diagnostics Applications", Invited Lecture, at "Nanoscience and Nanotechnology Joint Symposia Barcelona Nanocluster-RBNI Technion", 5-7 July 2015, Haifa, Israel

A.Merkoçi, "Nanodiagnostics with simple paper/plastic-based platforms", Plenary Lecture, 11th International Symposium on Pharmaceutical Science (ISOPS- 11), 09-12 June 2015, Ankara, Turkey.

A.Merkoçi, "Nanomaterials and Plastic/Paper-Based Sensors for Diagnostics Applications", Plenary Lecture, First Tunisian Chemical Society Conference on Coordination Chemistry, 8-10 May 2015, Hammamet, Tunisia

A.Merkoçi, "Nanobiosensors for diagnostics", Keynote lecture, SPIE Microtechnologies, 4-6 May in Barcelona, Spain

A.Merkoçi, "Paper/plastic nanobiosensors for food and environmental applications", 10th conference Food Feed Water Analysis innovations and breakthroughs, Noorderwijkerhout, the Netherlands, 20-22 April 2015.

A.Merkoçi, "NANOMATERIALS-BASED BIOSYSTEMS FOR DIAGNOSTICS APPLICATIONS", Invited talk at DATE (Design Automation and Test Conference, <http://www.date-conference.com/>), 9-13 March 2015, Grenoble, France

A.Merkoçi, NANOMATERIALS-BASED BIOSENSORS: FROM HEALTH TO SAFETY AND SECURITY APPLICATIONS, Invited talk at Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok, Thailand, March 30th, 2015

A.Merkoçi, "Nanomaterials and plastic/paper-based sensors for diagnostics applications", Invited Talk at "Workshop: Next Generation Tools for DNA diagnostics", Edinburgh, UK, 26.02.2015.

A.Merkoçi, "Clinical and environment diagnostics using nanobiosensors", Invited lecture at Universitat Pompeu Fabra, Barcelona, Spain, February 20th, 2015

A.Merkoçi, "NANOBIOSENSORS AND APPLICATIONS IN DIAGNOSTICS", Lecture at University of Girona, Girona, Spain, 18.02.2015

A.Merkoçi, "NANOBIOSENSORS AND APPLICATIONS IN DIAGNOSTICS", Keynote Talk, Nanoscience and Nanotechnology International Conference, 11-13 February 2015, Porto, Portugal

A.Merkoçi, "Nanobiosensor Application in Medical and Environment Technology", Plenary Lecture, Chemistry Fair 2014, Department of Chemistry, Universitas Indonesia, Indonesia, November 20th, 2014.

A.Merkoçi, "How to Develop Grand Design Research: Trend Topics in Nanobiotechnology", Plenary Lecture, Makara Journal of Science Research Colloquium 2014, Universitas Indonesia, Indonesia, November 19th, 2014

A.Merkoçi, "NANOMATERIALS-BASED PLATFORMS FOR BIOSENSING APPLICATIONS", Plenary Lecture, 9^{èmes} JOURNEES MAGHREB-EUROPE, MATERIAUX ET APPLICATIONS AUX DISPOSITIFS ET CAPTEURS, MADICA 2014, MAHDIA (Tunisie), 5 Novembre – 7 Novembre 2014

A.Merkoçi, "Graphene-based platforms for electrical and optical biosensing", Invited Lecture, 15th edition of Trends in Nanotechnology International Conference (TNT2014), Barcelona (Spain), Oct. 27-31, 2014.

A.Merkoçi, "Nanodevices for Societal Challenges- Life", Invited Lecture Sponsored by ICN2 - Severo Ochoa Excellence Center, 15th edition of Trends in Nanotechnology International Conference (TNT2014), Barcelona (Spain), Oct. 27-31, 2014.

A.Merkoçi, "NANOMATERIALS-BASED PLATFORMS FOR BIOSENSING APPLICATIONS", Invited Lecture at Department of Computer Science and Technology, University of Bedfordshire, University Square, Luton, UK, October 21st, 2014

A.Merkoçi, "Nanomaterials in diagnostics and sensoremoval applications", Invited Lecture, 14AS JORNADAS DE ANÁLISIS INSTRUMENTAL, Barcelona (Spain), Oct. 1-3, 2014

A.Merkoçi, "NANOMATERIALS-BASED ELECTROCHEMICAL BIOSENSING PLATFORMS", XIV^{ème} colloque du Groupe Français de Bioélectrochimie, LE LAZARET, SETE, France, Sept. 24th, 2014.

A.Merkoçi, "Nanomaterials-based biosensing platforms", 2nd International Conference on Applied Biotechnology, Plenary Lecture, Tirana, Albania, September 22nd 2014

A.Merkoçi, "Nanobiosensing devices using plastic and paper-based platforms", Plenary lecture at 2nd International Conference on Analytical Chemistry, Valahia University of Targoviste September 17, 2014 – September 21, 2014

A.Merkoçi, "Graphene-based sensing and biosensing platforms", Invited Speaker, International Graphene Innovation Conference (GRAPCHINA 2014), Organized by China Innovation Alliance of the Graphene Industry (CGIA), Ningbo (China), 1st to 3rd September 2014.

A.Merkoçi, "Nanobiosensing and actuating in lab-on-chip and paper-based lateral flow platforms", Invited talk at the Conference "New frontiers of nanomaterial technologies for applications in biology and medicine", Tirana, Albania, July 10th-11st, 2014.

A.Merkoçi, "Biosensing using graphene", Invited talk, Graphene & 2D Materials, Singapore-Spain Workshop, Singapore, June 19-20, 2014

A.Merkoçi, "Nanomaterials as signalling and actuation tools in biosensing", Invited talk at EHPS2014 - Electrospinning for High Performance Sensing, Monterotondo, Rome, Italy, April 29th-30th, 2014

A.Merkoçi, "Nanomaterials-based biosensing systems for diagnostics and environment monitoring applications", Invited talk at Department of Chemical Sciences, University of Naples "Federico II", Napoli, Italy. April 28th, 2014

Arben Merkoçi, "Nanomaterials-based platforms for biosensing applications", Invited Lecture, Nagoya University, Nagoya, Japan, March 20th 2014

Arben Merkoçi, Invited Talk, "Carbon based electrodes in nanomaterials-involved biosensing systems", International Symposium on Diamond Electrochemistry, March 18 – 19, 2014, Keio University (Yagami Campus), Yokohama, Japan

Arben Merkoçi, Invited lecture "Recent trends and applications of nanomaterial-based biosensing systems", Conference: "Advances in Biodetection and Biosensors", 10-11 March, 2014, Berlin, Germany

A.Merkoçi, Point of care diagnostics using simple nanomaterials based platforms, Invited lecture at Universitat Pompeu Fabra, Barcelona, Spain, March 7th, 2014

A.Merkoçi, "Biosensing using nanomaterials" (12h)". Invited Lecture & Course in the 34th Summer School of Chemistry in Brazil. Summer course organized by "Universidade Federal de Sao Carlos – Departamento de Química", Rodovia Washington Luís, km 235, CEP 13565-905-Sao Carlos - SP. February 17 – 21, 2014.

A.Merkoçi, "Bioanalytical nanosystems. Building nanoblocks (Part I & II)", 3d BIOANALYTICAL NANOTECHNOLOGY SCHOOL, 29 January to 1 February 2014, Organized by University of Santo Tomas, Research Center for the Natural and Applied Sciences, University of Santo Tomas, España Blvd., Manila, Philipinnes.

Arben Merkoçi, "Nanomaterial-based biosensors for diagnostic, safety and security applications", Nanotecnologie per la sicurezza, Premio Nobel per la Pace 2013 alla OPCW: il ruolo della Accademia delle Scienze dell'Istituto di Bologna, Dicembre 5th, 2013, Accademia delle Scienze dell'Istituto di Bologna, Bologna, Italy

C.Parolo, A.Merkoçi "NANOMATERIAL-BASED DEVICES FOR POINT OF CARE APPLICATIONS" Second Workshop on Nanomedicine, Organized by "Institut de Biotechnologia i de

Biomedicina (UAB)” and “Campus de Excelencia Internacional de la Universitat Autònoma de Barcelona (UAB-CEI)”, October 8th, 2013, Hotel Campus UAB (Cerdanyola del Valles). Bellaterra, Barcelona, Spain.

A.Merkoçi, “Nanomaterials based platforms for biosensing applications”, Workshop on Biosensors for Food Safety and Environmental Monitoring, Workshop on Biosensors for Food Safety and Environmental Monitoring, Essaouira (Morocco). October 3rd to 5th 2013

A.Merkoçi, “Tuning biosensor response by nanomaterials and signal transducing architectures”, The Nano Award Lecture, Advanced Materials World Congress Çeşme (Turkey). 16-19 September, 2013.

A.Merkoçi, “Simple and efficient biosensing devices using plastic and paper based platforms”, Plenary lecture, National Congress of Analytical Chemistry, Sestri Levante, Genova from 15 to 19 September

A.Merkoçi, “Nanomaterials based devices in electrochemical bio-sensing technology”, Plenary Lecture at: 10th International Congress of Electrochemistry, Konya, Turkey, September 4th, 2013

A.Merkoçi, “Nanomaterials based biosensors”, Invited Lecture at Summer School of Univ. Rovira Virgili, Tarragona, Spain, July 8th, 2013

A.Merkoçi, “NANOMATERIALS BASED ELECTROBIOSENSING”, Internationally Participated Electrochemistry Workshop, Nanostructure Modified Electrochemical and Bioelectrochemical Systems, 23-28 June 2013, Mugla, Turkey

A.Merkoçi, “Nanotheranostics: diagnostics and therapies using nanomaterials: Building simple nanomaterial based platforms that signal and evaluate diseases or pollutants”. 55th ICREA Colloquium, 18 June 2013.

A.Merkoçi, “Point of care diagnostics using simple nanomaterials based platforms”, Invited lecture at Universitat Pompeu Fabra, Barcelona, Spain, June 5th, 2013

Eden Morales-Narváez, Luis Miguel Baptista Pires, Arben Merkoçi, Graphene Based Platforms for Biosensing Applications, Invited talk at Parallel workshop: Applications of Graphene-based Materials, Graphene 2013, ImagineNano Conference, 23-26 April, 2013, Bilbao, Spain.

A.Merkoçi, “Development of Nanostructured Platforms for Sensing and Destroying of Pollutants”, Invited talk, 2ND JAPANESE- SPANISH BILATERAL SYMPOSIUM ON “NANOTECHNOLOGIES AND NEW MATERIALS FOR ENVIRONMENTAL CHALLENGES” (SJ-NANO 2013), TSUKUBA (JAPAN), 2013, MARCH 5th

A.Merkoçi, “Nanomaterials based biosensors”, Invited Talk, Facultad de Farmacia, Universidad de Concepción, Chile, Nov. 6th, 2012

A.Merkoçi, “Nanomaterials-based platforms in biotechnological applications”, Plenary lecture, The 1st International Conference on Nanomaterials: Fundamentals and Applications, NFA 2012, Strbske Pleso, Slovakia, October 3 to 6. 2012

A.Merkoçi, “Nanomaterial-based biosensing systems”, Invited talk, Laboratoire de Chimie Analytique et Électrochimie, Département de Chimie, Faculté des Sciences de Tunis, Université Tunis El-Manar, Campus Universitaire, Tunis El-Manar 2092, Tunisie, September 24th, 2012.

A.Merkoçi, “Nanomaterials-based bioanalytical devices”, Plenary Lecture, 1st International Conference on Analytical Chemistry, Valahia University of Targoviste, September 18, 2012 – September 21, 2012, Romania.

Eden Morales-Narváez, Luis Miguel Baptista Pires, Briza Pérez-López, Arben Merkoçi, "Graphene Based Platforms for Biosensing Applications", Keynote Lecture, GRANADA'12, Graphene Nanoscience: from Dirac Physics to Applications, 9-13 September 2012 Granada, Spain

A.Merkoçi, "Nanomaterials based biosensors" Invited Lecture at 5th Edition of the Cell Model Systems Summer School to be held in 10-15 of June, 2012 at the National Research Council of Italy's Research Establishment in Tor Vergata-Rome (<http://www.cms3.cnr.it/>), June 14th, 2012.

A.Merkoçi, "Nanomaterials based Microfluidics Biosensing", Invited talk at III International Workshop on Analytical Miniaturization and NANOTEchnologies, WAM-NANO2102, Barcelona, Spain, 11-12.06. 2012

A.Merkoçi, "Electroanalysis using Nanomaterials", Keynote Lecture at 14th International Conference on Electroanalysis, June 3-7, 2012, Portorož, Slovenia (<http://www.esaac2012.com/>)

A.Merkoçi, "Nanobiosensors for diagnostics", Invited lecture at Universitat Pompeu Fabra, Barcelona, Spain, May 30th, 2012

A.Merkoçi, "Nanomaterials-based Biodevices", Keynote Lecture at Institute for Chemical-Physical Processes - General Meeting 2012, Cetraro, Italy, 23.05.2012

A.Merkoçi, "Nanomaterials-based Biosensors", Kynote lecture, IMCS 2012 - The 14th International Meeting on Chemical Sensors, Nuremberg, Germany, 21.05.2012

A.Merkoçi, "Nanomaterials applications in biosensing platforms", Invited talk at Max-Planck-Institute for Solid State Research, Stuttgart, Germany, February 14th, 2012

A.Merkoçi, "Nanomaterials applications in biosensing platforms" Invited talk at Max-Planck-Institute for Solid State Research, Stuttgart, Germany, January 25th, 2011.

India, IMPROVING BIOSENSORS BY USING NANOTECHNOLOGY, Plenary Lecture, International Conference on Nanomaterials & Nanotechnology (ICNANO), University of Delhi, Delhi, India. 18-21 December, 2011. (<http://www.icbn2011.com>)

Albania, "Nanomaterials-based biosensors for point of care diagnostics, safety and security", Plenary Lecture, INTERNATIONAL CONFERENCE "BIOTECHNOLOGICAL DEVELOPMENTS", Academy of Sciences of Albania, Tirana, Albania, 20-21 NOVEMBER, 2011

A.Merkoçi, Nanomaterials applications in biosensing platforms, Invited talk, POTSDAM DAYS ON BIOANALYSIS 2011, Potsdam, Germany, Novembre 9-11, 2011 (<http://www.zmdb.de/bioanalytik/>)

A.Merkoçi, Carbone nanotube and graphene based biosensing platforms, Keynote talk, International Workshop on Graphene Nanostructures, Regensburg, Germany, 28-30 Sept., 2011

A.Merkoçi, Nanomaterials in biosensing applications, Invited Talk, Ege University Faculty of Pharmacy, Analytical Chemistry Department, Izmir, Turkey, Septembre 20th, 2011

A.Merkoçi, NANOMATERIALS APPLICATIONS IN (BIO)SENSING PLATFORMS, Invited talk, SJNANO2011 Workshop on Nanotechnology and New Materials for Environmental Challenges First Bilateral Japan-Spain, Meeting on Nanotechnology and New Materials for Environmental Challenges, Toledo, Spain, September 15th and 16th 2011.

A.Merkoçi, C.Parolo, "NANOMATERIALS FOR FAST DETECTION OF DNA, PROTEIN AND CELLS", Invited talk at Nanoelectronic Devices for Defense & Security (NANO-DDS) Conference, August 29th-Septembre 1st, 2011, NYU Polytecnic, NY, USA, <http://www.nano-dds.com>

A.Merkoçi, IMMUNOSENSING USING NANOPARTICLES, Invited talk, NATO Workshop, Snogeholm castle, Lund (Sjöbo) Sweden, 1-4 July 2011

A.Merkoçi, A.Escosura, M.Maltez, DIAGNOSTICS USING NANOBIOELECTRONICS BASED SENSING SYSTEMS, Invited talk at 4th annual Advances in Biodetection & Biosensors conference and exhibition. 30 June- 1 July 2011, Hamburg, Germany, <http://www.selectbiosciences.com/conferences/ABB2011/>

A.Merkoçi, "Nanomaterials for (bio)sensing applications", Invited talk at Institut Català d'Investigació Química, ICIQ, Tarragona, Spain, May 17th, 2011

Biosensing using nanoparticles, Kosice, Slovakia, University of P.J.Safarik in Kosice, Kosice, Slovakia, May 13th, 2011.

A.Merkoçi, "Nanomaterials based biosensors", Invited lecture at Universitat Pompeu Fabra, Barcelona, Spain, May 11st, 2011

A.Merkoçi, "Nanotechnology and green chemistry", GASTRONOMIE MOLECULAIRE et CHIMIE ANALYTIQUE VERTE, Paris Colegio de España, Paris, France Mars 24-25.

Arben Merkoçi, "Nanomaterials for biosensing applications", EMPA Thun, Laboratory for Mechanics of Materials and Nanostructures, Group of Electrochemistry, Thun, Switzerland, March 7th, 2011

Arben Merkoçi, "Nanoparticles for DNA, protein and cell sensing", Organic and Medicinal Chemistry
Department of Biotechnology and Biosciences University of Milano-Bicocca, Milan, Italy, February 22^d, 2011.

A.Merkoçi, "Biosensing through labelling with nanoparticles", Invited talk at NANOJASP 2010 - Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life Workshop: SPAIN-JAPAN, 28,29, Novembre 2010, Barcelona, Spain

A.Merkoçi, "Nanoparticles Based Biosensors for Diagnostics Applications", Invited talk, International Symposium of Materials on Regenerative Medicine, 2010 ISOMRM November 3-5, 2010 Taiwan.

A.Merkoçi, "Nanoparticles for electrochemical biosensors", 3rd Workshop of the Sensors, Divisional Group of the Italian Chemical Society, GS2010, Università degli Studi di Firenze, Firenze, Italy, 26th – 28th October 2010

A.Merkoçi "Nanoparticles for DNA, protein and cell sensors", Plenary Talk at CONGRESO INTERNACIONAL DE DOCENCIA E INVESTIGACIÓN EN QUÍMICA. Universidad Autónoma Metropolitana Unidad Azcapotzalco, Ciudad de México, Oct. 26th, 2010.

A.Merkoçi "Nanoparticles for DNA, protein and cell sensors", SLONANO 2010, Ljubljana, National Institute of Chemistry, Ljubljana, Slovenia www.slonoano.ijs.si Slovenia, 20–22 October 2010

A.Merkoçi "Nanoparticles for DNA, protein and cell sensors", Invited talk at Concateno, October 12th 2010, Oxford, UK

A.Merkoçi "Nanoparticles for DNA, protein and cell sensing", ANM 2010, 3rd International Conference on Advanced Nano Materials 12-15 September 2010 - Agadir, Morocco

A.Merkoçi "Nanoparticles for DNA, protein and cell sensing", Invited talk at Sandia National Laboratories, Albuquerque, NM, USA, Septembre 8th, 2010.

A.Merkoçi, "Nanosized and nanomaterial based (bio)sensors", NanoAgri 2010, International Conference on Food and Agriculture Applications of Nanotechnologies, São Pedro, SP, Brazil, June, 20 to 25, 2010.

A.Merkoçi, "Micro/Nanobioelectronics based Lab-on-a-Chip Devices" II International Workshop on Analytical Miniaturization ("Lab-on-a-chip"), 7-8 June 2010, Oviedo, Asturias, Spain.

A.Merkoçi "Nanoparticles for DNA, protein and cell sensors", Plenary Lecture, Biosensors 2010, 20th Anniversary World Congress on Biosensors, 26-28 May 2010, Glasgow, UK

'Nanomaterials for DNA, protein and cell sensors', Invited talk at National Institute for Materials Science, Tsukuba, Ibaraki, Japan., 28th of April, 2010.

"Nanomaterials for biosensing", Invited talk by Global COE Program, Information, Electrical Engineering and Electronics in Keio University, 27th of April, 2010

NANOPARTICLES BASED BIOSENSORS FOR DIAGNOSTICS APPLICATIONS, Invited talk at "International Workshop on Nanomedicine: Translation of nanosciences and nanotechnologies to clinical applications", Organized by Fundación Progreso y Salud. Consejería de Salud, Junta de Andalucía. March 25th, 2010, Malaga, Spain.

"Nanomaterials for biosensing applications", Invited talk at MICIN (Spain) – JST (Japan) Joint Workshop on "Nanosciences and New Materials for Environmental Challenges", Barcelona (Spain), March 10th -12th, 2010

"BIOSENSORS BASED ON NANOPARTICLES. APPLICATIONS IN BIOMEDICAL FIELD", Invited talk at Drug Delivery Workshop: Emerging Directions in Drug Delivery", 10th February 2010, Silken Havana Hotel, Barcelona, Spain

"Biosensors basats en nanomaterials i possibles aplicacions clíniques", Invited talk at: Fundació Sant Joan de Déu. Hospital Sant Joan de Déu, Barcelona, December 15th, 2009

"Nanomaterials for biosensing", Invited talk at the NanoGune (San Sebastian)- BCN - TECHNION (Israel) Workshop, San Sebastian, Spain, Novembre 25, 2009

"Nanotechnology, nanomaterials and biosensors", Invited talk at "Academy of Science of Albania", October 30th, 2009.

"Nanomaterials and applications in biosensors", Invited talk at Università degli Studi di Padova, Dipartimento di Scienze Chimiche, Padua, Italy, October 15th, 2009

"Nanomaterials for fast DNA, protein and cell analysis" "Invited speaker at 11th International Conference on Advanced Materials, Symposium I: New Materials and Processes for Sensing and Biosensing, Rio de Janeiro, Brazil, September 20-25, 2009 (http://www.icam2009.com/program/symposium_detail.php?code=I)

"Nanomaterials for biosensing applications", Invited talk at AsiaSense 2009, The 4th International Conference on Sensors, Converging Technology for Sensors application, Bangkok, Thailand, 29-31 July, 2009, <http://www.nstda.or.th/asiasense2009/Highlights%20Speakers.php>

"(Bio)sensors based on nanomaterials. Applications in environmental monitoring, May 7th, 2009, Banyuls Observatory of the University of Paris 6, Banyuls, France

"Nanobiosensing: synergy between nanotechnology methods, tools and materials ", Invited Speaker at "Asia Pacific Conference on Chemistry Education &v 24th Philippine Chemistry

Congress (APC2E•24PC2): Chemistry for All: Safeguarding Man, Society and the Environment", 14–16 April 2009, Bohol Tropics Hotel, Tagbilaran City, Bohol Island, Philippines.

"Voltammetric screen-printed sensors for heavy metals and phenols. Achievements and future prospects", Workshop "Environmental Risk Management tools for water quality monitoring" National Oceanographic Centre, Southampton (UK), 30 March (2009)

"Nanomaterials and applications in biosensors", Département de Chimie Moléculaire, Université Joseph Fourier, Grenoble, France. 26 March (2009)

"Nanotechnology and Biosensors. Applications in health and environmental studies", Health Institute & Agriculture University, Tirana, Albania. 6 February (2009)

"Nanotubs de carboni", SEMINARI PERMANENT DE FÍSICA I QUÍMICA curs 2008-09
2A SESSIÓ, TEMA NANOTECNOLOGIA, CDEC <http://www.xtec.net/cdec/> , 30 de gener de 2009

"Detection biosystems based on nanoparticles", Tutorial Course, Ibersensor 2008, 6th Ibero-American Congress on Sensors. Sao Paulo, Brazil. 24-26 November (2008)

"Nanobioelectronics for biosensors applications", 2nd Taiwan-Spain Workshop on Micro/Nano Electronics. National Cheng Kung University, Taiwan. 14-15 October (2008)

"Nanobiotechnology and biosensor opportunities", XXIV Trobades Científiques de la Mediterrània La Física a les Ciències de la Vida., Menorca, Spain. 6-7 October (2008)

"Nanobiotechnology and biosensors. Potential applications in agriculture and food technology", Symposium H, Nanomaterials and nanotechnology applied to biotechnology and agriculture, 7th Brazilian MRS Meeting., Guarujà, Brazil. 28 September-2 October (2008)

"Nanomaterials and (bio)sensing opportunities", Symposium F, Electrochemistry of nanostructured biological materials, 7th Brazilian MRS Meeting., Guarujà, Brazil. 28 September-2 October (2008)

"Sensing DNA and proteins via tagging with nanoparticles", 59th Annual Meeting of the International Society of Electrochemistry. Seville, Spain. 7-12 September (2008)

"Nanoscience, Nanotechnology and Biosensors Development", [Invited talk at University of Advancing Technology, \(AUT\)](#) , Arizona, USA, May 21st , 2008.

"Nanomaterials and (bio)sensing opportunities", Invited Talk at EMBRAPA (Embrapa Instrumentação Agropecuária), Sao Carlos, Brasil, October 2d, 2008.

"Nanobioelectronics, a powerful technology for DNA and protein Sensing" (Nanoparticles in protein sensors – section) at Electrochemistry of Nucleic Acids and Proteins. New Tools for Biotechnologies (Satellite Symposium to ESEAC 2008 (held in Prague, June 16-19, 2008), The symposium is dedicated to the 60th birthday of Prof. Joseph Wang), Brno, Czech Republic. 19-22 June (2008)

"Biosensors basats en nanomaterials", "Nanociència i nanotecnologia al Campus de la UAB: el BNC-B", Barcelona, Spain. 30 November (2007)

"Nanomaterials for biosensor applications", Competence from Nanotechnology", Seminar of Tekes FinNano –technology programme, University of Oulu, Finland. 21 September (2007)

"Nanotechnology and nanoscience. Novel possibilities for biosensors applications", II-Meeting of Albshkenca network, Prishtine, Kosove. 15 –16 August (2007)

"Carbon Nanotubes and Nanoparticles for biosensing applications", iNANO - Interdisciplinary Nanoscience Center at the University of Aarhus and Aalborg University, Denmark. 31 August (2007)

"Nanomateriales para aplicaciones bioanalíticas", I Workshop sobre Nanotecnología Analítica Colegio Mayor "La Asunción" de la Universidad de Córdoba. 16-17 July (2007)

Nanomaterials for Biosensing – Characterization and Direct Detection

ASIASENSE 2007 – Asian Conference on Sensors

Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philippines. 5-7 June (2007)

"NANOMATERIALS FOR BIOSENSING APPLICATIONS". Invited talk at National Applied Research Laboratories (NARL), National Nano Device Laboratories (NDL), Taiwan. May 2007.

"Nanomaterials for biosensor applications". Invited talk by Prof.Serge Cosnier, Directeur de Recherche CNRS, President of the French Group of Bioelectrochemistry, Director of the CNRS unit : GDR 2619 "Microbiosensors" (<http://www-chimie.ujf-grenoble.fr/LEOPR>). June 2007.

"Nanomaterials for bioanalytical applications". Invited talk at: I WORKSHOP SOBRE NANOTECNOLOGÍA ANALÍTICA, Colegio Mayor "La Asunción" de la Universidad de Córdoba, 16 y 17 de julio de 2007.

"Biosensing-Oriented Nanotechnology Using Carbon Nanotubes and Nanoparticles as Building Blocks", Keynote lecturer at XIXth Int. Symposium on BIOELECTROCHEMISTRY and BIOENERGETICS, 1st -4th April, 2007, Toulouse (France).
<http://www.ipbs.fr/BES2007/program.htm>

"[DNA detection platforms by using nanoparticles as quantitation tags or encoded hosts](#)". Nanotechnology in BioDiagnostics and Analytics (NBDA), Musée de Grenoble, June 29th and 30th 2005. [A Nanoforum conference](#) organized by the Institute of Nanotechnology, and supported by Nano2Life.

"[Electrochemical detection of DNA hybridization via nanoparticle tracing](#)" at [Workshop on Microsystems and Biotechnology](#), Organized by Fraunhofer-Gesellschaft e.V., St. Augustin, Germany 20-21 June, 2005

"[Integration of nanomaterials in analytical detection systems](#)". [Presentation of the activities in nanotechnologies at ICMAB-CSIC, IMB-CSIC and UAB. Barcelona, 18.02.2004](#)

"[Design, study and applications of new analytical systems based on nanomaterials](#)", [IV Memorial Enric Casassas. Workshop on analytical nanoscience and nanotechnology, Barcelona, 16.12.2004](#)

"Electrochemical sensors and biosensors based on nanoparticles, carbon nanotubes and other materials". Invited lecture at Universitat Rovira I Virgili, Tarragona, February, 2003

Referred Conference papers (oral & poster presentations)

1. A.Merkoçi, A.Sastre, B.Baraj, "Characterisation of di(2-ethylhexyl) thiophosphoric acid by potentiometric titration and capillary zone electrophoresis (#1062)", 189-th Meeting of the Electrochemical Society, Inc., Treatise on The 189-th Meeting of the Electrochemical Society, Inc. May 1996, Electrochemical Society, American Chemical Society, Los Angeles, California, USA, May 1996

2. A.Merkoci, M.Jurkiewicz, E.Martínez-Fàbregas, S.Alegret, "Batch and FIA potentiometric response of a consolidated biocomposite membrane biosensor for glucose monitoring", II-Rencontre transfrontaliere capteurs et biocapteurs, Ceret (France), 18-19 September 1997

3. A.Merkoci, M.Jurkiewicz, E.Martínez-Fàbregas, S.Alegret, F.Valdes-Perezgasga, "A glucose potentiometric biosensor based on a consolidated biocomposite", 4th European Science Foundation (ESF) and ABI workshop, Biomolecular interaction, recognition and dynamics, Abstracts Book Fourth workshop, European Science Foundation, Artificial Biosensing Interfaces (ABI), Sitges, Spain, October 1997
4. A.Merkoci, E.Martínez-Fàbregas, S.Alegret, "Consolidated biocomposite membrane technology (CBMT) for production of potentiometric biosensors", III-Rencontre transfrontaliere capteurs et biocapteurs. Peníscola, Spain, September 1998
5. Merkoçi, A; Santandreu, Solé, S; Albareda, M; Lallana, X; Pividori, M.I;Ramírez, S; Céspedes, F; Fàbregas, E; and Alegret, S, "Biocomposite membrane technology in biosensor production", 5th European Science Foundation (ESF) and ABI workshop - Biomolecular recognition and signal transduction", 5th Workshop on Biomolecular interaction and signal transduction, Pisa (Italy), 22-24 October 1998.
6. M.I.Pividori, A.Merkoçi, E.Fàbregas, S.Alegret, "An amperometric genosensor for DNA sequence detection", IV-Rencontre transfrontaliere capteurs et biocapteurs, Montpellier, France, 16-17 September 1999
7. B.Prieto, S.Solé, A.Merkoçi, E.Fàbregas, S.Alegret, "Recent developments in the analysis of heavy metal toxicity using enzyme based electrochemical biosensors", IV-Rencontre transfrontaliere capteurs et biocapteurs, Montpellier, France, 16-17 September 1999
8. A.Merkoçi, M.Vasjari, S.Alegret, "Determination of some heavy metals by anodic stripping voltammetry using modified carbon electrodes", IV-Rencontre transfrontaliere capteurs et biocapteurs, Montpellier, France, September 1999
9. M.Albareda-Sirvent, A.Merkoçi, S.Alegret, "Fabrication of screen-printed biosensors for pesticide analysis", IV-Rencontre transfrontaliere capteurs et biocapteurs, 16-17 September 1999, Montpellier, France
10. M.Vasjari, A.Merkoçi, S.Alegret, "Potentiometric characterisation of acid rains using corrected linear plots", IV-Rencontre transfrontaliere capteurs et biocapteurs, Montpellier, France, 16-17 September 1999
11. M.I.Pividori, A.Merkoçi, E.Fàbregas, S.Alegret, "An amperometric genosensor for DNA sequence detection", 9as Jornadas de Análisis instrumental, JAI, Barcelona, 10-12 Noviembre 1999, Barcelona, Spain, 10-12 November 1999
12. M.I.Pividori, A.Merkoçi, E.Fàbregas, S.Alegret, "[Classical DOT BLOT DNA analysis implemented as amperometric genesensor](#)", [The sixth world congress on biosensors. Organized by Elsevier Science, San Diego \(USA\), 24-26 May 2000](#)
13. M.Albareda, A.Merkoçi and S.Alegret, "[Thick film biosensors for pesticides produced by screen-printing of graphite-epoxy composite and biocomposite pastes](#)", V-Rencontre transfrontaliere capteurs et biocapteurs, Universitat de Vic, Vic, Spain, September 2000
14. M.I.Pividori, A.Merkoçi and S.Alegret, "[Amperometric genosensors for detecting a novel determinant of \$\beta\$ -lactamase resistance in staphylococcus aureus](#)", V-Rencontre transfrontaliere capteurs et biocapteurs, Vic, Spain , September 2000
15. M.I.Pividori, A.Merkoçi and S.Alegret, "[Coupled PCR electrochemical genosensor system for rapid and specific detection of salmonella typhimurium](#)", V-Rencontre transfrontaliere capteurs et biocapteurs, Vic: 21-22 setembre 2000, Universitat de Vic
Organised in: Vic, Spain

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16. B.Prieto-Simón, A.Merkoçi, S.Alegret and E.Fàbregas, "Analytical characterisation of some mediators used to modify amperometric biosensors with interest in heavy metal toxicity analysis", V-Rencontre transfrontaliere capteurs et biocapteurs, Vic: 21-22 setembre 2000, Universitat de Vic, Vic, Spain
17. M. I. Pividori, A. Merkoçi, S. Alegret, "New amperometric genosensor in capture format. Rapid determination of a novel determinant of β -lactamase resistance in *Staphylococcus aureus*", VI-Rencontre transfrontaliere capteurs et biocapteurs, Toulouse: 20-21 setembre 2001, Toulouse, France
18. C.Sánchez-Maroto, S.Alegret, A.Merkoci, M.del Valle, "Us de polimers conductors en el desenvolupament de sensors electroquímics", VI-Rencontre transfrontaliere capteurs et biocapteurs", Toulouse: 20-21 September 2001, Toulouse, France
19. L. Moreno, A. Merkoçi, S. Alegret, "[Unmodified graphite epoxy composite electrodes for determination of lead by anodic stripping techniques](#)", VI-Rencontre transfrontaliere capteurs et biocapteurs, Toulouse: 20-21 setembre 2001, Toulouse, France
Organized in: Toulouse, France
- [20. Marc Serradell, Santos Izquierdo, L. Moreno, A. Merkoçi, S. Alegret, "A free-mercury PSA of heavy metals by using graphite-epoxy composite based electrodes"](#), VI-Rencontre transfrontaliere capteurs et biocapteurs, Toulouse: 20-21 setembre 2001, Toulouse, France
21. X. Llopis, A. Merkoçi, M. del Valle, S. Alegret, "[Construction and evaluation of an epoxy-graphite-GOD-TTF•TCNQ biocomposite based glucose electrode](#)", VI Trobada Transfronterera sobre Sensors i Biosensors, Toulouse 2001. Poster.
- [22. M. Albareda-Sirvent, A. Merkoçi, A. L. Hart, S. Alegret, "Studies of malic and lactic acid determination using thick-film biosensors based on sol-gel immobilization"](#), VI-Rencontre transfrontaliere capteurs et biocapteurs", Toulouse: 20-21 setembre 2001, Toulouse, France
23. L. Moreno-Barón, J. Saurina, S. Hernández-Cassou, A Merkoçi, S. Alegret, "Chemometric characterization of the voltammetric response of various graphite composite and platinum electrodes. Application to the analysis of oxidizable amino acids in feed samples", VI-Rencontre transfrontaliere capteurs et biocapteurs, Toulouse: 20-21 September 2001, Toulouse, France
24. M.I. Pividori, A Merkoçi, S Alegret, "[Graphite-epoxy composites. A new transducing material for electrochemical genosensing](#)", [The seventh world congress on biosensors, Kyoto, Japan 15-17 May, 2002](#)
25. Joyce Tan, Arben Merkoci, Salvador Alegret and Fortunato Sevilla III, "All-solid-state potentiometric sensor for iodide based on a mixed AgI/Ag₂S/Epoxy membrane", 24th National Academy of Science and Technology (NAST), July 10-11, 2002, Manila, Philippines.
26. M. I. Pividori, A. Merkoçi, S. Alegret, M. Del Valle, A. Erdem, E. Williams, "Genosensores amperométricos para análisis alimentario in situ". I workshop on "Mètodes ràpids i automatització en microbiologia alimentària", Barcelona (Espanya), 27 al 29 de novembre de 2002
27. M. I. Pividori, A. Merkoçi, S. Alegret, "New amperometric genosensors. Design and construction", Ibersensor 2002., Lima, Perú, 6 al 8 de novembre de 2002
28. M. I. Pividori, A. Merkoçi, J. Barbé, S. Alegret, "Rapid electrochemical genosensing of *Salmonella* sp", VII Trobada Transfronterera sobre Sensors i Biosensors, Barcelona (Espanya), 19 y 20 de setiembre de 2002.
29. E. Zacco, M. I. Pividori, A. Merkoçi, S. Alegret, "Renewable Protein A modified surfaces for

electrochemical immunosensing", VII Trobada Transfronterera sobre Sensors i Biosensors, Barcelona (Espanya), 19 y 20 de setiembre de 2002.

30. Dongchan Shin, Akira Fujishima, Arben Merkoçi, Joseph Wang, "[Resistance to surfactant fouling effects at conducting diamond electrodes](#)", Proceedings of the 37th Chemical Sensor Symposium", Japan, Tokyo, September 10-13, 2003 Vol. 19, Supplement B (2003)

31. A. Merkoçi, S. Alegret, "[Trends in labelling strategies used for electrochemical sensing](#)", [VII Trobada Transfronterera sobre Sensors i Biosensors, Ceret, France, 18 - 19 Setember 2003](#)

32. A. Merkoçi, S.Alegret, "Quantum Dots and other nanoparticles as labels for electrical DNA and immuno sensing", Nanoforum / BIT Seminar - 2nd Call for Nanotechnology and Nanoscience in FP6, Viena, Austria, November 19, 2003

33. A. Merkoçi, M.I.Pividori, E. Williams, M del Valle, S. Alegret, J.Wang, G.Liu, "[DNA detection using enzyme and nanoparticle tracing electrochemical technologies](#)", Treatise on the Second International Workshop on Multianalyte Biosensing Devices, [Second International Workshop on Multianalyte Biosensing Devices, Tarragona, Spain, February 18-20, 2004](#)

34. A. Merkoçi, M.I.Pividori, M del Valle, S. Alegret, J.Wang, G.Liu, M.Musameh, "[Nanobiostructures as alternative materials in developing sensors and biosensors](#) ", [1st NanoSpain Workshop. San Sebastian, Spain, Treatise on the 1st NanoSpain Workshop. San Sebastian, Spain, 10-12 March, 2004](#)

35. A. Merkoçi, S. Alegret, M.I. Pividori and M. del Valle, "[Rigid conducting carbon-polymer \(bio\) composites as an advantageous alternative in the design of a large spectrum of electrochemical \(bio\) sensors](#)", [Euroanalysis, Salamanca, September. 6-11, 2004](#)

36. M. Aldavert, S. Marin, M. del Valle, S. Alegret, A. Merkoçi, "[Synthesis and characterization of semiconducting nanoparticles](#)", [IX Transfrontier Meeting about Sensors and Biosensors, Tarragona, 16-17 September, 2004](#)

37. M. Aldavert, G. Tarrasón, R. Eritja, S. Alegret, A. Merkoçi, "[Gold nanoparticles as tracers for oligonucleotide-peptide conjugates](#)", [IX Transfrontier Meeting about Sensors and Biosensors, Tarragona, 16-17 September, 2004](#)

38. X. Llopis, A.Merkoçi, J.Alonso, S.Alegret, "[Bead injection analysis \(BIA\) system based on a cholinesterase magnetobiosensor for pesticides](#)", [IX Transfrontier Meeting about Sensors and Biosensors, Tarragona, 16-17 September, 2004](#)

39. M. Vasjari, J. P. Hart, S. Alegret, A. Merkoçi, [Aminoacid determination using screen-printed electrochemical sensors](#), [IX Transfrontier Meeting about Sensors and Biosensors, Tarragona, 16-17 September, 2004](#)

40. A. Merkoçi, M.del Valle, S. Alegret, [Bionanostructures and their integration into electrochemical sensing systems](#)" [IV Congreso Iberoamericano de Sensores i Biosensores, Puebla, Mejico, Oct. 27-29, 2004](#)

41. A. Merkoçi, "[Disseny, estudi i aplicació de nous sistemes d'anàlisi basats an nanomaterials](#)", [IV Memorial Enric Casassas, Treatise on the IV Memorial Enric Casassas, Barcelona, Spain, Dec. 16, 2004](#)

42. Arben Merkoçi, Martin Pumera, Salvador Alegret, [Carbon nanotubes and nanoparticles for applications in biosensors and DNA sensors](#), [2nd NanoSpain Workshop, Barcelona, 14-17 March, 2005](#)

43. Arben Merkoçi, Martin Pumera, Salvador Alegret, [Carbon nanotube and graphite composites](#)

[for \(bio\)electrochemical sensing, Pittcon 2005, March-April 2005, Orlando, USA 44.](#) M. Pumera, A. Merkoçi, M.I. Pividori, A. Lermo, R. Eritja, S. Alegret, [Direct electrochemical detection of 1:1 Au67 Quantum Dot – DNA conjugate using paramagnetic beads](#), OP-10, [BIOELECTROCHEMISTRY-2005 XVIII International Symposium on Bioelectrochemistry and Bioenergetics \(BES\) 3rd Spring Meeting: Bioelectrochemistry \(ISE\) COIMBRA, PORTUGAL, June 19-24, 2005, <http://www.bes-ise-2005.uc.pt>](#)

45. Ülkü Anık Kırköz, Suna Timur, Dilek Odacı, Arben Merkoçi, Nurdan Pazarlıoğlu, [Graphite epoxy composite electrodes based on bacterial cells](#), [BIOELECTROCHEMISTRY-2005 XVIII International Symposium on Bioelectrochemistry and Bioenergetics \(BES\) 3rd Spring Meeting: Bioelectrochemistry \(ISE\) COIMBRA, PORTUGAL, June 19-24, 2005, <http://www.bes-ise-2005.uc.pt>](#)

46. Arben Merkoçi (invited speaker) Electrochemical detection of DNA hybridization via nanoparticle tracing, [Workshop on Microsystems and Biotechnology, Organized by Fraunhofer-Gesellschaft e.V., St. Augustin, Germany 20-21 June, 2005 \(see Programme\)](#)

47. Arben Merkoçi (invited speaker) [DNA detection platforms by using nanoparticles as quantitation tags or encoded hosts](#), [Nanotechnology in BioDiagnostics and Analytics \(NBDA\), Organized by Nanoforum, Musée de Grenoble, June 29th and 30th 2005.](#)

48. Briza Pérez, Martin Pumera, Manel del Valle, Arben Merkoçi, Salvador Alegret, [Glucose Determination Based on a Carbon Nanotube/Epoxy Composite Electrochemical Biosensor](#), WBp-8, [EUROSENSORS XIX Barcelona. Spain. 11th-14th September 2005](#)

49. M.T. Castañeda, B. Pérez, M. Pumera, M. del Valle, A. Merkoçi, S. Alegret, [Detection of heavy metals by using a composite sensor based on a built-in bismuth precursor](#), WBp-5, [EUROSENSORS XIX Barcelona. Spain. 11th-14th September 2005](#)

50. Xavier Llopis, Martin Pumera, Arben Merkoçi, Salvador Alegret, [PDMS as polymeric matrix for composites and biocomposites for \$\mu\$ -TAS applications](#), TP-76, [Eurosensors XIX, 11th-14th September 2005, Barcelona, Spain.](#)

51. Briza Pérez, Martin Pumera, Arben Merkoçi, Salvador Alegret, [Carbon Nanotube/Epoxy Composites for Biosensor Development](#), [Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France](#)

52. Majlinda Vasjari, Martin Pumera, Arben Merkoçi, Salvador Alegret, [Antibiotics analysis by using carbon nanotube based sensors](#), [Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France](#)

53. Martin Pumera, Arben Merkoçi, Salvador Alegret, [Fabrication of Poly\(dimethylsiloxane\) Microfluidic Channels for Paramagnetic Beads Manipulations](#), [Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France](#)

54. S. Marín, M. Castañeda, M. Pumera, J. Ros, A. Merkoçi, S. Alegret. [Water soluble and electroactive CdS quantum dots for DNA sensing](#), [Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France](#)

55. M.T. Castañeda, B. Pérez, M. Pumera, M. del Valle, A. Merkoçi, S. Alegret, [Individual and simultaneous determination of lead and cadmium by using a composite sensor based on a built-in bismuth precursor](#), [Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France](#)

56. M.T. Castañeda, M. Pumera, A. Merkoçi, S. Alegret, [Magnetically triggered gold nanoparticle network for the detection of breast cancer BRCA1 gene related DNA](#), [Xème Rencontre transfrontalière capteurs et biocapteurs, 16-17 Sept. 2005, Albi, Toulouse, France](#)

-
57. Xavier Llopis, Martin Pumera, Arben Merkoçi, Salvador Alegret, [PDMS as polymeric matrix for enzymatic reactors and composite electrodes](#), [Xème Rencontre transfrontalière capteurs et biocapteurs](#), 16-17 Sept. 2005, Albi, Toulouse, France
58. B.Pérez, M. Pumera, M. Del Valle, A. Merkoçi, S. Alegret, [Graphite vs. carbon nanotube composites for biosensor applications](#). P-I-10. [The 4th International Conference on Instrumental Methods of Analysis Modern Trends and Applications](#), 2 - 6 October, 2005 Iraklion, Crete Greece
59. A. Merkoçi, M. Pumera, M.Aldavert, T. Castañeda, S.Alegret. [Proof of concept of novel DNA sensing strategies through gold nanoparticles](#). [The 4th International Conference on Instrumental Methods of Analysis Modern Trends and Applications](#), 2 - 6 October, 2005 Iraklion, Crete, Greece
60. Jordi Gené, Arben Merkoçi, [El aprendizaje basado en problemas y la evaluación continuada: herramientas metodológicas para la enseñanza de la Química](#). [Jornadas sobre la Enseñanza de la Química](#), Palma de Mallorca, 14-16 de octubre de 2005
61. A.Merkoçi, M.Pumera, M.Aldavert, S.Marin, T.Castañeda, M.del Valle, S.Alegret, [Synthesis and modification of quantum dots and their integration in DNA sensing systems](#), [International Congress of Nanotechnology](#), October 31 to November 4, 2005 San Francisco, USA
62. Martin Pumera, Arben Merkoçi, Salvador Alegret, [Carbon nanotube composites for electrochemical sensing](#), 26B-2-5, p. 30, [International Microprocesses and Nanotechnology Conference 2005](#), Tokyo, Japan. ORAL
63. Jordi Gené, Arben Merkoçi, [Aplicación de metodologías activas en la enseñanza de la Química Analítica](#), PO-DOC-01. Sección: Docencia, contribuciones teóricas, metrología y quimiometría. [11as JORNADAS DE ANÁLISIS INSTRUMENTAL Barcelona](#), del 15 al 17 de noviembre de 2005
64. X. Llopis, A. Merkoçi, M. del Valle, S. Alegret, [Integration of a glucose electrode based on an epoxy-graphite-GOD-TTF•TCNQ biocomposite on a flow injection analysis system](#), VII Trobada Transfronterera sobre Sensors i Biosensors, Barcelona 2002. Poster.
65. A.Merkoçi, M.Pumera, S.Marin, T.Castañeda, S.Alegret, ["Water soluble nanoparticles for direct electrochemical sensing of DNA hybridisation."](#), [Pittcon 2006, March 2006, Orlando, USA](#)
66. Martin Pumera, Arben Merkoçi, Salvador Alegret, "Microchip Capillary Electrophoresis with a Carbon Nanotube/Metal Electrochemical Detectors", [Pittcon 2006, March 2006, Orlando, USA](#). Poster
67. M.T. Castañeda, M. Pumera, A. Merkoçi, S. Alegret, ["Gold Nanoparticles as Electrochemical Tracers for DNA Hybridization Detection"](#) [3d Nanospain, March 02-03, 2006, Pamplona, Spain](#). (P8, Nanobio / Nanobiomedicine section).
68. A.Merkoçi, M.Pumera, S.Marin, T.Castañeda, S.Alegret, ["Novel trends in the use of nanocrystals for DNA sensing"](#), [Biosensors 2006, The ninth world congress on biosensors, 10-12 May, Toronto, Canada](#). Oral presentation.
69. M.T. Castañeda, A. Merkoçi, M. Pumera, S.Alegret, ["Gold nanoparticle based genomagnetic sensor related to electrochemical detection of cystic fibrosis"](#), [Biosensors 2006, The ninth world congress on biosensors, 10-12 May, Toronto, Canada](#), Poster.
70. Ülkü ANIK KIRGÖZ, Dilek ODACI, Suna TİMUR, Arben MERKOÇI, Salvador ALEGRET,

Nurgün BEŞÜN, "A biosensor based on graphite epoxy composite electrode (gece) for aspartame and ethanol detection", [11th International Conference on Electroanalysis, ESEAC 2006, Bordeaux, France, 11-15 June 2006](#), Poster.

[71.](#) Sergio Marín , Maria Teresa Castañeda, Arben Merkoçi, Salvador Alegret "[DNA detection using cadmium sulphide nanocrystals as electrochemical tags](#)" Oral presentation. [XI Trobada transfronterera sobre sensors i biosensors, Universitat de Girona, 14-15 setembre 2006](#)

[72.](#) M.T. Castañeda, A. Merkoçi, M. Pumera, P. Moretti, G. Palleschi, S. Alegret, "Electrochemical genomagnetic sensors for dna hybridization detection using gold nanoparticles" Oral presentation. [XI Trobada transfronterera sobre sensors i biosensors, Universitat de Girona, 14-15 setembre 2006](#)

[73.](#) Adriano Ambrosi, Malcolm R. Smyth, Arben Merkoçi, Salvador Alegret, "Electrochemical Detection Of Antibody-Antigen Interaction Using Nanoparticles". Poster. [XI Trobada transfronterera sobre sensors i biosensors, Universitat de Girona, 14-15 setembre 2006](#)

[74.](#) B. Pérez, M. Pumera, M. del Valle, S. Alegret, A. Merkoçi, "Electrochemistry of nadh at carbon-nanotube-modified glassy carbon electrode". Poster. [XI Trobada transfronterera sobre sensors i biosensors, Universitat de Girona, 14-15 setembre 2006](#)

[75.](#) M.T. Castañeda, S. Alegret, M. Pumera, A. Merkoçi, "[Electrochemical sensors for biomedical applications based on dna hybridization detection using gold nanoparticle tags](#)", Poster 136. [5º Congreso Iberoamericano de Sensores IBERSENSOR 2006, 27-29 de setiembre de 2006 - Montevideo, Uruguay](#)

[76.](#) Briza Pérez, Salvador Alegret, Manel del Valle, Arben Merkoçi, "[Carbon nanotube modified electrodes for electrochemical sensing of NADH](#)", Poster 138. [5º Congreso Iberoamericano de Sensores IBERSENSOR 2006, 27-29 de setiembre de 2006 - Montevideo, Uruguay](#)

[77.](#) G. Alarcon-Angeles, B. Pérez-López, S. Corona-Avendaño, A. Rojas-Hernández, M. Palomar-Pardave, M A. Romero-Romo, M. T. Ramírez-Silva, S. Alegret, A. Merkoçi, "[Some aspects related to cyclic voltammetry of dopamine with glassy carbon electrode modified with carbon nanotubes and b-cyclodextrin](#)", Poster 139. [5º Congreso Iberoamericano de Sensores IBERSENSOR 2006, 27-29 de setiembre de 2006 - Montevideo, Uruguay](#)

[78.](#) L. Moreno-Barón, A Merkoçi, S. Alegret, M. del Valle, V. Moo, J.M. Gutiérrez, R. Muñoz, L. Leija, P.R. Hernández "[Determinación de metales pesados en aguas depuradas a través de sensores amperométricos serigráficos con compósitos modificados y procesamiento avanzado de datos](#)", Poster 114. [5º Congreso Iberoamericano de Sensores IBERSENSOR 2006, 27-29 de setiembre de 2006 - Montevideo, Uruguay](#)

[79.](#) A.Merkoçi "[Carbon nanotubes for electrochemical sensor applications](#)", Oral presentation (Invited speaker) at [3rd International Congress of Nanotechnology 2006 \(ICNT 2006\)](#) , which was held on October 30-November 2, 2006 at the San Francisco Airport Hotel. SF (USA)

[80.](#) Sergio Marín, Luiz Humberto Marcolino-Junior, Orlando Fatibello-Filho, Josep Ros, Joan Sola, Salvador Alegret, Arben Merkoçi. "[Quantum dots for electrochemical DNA sensing](#) " Poster at XXII TROBADES CIENTÍFIQUES DE LA MEDITERRÀNIA Nanociència i Nanotecnologia, Maó (Menorca), 9-11 d'Octubre de 2006, Spain

[81.](#) B. Pérez, M.Pumera, M. del Valle, S.Alegret, A. Merkoçi "Carbon nanotubes integrations into electrochemical (bio)sensing systems", " Poster at [XXII TROBADES CIENTÍFIQUES DE LA MEDITERRÀNIA Nanociència i Nanotecnologia, Maó \(Menorca\), 9-11 d'Octubre de 2006, Spain](#)

[82.](#) Sergio Marín Mancebo, Salvador Alegret, Arben Merkoçi,"[QUANTUM DOTS AS LABELS FOR DNA DETECTION](#)" Poster at [Jornada de química de Catalunya i del gran sud-oest francès.](#)

Organized by "SOCIETAT CATALANA DE QUÍMICA, SOCIÉTÉ FRANÇAISE DE CHIMIE, 23 i 24 de novembre de 2006 at Institut d'Estudis Catalans, Barcelona.

83. M.T. Castañeda, S. Alegret, A. Merkoçi, "[GOLD NANOPARTICLES \(AuNPs\) AS LABELS FOR DNA ANALYSIS](#)", Poster at [Jornada de química de Catalunya i del gran sud-oest francès. Organized by "SOCIETAT CATALANA DE QUÍMICA, SOCIÉTÉ FRANÇAISE DE CHIMIE, 23 i 24 de novembre de 2006 at Institut d'Estudis Catalans, Barcelona.](#)

84. B. Pérez, M. del Valle, S. Alegret, A. Merkoçi, "Carbon nanotubes integrations into electrochemical (bio)sensing systems". Poster at [Jornada de química de Catalunya i del gran sud-oest francès. Organized by "SOCIETAT CATALANA DE QUÍMICA, SOCIÉTÉ FRANÇAISE DE CHIMIE, 23 i 24 de novembre de 2006 at Institut d'Estudis Catalans, Barcelona.](#)

85. Adriano Ambrosi, Arben Merkoçi, Anthony J. Killard, Salvador Alegret and Malcolm R. Smyth, "Enhanced immunoanalysis based on gold nanoparticle labels" (Oral Presentation), RSC Analytical Research Forum 2007, University of Strathclyde, Glasgow, United Kingdom, 16-18 July 2007

86. Arben Merkoçi, "[Use of nanocrystals for biosensors applications](#)" Oral presentation, [Pittcon Conference, Chicago, USA, Feb.26. – March 2, 2007.](#)

87. B. Pérez, M. del Valle, S. Alegret, A. Merkoçi, "[Carbon nanotubes for sensor applications](#)" Poster, [Pittcon Conference, Chicago, USA, Feb.26. – March 2, 2007.](#)

88. A.Merkoçi, "[Nanocrystals for biosensors applications](#)", [Contributed Speaker](#), [Nanotech Northern Europe Congress, \(NTNE2007\), Congress & Exhibition, 27-29 March 2007, Helsinki, Finland.](#)

89. G.Alarcón Ángeles, Corona Avendaño S., M.A. Romero Romo, M.Palomar Pardavé, M. T Ramírez Silva, B. Pérez, S.Alegret, A. Merkoçi, "[Electrochemical response versus dopamine and ascorbic acid of a carbon nanotube modified electrode](#)", [Poster, 4th NanoSpain Workshop 12-15 March, 2007 Sevilla-Spain.](#)

90. Adriano Ambrosi, Anthony J. Killard, Malcolm R. Smyth, Salvador Alegret, Arben Merkoçi, "[Enhanced electrochemical immunoassay based on paramagnetic platforms and gold nanoparticle labels](#)", Poster, [Poster, 4th NanoSpain Workshop 12-15 March, 2007 Sevilla-Spain.](#)

91. M.T. Castañeda, R. Eritja, M.M.V. Maltez, S. Alegret, A. Merkoçi, "[New gold nanoparticles based genosensor design for detection of DNA hybridization](#)", Poster, [Poster, 4th NanoSpain Workshop 12-15 March, 2007 Sevilla-Spain.](#)

92. B. Pérez, Salvador Alegret, M. del Valle, A. Merkoçi, "[Carbon nanotube based electrochemical sensors](#)", Poster, [Poster, 4th NanoSpain Workshop 12-15 March, 2007 Sevilla-Spain.](#)

93. Sergio Marín, Maria Teresa Castañeda, Salvador Alegret Arben Merkoçi, "[DNA detection using cadmium sulphide nanocrystals as electrochemical tags](#)", Poster, [Poster, 4th NanoSpain Workshop 12-15 March, 2007 Sevilla-Spain.](#)

94. Alfredo de la Escosura Muñiz, Adriano Ambrosi, Marisa Maria Viana Maltez da Costa, Maria Teresa Seabra dos Reis Gomes, Salvador Alegret, Arben Merkoçi, "[Electrocatalytic immunosensing methods based on gold nanoparticles](#)", Poster, [Poster, 4th NanoSpain Workshop 12-15 March, 2007 Sevilla-Spain.](#)

95. Arben Merkoçi, "[Biosensing-Oriented Nanotechnology Using Carbon Nanotubes and Nanoparticles as Building Blocks](#)", Invited Keynote Speaker, [XIXth International symposium on BIOELECTROCHEMISTRY and BIOENERGETICS, April 1-4, 2007, Toulouse, France](#)

96. Arben Merkoçi, "Nanomaterials for Biosensing – Characterization and Direct Detection" Keynote lecture [ASIASENSE 2007](#) – Asian Conference on Sensors Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philippines, 5 - 7 June 2007.

97. Arben Merkoçi, Alfredo de la Escosura Muñiz, Adriano Ambrosi, Marisa Maria Viana Maltez da Costa, Maria Teresa Seabra dos Reis Gomes, Salvador Alegret "Electrocatalytical Immunosensing Methods Based On Gold Nanoparticles". Oral presentation, [ASIASENSE 2007](#) – Asian Conference on Sensors Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philippines, 5 - 7 June 2007.

98. Briza. Pérez, Arben Merkoçi, Manel del Valle, Salvador Alegret, « New Electrochemical Studies Using Carbon Nanotubes » Poster presentation, [ASIASENSE 2007](#) – Asian Conference on Sensors Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philippines, 5 - 7 June 2007.

99. Sergio Marín, Maria Teresa Castañeda, Salvador Alegret, Arben Merkoçi, « DNA Detection Using Cadmium Sulphide Nanocrystals As Electrochemical Tags » [ASIASENSE 2007](#) – Asian Conference on Sensors Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philippines, 5 - 7 June 2007.

100. M.T. Castañeda, R. Eritja, M.M.V. Maltez, S. Alegret, A. Merkoçi, «Streptavidin Vs. Thiol Linked Gold Nanoparticles DNA For Genosensing Applications» [ASIASENSE 2007](#) – Asian Conference on Sensors Thomas Aquinas Research Complex, University of Santo Tomas, Manila, Philippines, 5 - 7 June 2007.

[101. A.Merkoçi, S.Alegret, "Nanomateriales para aplicaciones bioanalíticas", I WORKSHOP SOBRE NANOTECNOLOGÍA ANALÍTICA, Colegio Mayor "La Asunción" de la Universidad de Córdoba, 16 y 17 de julio de 2007](#)

102. Alfredo de la Escosura Muñiz, Adriano Ambrosi, Marisa Maria Viana Maltez da Costa, Salvador Alegret, Arben Merkoçi, "Gold nanoparticles for immunosensing", Poster, [I WORKSHOP SOBRE NANOTECNOLOGÍA ANALÍTICA, Colegio Mayor "La Asunción" de la Universidad de Córdoba, 16 y 17 de julio de 2007](#)

103. Briza. Pérez, Manel del Valle, Salvador Alegret, Arben Merkoçi, « Some electrochemical aspects related to carbon nanotubes integration into biosensing systems » [I WORKSHOP SOBRE NANOTECNOLOGÍA ANALÍTICA, Colegio Mayor "La Asunción" de la Universidad de Córdoba, 16 y 17 de julio de 2007](#)

104. M.T. Castañeda, R. Eritja, M.M.V. Maltez, S. Alegret, A. Merkoçi, « Two sandwich hybridization assays for electrochemical detection of DNA by labelling with gold nanoparticles of different sizes », Poster, [I WORKSHOP SOBRE NANOTECNOLOGÍA ANALÍTICA, Colegio Mayor "La Asunción" de la Universidad de Córdoba, 16 y 17 de julio de 2007](#)

105. Fraser Douglas, Ramon Yanez, Josep Ros, Sergio Marín, Alfredo de la Escosura, Salvador Alegret, Arben Merkoçi, « Silver, gold and the corresponding core shell nanoparticles for sensing applications » Poster, [I WORKSHOP SOBRE NANOTECNOLOGÍA ANALÍTICA, Colegio Mayor "La Asunción" de la Universidad de Córdoba, 16 y 17 de julio de 2007](#)

106. Adriano Ambrosi, Arben Merkoçi, Anthony J. Killard, Salvador Alegret, Malcolm R. Smyth., « [Gold Nanoparticle labels for Enhanced Electrochemical Immunoassay](#) », 5th Spring Meeting of the International Society of Electrochemistry, Dublin City, University in Dublin, Ireland, 1st to the 4th May 2007.

107. Arben Merkoçi "[Carbon Nanotubes and Nanoparticles for biosensing applications](#)" Invited lecture at iNANO - Interdisciplinary Nanoscience Center at the University of Aarhus and Aalborg

University, Dainmarc (<http://www.ochem.au.dk/kalender/inano31.08.07>)

108. A. Filipkowski, R. Allabashi, A.R. Allen, P.Grabiec, A.Legin, E.Malinowska, A.Merkoçi, P.Moscetta, L.J.Opalski, S. Sandven, L.Sanfilippo, I.Thompson, W.Wróblewski, "[An integrated system for WAter Risk Management in EuRope – WARMER](#)" Poster at "[Autmonet 2007, 3rd International IWA Conference on Automation in Water Quality Monitoring](#)", 5 - 7 September 2007, Gent, Belgium.

109. Arben Merkoçi, Nanotechnology and nanoscience. Novel possibilities for biosensors applications "[II-Meeting of Albshkenca network](#)", Prishtine, Kosove, 15 –16 August 2007 (www.albshkenca.org)

110. Arben Merkoçi, "Nanomaterials for biosensor applications" Invited lecture at: "[Competence from Nanotechnology](#)", Seminar of Tekes FinNano –technology programme, 21st Sept 2007, University of Oulu, Finland.

111. Alfredo de la Escosura-Muñiz, Marisa Maltez-da Costa, Salvador Alegret, Arben Merkoçi, "Electrocatalytical biosensing based on gold nanoparticles", Oral presentation at XII Trobada Transfronterera sobre Sensors i Biosensors, Céret (France), 27-28 September 2007.

112. Arben Merkoçi "Biosensors basats en nanomaterials", Oral presentation at "[Nanociència i nanotecnologia al Campus de la UAB: el BNC-B](#)", Conference organized by Secció de Ciències i Tecnologia de l'Institut d'Estudis Catalans, amb la col·laboració de l'Institut Català de Nanotecnologia i el Centre Nacional de Microelectrònica. Novembre 30th, 2007, Barcelona.

113. Alfredo de la Escosura Muñiz, Marisa Maltez da Costa, M. Teresa Castañeda Briones, Salvador Alegret, Arben Merkoçi, "[Electrocatalytical magnetobiosensing based on gold nanoparticles](#)", Oral presentation at [European Nanosystems \(ENS 2007\), Paris, France, December 03-04, 2007](#).

114. Roza Allabashi, Wolfgang Stach, Leticia Liste Calleja, Alfredo de la Escosura, Arben Merkoçi, "[Quantification of gold nanoparticles in aquatic systems by ICP-MS](#)", Poster presentation at: "[Aquatic Nanosciences and Nanotechnology European Workgroup in the German Waterchemical Society](#)", 1st International Workshop Vienna University 9. - 11. December 2007.

115. Alfredo de la Escosura Muñiz, Adriano Ambrosi, Salvador Alegret, Arben Merkoçi "[Immunosensing based on gold nanoparticles](#)", Oral presentation at the Workshop "[NANOBIOSENSORES PARA APLICACIONES BIOMÉDICAS / NANOBIOSENSORS FOR BIOMEDICAL APPLICATIONS](#)", Organized by [Nanoaracat](#) on 19 y 20 de diciembre de 2007, Hotel Campus Serhs UAB CAMPUS Bellaterra. (Barcelona)

116. M.T. Castañeda, R. Eritja, M.M.V. Maltez, S. Alegret, A. Merkoçi, "[DNA sensors based on nanoparticles](#)", Oral presentation at the Workshop "[NANOBIOSENSORES PARA APLICACIONES BIOMÉDICAS / NANOBIOSENSORS FOR BIOMEDICAL APPLICATIONS](#)", Organized by [Nanoaracat](#) on 19 y 20 de diciembre de 2007, Hotel Campus Serhs UAB CAMPUS Bellaterra. (Barcelona)

117. B. Pérez, M. del Valle, S. Alegret, A. Merkoçi, "[Carbon nanotubes based biosensors systems](#)", Oral presentation at the Workshop "[NANOBIOSENSORES PARA APLICACIONES BIOMÉDICAS / NANOBIOSENSORS FOR BIOMEDICAL APPLICATIONS](#)", Organized by [Nanoaracat](#) on 19 y 20 de diciembre de 2007, Hotel Campus Serhs UAB CAMPUS Bellaterra. (Barcelona).

118. B. Pérez, M. del Valle, S. Alegret, A. Merkoçi, "[Amperometric biosensing of phenols based on carbon nanotube modified devices](#)", [Poster \[P3.5\]](#) at Session 3: Nanomaterials & nanoanalytical systems | Organism- and whole cell based Biosensors | Systems integration, proteomics and

single cell analysis, [10th World Congress on Biosensors, Shanghai, China, May 14-16, 2008.](#)

119. Briza Pérez, Humberto Takeda, Adriano Ambrosi, Orlando Fatibello, Salvador Alegret, Arben Merkoçi, "[NANOSTRUCTURED BIOSENSORS FOR THE ANALYSIS OF PHENOLIC COMPOUNDS](#)", Poster at [NANOSPAIN 2008, Braga \(Portugal\), April 14-18, 2008](#)

120. Sergio Marín Mancebo, Maria Teresa Castañeda, Salvador Alegret, Arben Merkoçi, "[ELECTROCHEMICAL GENOSENSORS LABELLED WITH CdS QDs](#)", Poster at [NANOSPAIN 2008, Braga \(Portugal\), April 14-18, 2008.](#)

121. Christian Sánchez-Espinel, Adriano Ambrosi, Alfredo de la Escosura-Muñiz, Belén Díaz, Elina Garet, Arben Merkoçi, José Faro, África González-Fernández, "Inmunodetección electroquímica de interferon gamma humano mediante el uso de nanopartículas de oro y micropartículas magnéticas", Poster presentation at XXXIV Congreso Nacional de la Sociedad Española de Inmunología, Palma de Mallorca (Spain), 21-24 May 2008.

122. Belén Díaz-Freitas; Christian Sánchez-Espinel, Adriano Ambrosi, Alfredo de la Escosura-Muñiz; Arben Merkoçi, José Faro, Maria José Alonso, África González-Fernández, "Biosensor electroquímico para la inmunodetección de anticuerpos específicos frente al antígeno de superficie del virus de hepatitis B (HBsAg)", Poster presentation at XXXIV Congreso Nacional de la Sociedad Española de Inmunología, Palma de Mallorca (Spain), 21-24 May 2008.

123. Güell R., Aragay G., Fontàs C., Anticó E, Merkoçi A., "[Screen-printed electrodes for heavy metals monitoring in sea water](#)" Poster (PP061) at, [12th International Conference on Electroanalysis, ESEAC 2008, Prague, Czek Republic, June 16 - 19, 2008](#)

124. Takeda H. H., Perez B., Ambrosi, A., Filho O. F., Faria R. C., Mattoso L. H. C., Merkoçi A., "[Nanostructured conducting polymer based biosensors for the analysis of phenolic compounds](#)", Poster (PP164) at [12th International Conference on Electroanalysis, ESEAC 2008, Prague, Czek Republic, June 16 - 19, 2008](#)

125. Arben Merkoçi, "Nanobioelectronics, a powerful technology for DNA and protein Sensing" Invited Lecture ([Nanoparticles in protein sensors – section](#)) at [Electrochemistry of Nucleic Acids and Proteins. New Tools for Biotechnologies, Brno, Czek Republic, June 19-22 \(Satellite Symposium to ESEAC 2008 \(held in Prague, June 16-19, 2008\), The symposium is dedicated to the 60th birthday of Prof. Joseph Wang\).](#)

126. Gemma Aragay, Anna Puig-Font, Serena Laschi, Marco Mascini, Luca San Filippo, Arben Merkoçi, "[Electrochemical stripping analysis, a powerful technique for real-time controlling of environment pollution from heavy metals](#)", Oral presentation at "[iEMSs 2008. International Congress on Environmental Modelling and Software Integrating Sciences and Information Technology for Environmental Assessment and Decision Making, July 7-10, 2008 - Barcelona, Catalonia, Incorporating the 4th Biennial Meeting of iEMSs](#)"

127. Adriano Ambrosi, Briza Perez, Gemma Aragay, Anna Puig, Arben Merkoçi, "[Application of Novel Materials To Screen-Printed Sensors For Environmental Analysis](#)", Poster at [Chemical Sciences Printed Functional Materials Symposium: May 26th-27th 2008, Dublin City University 26th - 27th May 2008, Dublin, Ireland.](#)

128. Arben Merkoçi, Alfredo de la Escosura, Adriano Ambrosi, "[Sensing DNA and proteins via tagging with nanoparticles](#)" Invited lecture" [59th Annual Meeting of the International Society of Electrochemistry, 5-9 Sept. 2008, Seville, Spain.](#)

126. Alfredo de la Escosura-Muñiz, Adriano Ambrosi, Marisa Máltez, Arben Merkoçi, "[Direct electrochemical detection of gold nanoparticles: application in magnetobiosensors](#)", Poster at [TNT2008, Trends in Nanotechnology, Oviedo \(Spain\), September 01-05, 2008.](#)

129. Alfredo de la Escosura-Muñiz, Adriano Ambrosi, Marisa Maltez-da Costa, Belén Díaz-Freitas, Christian Sánchez-Espinel, África González-Fernández, Arben Merkoçi. "Electrochemical routes for fast and efficient detection of biomolecules based on gold nanoparticles", Poster at II Workshop sobre Nanociencia y Nanotecnología Analíticas, Tarragona (Spain), 25-26 September 2008.

130. Arben Merkoçi, "[Nanobiotechnology and biosensor opportunities](#)" Invited lecture at [XXIV Trobades Científiques de la Mediterrània La Física a les Ciències de la Vida, 6-7 October 2008, Menorca, Spain.](#)

131. Alfredo de la Escosura-Muñiz, Adriano Ambrosi, Belén Díaz-Freitas, Christian Sánchez-Espinel, África González-Fernández, Arben Merkoçi, "[Clinical applications of gold nanoparticle-based magnetobiosensors](#)", Oral presentation at [XXIV Trobades Científiques de la Mediterrània La Física a les Ciències de la Vida, 6-7 October 2008, Menorca, Spain](#)

132. Marisa Maltez, Alfredo de la Escosura-Muñiz, Adriano Ambrosi, Arben Merkoçi, "Electrochemical bioassays based on gold nanoparticle tags", Oral presentation at "[XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS](#)", Centre de Congressos d'Andorra la Vella, Andorra, 18-19 de Septiembre de 2008"

133. Raquel Güell, Gemma Aragay, Clàudia Fontàs, Enriqueta Anticó, Arben Merkoçi, "[Lead and cadmium monitoring in seawater using screen-printed electrodes](#)" Poster at "[XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS](#)", Centre de Congressos d'Andorra la Vella, Andorra, 18-19 de Septiembre de 2008"

134. Gemma Aragay, Anna Puig, Arben Merkoçi, "[Flow through system using screen printed electrodes for stable monitoring of heavy metal pollution](#)", Oral presentation at "[XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS](#)", Centre de Congressos d'Andorra la Vella, Andorra, 18-19 de Septiembre de 2008"

135 Briza Pérez, Maria Guix, Adriano Ambrosi, Arben Merkoçi, "[Novel Screen Printed Biosensors based on Tyrosinase-Multi-Walled Carbon Nanotubes for Phenol Compounds determination](#)", Poster at "[XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS](#)", Centre de Congressos d'Andorra la Vella, Andorra, 18-19 de Septiembre de 2008"

136. Georgina Alarcom, Maria Teresa Ramirez, Arben Merkoçi, "Electrochemical bioassays based on Gold Nanoparticle tags", Poster at "[XIII TROBADA TRANSFRONTERERA SOBRE SENSORS I BIOSENSORS](#)", Centre de Congressos d'Andorra la Vella, Andorra, 18-19 de Septiembre de 2008"

137. Arben Merkoçi, "[Nanobioelectronics for biosensors applications](#)" [Invited Lecture, 2nd Taiwan-Spain Workshop on Micro/Nano Electronics, October 14,-15, 2008](#)

138. Arben Merkoçi, "[Nanomaterials and \(bio\)sensing opportunities](#)", Invited Lecture at Symposium F, Electrochemistry of nanostructured biological materials, [7th Brazilian MRS Meeting, Sept. 28th-2nd Oct., 2008, Guarujá, Brazil.](#)

139. Arben Merkoçi, "Nanobiotechnology and biosensors. Potential applications in agriculture and food technology", Invited Lecture at Symposium H, Nanomaterials and nanotechnology applied to biotechnology and agriculture, [7th Brazilian MRS Meeting, Sept. 28th-2nd Oct., 2008, Guarujá, Brazil.](#)

140. Arben Merkoçi "Detection biosystems based on nanoparticles", [Tutorial Course, 6th Ibero-American Congress on Sensors, November 24th - 26th, 2008, Sao Paulo, Brazil](#)

141. Briza Pérez, Maria Guix, Salvador Alegret, Arben Merkoçi, "[Catalytic effect of nanostructured carbon forms for biosensor applications](#)", Oral presentation at [6th Ibero-American](#)

Congress on Sensors, November 24th - 26th, 2008, Sao Paulo, Brazil

112. Adriano Ambrosi, Briza Perez, Arben Merkoçi, "Electrochemical Detection Nanosystems for Lab-On-A-Chip with Capillary Electrophoresis", Poster at [6th Ibero-American Congress on Sensors, November 24th - 26th, 2008, Sao Paulo, Brazil](#)

143. Gemma Aragay, Anna Puig-Font, Arben Merkoçi, "[Voltammetric screen-printed sensors for flow through detection of heavy metal](#)", Poster at [6th Ibero-American Congress on Sensors, November 24th - 26th, 2008, Sao Paulo, Brazil](#)

144. Gemma Aragay, Anna Puig-Font, Arben Merkoçi, "[Screen-Printed Sensors for the Determination of Trace Heavy Metals](#)", Poster at the [3rd Annual Meeting of Institute Alb-Shkenca IASH 1-3 September 2008, Tirana, Albania](#)

145. Briza Pérez, Humberto Takeda, Adriano Ambrosi, Orlando Fatibello, Salvador Alegret, Arben Merkoçi, "[Nanostructured biosensors for the analysis of phenolic compounds](#)", Poster at the [3rd Annual Meeting of Institute Alb-Shkenca IASH 1-3 September 2008, Tirana, Albania](#)

146. Gemma Aragay, Anna Puig-Font, Arben Merkoçi, "[Stripping voltammetry as a robust detection method for heavy metals](#)", [CAREX \(Coordination Action for Research Activities on life in Extreme Environments\) Workshop, "Priorities for environment specific technological developments and infrastructures, Wednesday 3 to 5 December, 2008, Sant-Feliu de Guixols, Spain.](#)

147. A.Merkoçi "Nanotechnology and Biosensors. Applications in health and environmental studies", Invited talk, Health Institute & Agriculture University, Tirana, Albania, 6.02.2009

148. G.Aragay, A.Puig, A.Merkoçi, "Electrochemical Flow Through System for Real-Time Controlling of Environmental Pollution from Heavy Metals", Poster, Pittcon Conference, March 8-13, 2009, Chicago, Illinois, USA.

149. A.Merkoçi "Nanomaterials and applications in biosensors", Invited talk at "Département de Chimie Moléculaire, Université Joseph Fourier, Grenoble.

150. Arben Merkoci "Voltammetric screen-printed sensors for heavy metals and phenols. Achievements and future prospects", Invited talk, Workshop on Environmental Risk Management tools for water quality monitoring, Southampton (UK), 30th March 2009

151. Maria Guix, Melike Sahin, Briza Pérez, Adriano Ambrosi, Arben Merkoçi, "Design of a phenol biosensor based on carbon nanotubes", Poster, Workshop on Environmental Risk Management tools for water quality monitoring, Southampton (UK), 30th March 2009

152. G.Aragay, A.Puig, R.Güell and A.Merkoçi, "Heavy metals detection using screen-printed electrodes, Poster, Workshop on Environmental Risk Management tools for water quality monitoring, Southampton (UK), 30th March 2009

153. P. Moschetta, L. Sanfilippo, G. Aragay, A.Puig, M. Cadevall, M.Medina, A. Merkoçi, "In-situ voltammetric probe for heavy metal detection", Poster, Workshop on Environmental Risk Management tools for water quality monitoring, Southampton (UK), 30th March 2009

154. A.Merkoçi, "Nanomaterials for fast DNA, protein and cell analysis" "Invited speaker at 11th International Conference on Advanced Materials, Symposium I: New Materials and Processes for Sensing and Biosensing, Rio de Janeiro, Brazil, September 20-25, 2009 (http://www.icam2009.com/program/symposium_detail.php?code=I)

155. A.Merkoçi, "Nanobiosensing: synergy between nanotechnology methods, tools and materials", Invited Speaker at "Asia Pacific Conference on Chemistry Education & 24th Philippine Chemistry Congress (APC2E•24PC2): Chemistry for All: Safeguarding Man, Society and the

Environment”, 14–16 April 2009, Bohol Tropics Hotel, Tagbilaran City, Bohol Island, Philippines.

156. A.Merkoçi, [Invited talk, \(Bio\)sensors based on nanomaterials. Applications in environmental monitoring, May 7th, 2009, Banyuls Observatory of the University of Paris 6, Banyuls, France](#)

157. A.Merkoçi, “Using nanoparticles makes an easier sensing and biosensing”, Invited talk at AsiaSense 2009, The 4th International Conference on Sensors, Converging Technology for Sensors application, Bangkok, Thailand, 29-31 July, 2009, <http://www.nstda.or.th/asiasense2009/Highlights%20Speakers.php>

158. Marisa Maltez, A. de la Escosura-Muñiz, A. Ambrosi, B. Pérez-López, S. Marín, A. Merkoçi, Oral presentation: “Nanomaterial based electrochemical transducing platforms for biomedical applications” Medical Physics and Biomedical Engineering World Congress 2009, Munich (Germany) 7-12 September 2009.

159. A. de la Escosura-Muñiz, Marisa Maltez, C. Sánchez-Espinel, B. Dias-Freitas, A. Hernández-Fernández, A. González-Fernández, A. Merkoçi Poster presentation: “Immunosensor to identify tumor cells: a novel low cost and efficient devicebased on electrocatalytic effect induced by gold nanoparticles conjugated to antibodies” II European Congress of Immunology, Berlin (Germany), 13-16 September 2009.

160. C. Parolo, M. Maltez-da Costa, A. de la Escosura-Muñiz, A. Ambrosi, A. Merkoçi Oral presentation: “Investigation of electrochemical responses of different sized gold nanoparticles using screen-printed carbon electrodes” XIV Trobada Transfronterera sobre Sensors i Biosensors, Banyuls-Sur-Mer (France), 24-25 September 2009.

161. P. Kara, M. Guix, A. de la Escosura-Muñiz, M. Maltez, M. Ozsoz, A. Merkoçi. Oral presentation: “An electrochemical biosensor design for protein detection based on aptamers” XIV Trobada Transfronterera sobre Sensos i Biosensors, Banyuls-Sur-Mer (France), 24-25 September 2009.

162. P. Kara, M. Guix, A. de la Escosura-Muñiz, M. Ozsoz, A. Merkoçi. Poster presentation: “Direct electrical detection of point mutations at multi walled carbon nanotube modified electrodes” XIV Trobada Transfronterera sobre Sensos i Biosensors, Banyuls-Sur-Mer (France), 24-25 September 2009

163. Gemma Aragay, Anna Puig-Font, Mariana Medina, Arben Merkoçi and Luca Sanfilippo, Marzio Malizia, Pompeo Moschetta, Pietro Moschetta “Heavy metal screen-printed electrodes integration in an in-situ voltammetric probe”, Poster at “XIV Trobada transfronterera sobre sensors i biosensors” September 2009, Banyuls, France.

164. G. Aragay, M. Cadevall, A. Puig-Font, A. Merkoçi. Oral presentation: “Interferences in heavy metals detection using voltammetric screen-printed electrodes with interest for seawater quality control” XIV Trobada Transfronterera sobre Sensos i Biosensors, Banyuls Sur Mer (France), 24-25 September 2009

165. Mariana Medina Sánchez, Sergio Marín Mancebo, Maria Guix, Georgina Alarcón, Adriano Ambrosi, Arben Merkoçi, Diego A. Garzón. Poster presentation: “ PDMS based LAB-ON-A-CHIP with electrochemical detection using screen printed electrodes ” XIV Trobada Transfronterera sobre Sensors i Biosensors, Banyuls Sur Mer (France), 24-25 September 2009

166. M. Medina, D. A. Garzón, S. Marín, M. Guix, G. Alarcón, A. Ambrosi, A. Merkoçi, Poster presentation: “Silver, gold and the corresponding core shell nanoparticles for sensing applications”, XIV trobada transfronterera sobre sensors i biosensors, Banyuls, France, 24-25 september 2009.

167. M. Guix, M. Roldán, G. Alarcón, B. Pérez, A. Ambrosi, A. Merkoçi, Oral presentation: “Characterization and visualization of the tyrosinase distribution onto MWCNT modified SPE”, XIV

trobada transfronterera sobre sensors i biosensors, Banyuls, France, 24-25 september 2009.

168. Gemma Aragay, Josefina Pons, Josep Ros, Arben Merkoçi, Poster presentation: "Gold Nanoparticles modification with coordination ligands for sensing applications" Nanotech Europe 2009, 28-30 September 2009, Berlin, Germany.

169. M. Guix, G. Alarcón, B. Pérez, A. Ambrosi and A. Merkoçi, Poster presentation: "Characterization and visualisation of the tyrosinase distribution onto multi-walled carbon nanotubes modified Screen Printed Electrode" Nanotech Europe 2009, 28-30 September 2009, Berlin, Germany.

170. A. MERKOCI, A. DE LA ESCOSURA, A. AMBROSI, S. MARIN, M. MALTEZ. "Nanoparticles for DNA, protein and cell sensing" "THE FOURTH INTERNATIONAL ANNUAL MEETING OF ALB-SCIENCE INSTITUTE", Skopje - /Tetovo, 30 August – 2 September 2009.

171. A. Merkoçi, A. de la Escosura-Muñiz, A. Ambrosi, M. Maltez, S. Marín "Nanoparticles based electrical platforms for DNA and protein sensing", Oral presentation, "Nanotech Europe 2009, 28-30 September 2009, Berlin, Germany.

172. A. Merkoçi, A. de la Escosura-Muñiz, S. Marin, M. Maltez da Costa. Poster presentation: "Nanomaterials based biosensors for cost effective cancer diagnostics" Towards Personalized Cancer Medicine (The New York Academy of Sciences), Barcelona (Spain), 19-21 May 2010.

173. Alfredo de la Escosura, Arben Merkoçi. Oral presentation: "Nanoparticle based enhancement of electrochemical DNA hybridization signal using nanoporous electrodes". 20th Biosensors World Congress, Glasgow (United Kingdom), 26-28 May 2010

174. M. Maltez-da Costa, A. de la Escosura-Muñiz, C. Sánchez-Espinel, B.- Díaz-Freitas, A. González-Fernández, A. Merkoçi. Poster presentation: "Gold nanoparticle-based electrochemical magnetosensor for rapid detection of clinical biomarkers". 20th Biosensors World Congress, Glasgow (United Kingdom), 26-28 May 2010

175. G. Alarcón, M. Guix, W. C. Silva, A.M.T. Ramírez-Silva, M. Palomar-Pardavé, A. Merkoçi. Poster presentation: "Enzyme entrapment by cyclodextrine electropolymerization onto carbon nanotube modified screen-printed electrode". 20th Biosensors World Congress, Glasgow (United Kingdom), 26-28 May 2010

176. P. Kara, M. Guix, A. de la Escosura-Muñiz, M. Maltez-da Costa, M. Ozsoz, A. Merkoçi. Poster presentation: "Aptamers based electrochemical biosensor for protein detection using carbon nanotubes platforms". 20th Biosensors World Congress, Glasgow (United Kingdom), 26-28 May 2010

177. M. Medina, M. Guix, A. Merkoçi. Poster presentation: "New Lab-on-a-chip designs for biological samples sorting and detection basen on micro/nanostructures". II International Workshop on Analytical Miniaturization, Asturias (Spain). 7th-8th June 2010

178. M. Guix, A. Ambrosi, A. Merkoçi. Poster presentation: "Magnetic and electrokinetic manipulation on microchip device for bead based immunoassay". II International Workshop on Analytical Miniaturization, Asturias (Spain). 7th-8th June 2010

179. A. de la Escosura-Muñiz, M. Maltez-da Costa, C. Parolo, A. Merkoçi. Poster presentation: "Protein detection using gold nanoparticles as labels and electrochemical sensing routes". 13th International Conference on Electroanalysis (ESEAC 2010), Gijón (Spain), 20-24 June 2010.

180. M. Espinoza, A. de la Escosura-Muñiz, W. Cantanhede, A. Merkoçi. Poster presentation: "Scanning electrochemical microscopy studies of nano and microstructured platforms with

interest for biosensing applications". 13th International Conference on Electroanalysis (ESEAC 2010), Gijón (Spain), 20-24 June 2010.

181. Wilanee Chunglok, Alfredo de la Escosura, Arben Merkoçi. Oral presentation: "Electrochemical aptasensor using nanoporous platforms". XV Trobada Transfronterera sobre Sensos i Biosensors, Sant Carles de la Ràpita (Spain). 16-17 September 2010

182. H.Montón, S. Marín, C. Nogués y A. Merkoçi. Oral presentation: "Non-toxic ZnS nanoparticles as electrochemical tags in biosensing". XV Trobada Transfronterera sobre Sensos i Biosensors, Sant Carles de la Ràpita (Spain). 16-17 September 2010

183. Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Welter Cantanhêde, Arben Merkoçi. Oral presentation: "Scanning electrochemical microscopy studies of nano and microstructured platforms with interest for biosensing applications". XV Trobada Transfronterera sobre Sensos i Biosensors, Sant Carles de la Ràpita (Spain). 16-17 September 2010

184. C. Parolo, A. de la Escosura-Muñiz, A. Merkoçi. Poster presentation: "Effect of gold nanoparticles size on electrochemical immunosensing". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010.

185. M. Perfezou, C. Parolo, A. de la Escosura-Muñiz, A. Merkoçi. Poster presentation: "Lateral flow immunoassay using gold nanoparticles as labels". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010.

186. N. Kleovoulou, C. Parolo, A. de la Escosura-Muñiz, A. Merkoçi. Poster presentation: "Single nucleotide polymorphism detection using a selective polymerase chain reaction assay". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010.

187. Gemma Aragay, Josefina Pons, Josep Ros, Arben Merkoçi. Poster presentation: "Gold nanoparticles modification with intramolecular coordination ligands with interest for sensing applications". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010.

188. Miquel Cadevall, Josep Ros, Arben Merkoçi. Poster presentation: "Synthesis of bismuth nanoparticles and applications in metals sensing". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010

189. Briza Pérez-López, Arben Merkoçi. Poster presentation: "“On-off” Magneto-switchable Biosensor Based on Hybrid Nanobiomaterials". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010

190. Maria Guix, Serdar Çevik, Briza Pérez, Ülkü Anik and Arben Merkoçi. Poster presentation: "Bismuth film and carbon nanotubes implementation in a biosensor for phenol detection". XV Trobada transfronterera sobre sensors i biosensors, Sant Carles de la Ràpita (Spain), 16-17 September 2010

191. Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Welter Cantanhêde, Arben Merkoçi. Poster presentation: "Scanning electrochemical microscopy studies of nano and microstructured platforms with interest for biosensing applications". 6th Workshop on Scanning Electrochemical Microscopy, Frejus, (France), 3-7 October 2010

192. Marisol Espinoza-Castañeda, Alfredo de la Escosura-Muñiz, Welter Cantanhêde, Arben Merkoçi. Oral presentation: "Scanning electrochemical microscopy studies of nano and microstructured platforms with interest for biosensing applications". I Congreso Internacional de

Docencia e Investigación Química. Universidad Autónoma Metropolitana-Azcapotzalco, México D.F. (México). 27-29 November 2010

193. Alfredo de la Escosura, Arben Merkoçi. Poster presentation: " Voltammetric biosensors using a nanoporous membrane based platform". NANOJASP 2010 - Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life (Workshop: SPAIN-JAPAN), Barcelona (Spain), 29-30 November 2010.

194. S. Marín, H.Montón, C. Nogués, A. Merkoçi. Poster presentation: " Quantum dots for electrochemical detection of DNA and cells.". NANOJASP 2010 - Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life (Workshop: SPAIN-JAPAN), Barcelona (Spain), 29-30 November 2010.

195. Gemma Aragay, Anna Puig-Font, Miquel Cadevall, Josefina Pons, Arben Merkoçi. Poster presentation: " Heavy metals monitoring using screen-printed electrodes". NANOJASP 2010 - Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life (Workshop: SPAIN-JAPAN), Barcelona (Spain), 29-30 November 2010.

196. Briza Pérez, Arben Merkoçi. Poster presentation: "Hybrid nanobiomaterials for magneto-switchable biosensing applications". I Congreso Internacional de Docencia e Investigación Química. Universidad Autónoma Metropolitana-Azcapotzalco, México D.F. (México). 27-29 November 2010

197. Briza Pérez, Arben Merkoçi. Poster presentation: "On-off" magneto-switchable biosensor based on hybrid nanobiomaterials". NANOJASP 2010 - Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life (Workshop: SPAIN-JAPAN), Barcelona (Spain), 29-30 November 2010.

198. Gemma Aragay, Josefina Pons, Josep Ros, Arben Merkoçi. Poster presentation: " Gold Nanoparticles modification with coordination ligands for sensing applications". NANOJASP 2010 - Nanomaterials based biosensors and biosystems. Improving the quality and security of citizen's life (Workshop: SPAIN-JAPAN), Barcelona (Spain), 29-30 November 2010.

199. M. Maltez-da Costa, A. de la Escosura-Muñiz, A. Merkoçi. Poster presentation: "Electrochemical biosensors based on nanomaterials for diagnostics", Imagenano -NanoBio&Med 2011, Bilbao, Spain. 11-14 April 2011.

200. Helena Montón, Sergio Marín, Gemma Aragay, Alfredo de la Escosura, Maria Guix, Carme Nogués, Arben Merkoçi. Poster presentation: "Confocal Laser Scanning Microscopy In Nanobiosensing". Focus on Microscopy 2011, Konstanz (Germany). 17-20 April, 2011.

201. Gemma Aragay, Josefina Pons, Arben Merkoçi. Poster presentation: "Nanomaterials based strategies for heavy metals detection". SJNANO2011, Toledo, Spain. 15-16 September, 2011.

202. Flavio Pino, Gemma Aragay, Arben Merkoçi. Poster presentation: "Nanomaterials for pesticides detection" SJNANO2011, Toledo, Spain. 15-16 September, 2011.

203. Eden Morales-Narváez, Briza Pérez-López, Luis Pires Baptista and Arben Merkoçi. Oral Presentation: "Graphene in biosensor applications". Secorial Meeting, ICFO, Castelldefels, Spain. 23rd September, 2011.

2014. Eden Morales-Narváez & Arben Merkoçi. Oral Presentation: "Alzheimer biomarker screening using microarrays". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

205. Carmen C. Mayorga-Martinez, Maria Guix, Rossana E. Madrid, and Arben Merkoçi. Oral Presentation: "Impedance based biosensing". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

206. Lourdes Rivas, Alfredo de la Escosura-Muñiz, Gemma Aragay, Tiziana Placido, Lucia Curri, Josefina Pons and Arben Merkoçi. Oral Presentation: "Synthesis of gold based nanostructures for biosensing applications". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

207. Irene Xochilt Cantarelli, Gemma Aragay, Helena Montón, Sergio Marin, Claudio Parolo, Flavio Maran, Arben Merkoçi. Oral Presentation: "Protein Electrochemical Detection based on a Sandwich System formed by ZnS-thioglycerol Quantum Dots and Magnetic Nanoparticles". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

208. Gemma Aragay, Helena Montón, Josefina Pons, Arben Merkoçi. Poster presentation: "Different strategies for rapid and high sensitive detection of heavy metal ions using N-alkylaminopyrazole ligands". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

209. Briza Pérez-López, Luis Baptista-Pires, André Santiago Afonso and Arben Merkoçi. Poster presentation: "Nanomaterial-based strategies for (bio)sensing systems applied in food quality control". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

210. M. Maltez-da Costa, A. de la Escosura-Muñiz, A. Merkoçi. Poster presentation: "Electrochemical sensing platforms based on nanomaterials applied to diagnostics". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

211. Flavio Pino, Gemma Aragay, Arben Merkoçi. Poster presentation: "Nanomaterials for pesticides detection". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

212. Adaris M. López Marzo, Gemma Aragay, Claudio Parolo, Alfredo de la Escosura, Josefina Pons, Arben Merkoçi. Poster presentation: "Synthesis of CaCO₃ micro and nanoparticles for future biosensing applications". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

213. Marisol Espinoza-Castañeda, Alfredo De la Escosura-Muñiz, Gemma González-Ortiz, Susana Martín-Orúe, Francisco Pérez, Arben Merkoçi. Poster presentation: "Gold nanoparticles as carriers of a casein glycopeptide for therapeutic and biosensing applications". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

214. Sandrine Miserere, Mariana Medina, Arben Merkoçi. Poster presentation: "Integration of electrochemical detection in COC microfluidic platform for biosensing applications". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

215. Sergio Marín, Sílvia Pujals, Ernest Giralt, and Arben Merkoçi. Poster presentation: "Electrochemical interrogation of cellular uptake of quantum dots decorated with a proline-rich cell penetrating peptide". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

216. Miquel Cadevall, Josep Ros, Arben Merkoçi. Poster presentation: "Synthesis of bismuth nanoparticles for sensing applications". XVIèmes Rencontres Transfrontalières « Capteurs et Biocapteurs » – Toulouse, France. 29-30 September, 2011.

217. Claudio Parolo, Marisa Maltez-da Costa, Alfredo de la Escosura-Muñiz, Arben Merkoçi: "Nanomaterials based biosensors for rapid and cost effective diagnostic of biomarkers", Poster presentation at "Evolving Challenges in Promoting Cardiovascular Health" Workshop (The New York Academy of Sciences), Barcelona (Spain), 4-5 November 2011.

218. A. de la Escosura-Muñiz, C. Parolo, M. Maltez-da Costa, A. Merkoçi. Poster presentation: "Nanomaterials based biosensors for rapid and cost effective diagnostic of biomarkers". ICREA Conference on Network Medicine Approaches to Human Disease, Barcelona (Spain), 21-23 November 2011.

Broadcast / News articles on our research

A.Merkoçi. "[Nou sistema de detecció del DNA basat en l'ús de nanopartícules d'or](#)" (in catalan). UAB Divulg@, February 24, 2006 (<http://www.uab.es/uabdivulga/AVENÇOS>)

Biosensors electroquímics basats en nanopartícules d'or (Merkoçi et al.). Comments at "[Ciutadania i empresa](#)" (Edited by Xavier Garcés). p.4, 2009.

"[QDs make DNA detection faster and simpler](#)", Published at: <http://nanotechweb.org/cws/article/tech/37255> on Jan 12, 2009

Immunosensing using nanoparticles, Podcast Interview at Material Today, 19 March 2010
<http://www.materialstoday.com/podcasts/>

Briza Pérez, Manel del Valle, Salvador Alegret i Arben Merkoçi, [Nanoscience for the improvement of biosensors](#), UAB Divulg@, April, 2009 (<http://www.uab.es/uabdivulga/AVENÇOS>)

"[Quantum-dot device detects DNA](#)". Written by James Dacey, reporter for physicsworld.com. Published on January 20, 2009 at: <http://physicsworld.com/cws/article/news/37388>

S.Marin, A.Merkoçi, [Nueva técnica de detección de DNA](#), (in catalan). UAB Divulg@, March, 2009 (<http://www.uab.es/uabdivulga/AVENÇOS>)

"Biosensors ecologics" UAB Divulg@, 2009

<http://www.uab.es/servlet/Satellite?cid=1096481464166&pagename=UABDivulga%2FPage%2FTemplatePageDetallArticleInvestigar¶m1=1245651215276>

News on the article: Alfredo de la Escosura-Muñiz, Christian Sánchez-Espinel, Belén Díaz-Freitas, África González-Fernández, Marisa Maltez-da Costa, Arben Merkoçi, "Rapid identification of tumour cells using a novel electrocatalytic method based in gold nanoparticles". Analytical Chemistry, 2009, 81, 10268–10274

<http://www.google.com/hostednews/epa/article/ALeqM5gdWkn7REM4lAg3jYN1bTFGUoxfrw>

<http://www.rtve.es/noticias/20091122/nuevo-dispositivo-para-detectar-cancer-dos-minutos/301984.shtml>

<http://www.20minutos.es/noticia/571603/0/tumores/deteccion/rapidez/>

http://www.elpais.com/articulo/sociedad/biosensor/identifica/cuenta/celulas/cancer/elpepisoc/20091119elpepisoc_5/Tes

<http://www.publico.es/agencias/efe/271858/descubren/biosensores/capaces/detectar/celulas/tumorales/minutos>

http://www.elperiodico.com/default.asp?idpublicacio_PK=46&idioma=CAS&idnoticia_PK=664096&idseccio_PK=1477

<http://www.diariodecadiz.es/article/sociedad/569462/metodo/detecta/celulas/cancerigenas/solo/dos/minutos.html>

<http://www.es.globaltalentfcrl.com/articles/1367/Desarrollan-un-nuevo-metodo-para-la-deteccion-mas-rapida-y-sencilla-de-las-celulas-cancerigenas.html>

<http://es.euronews.net/teletipos/76039-descubren-unos-biosensores-capaces-de-detectar-celulas-tumorales-en-2-minutos/>

<http://noticias.terra.es/espana/2009/1122/actualidad/descubren-unos-biosensores-capaces-de-detectar-celulas-tumorales-en-2-minutos.aspx>

<http://www.hoymujer.com/reportajes/descubren,unos,biosensores,capaces,101695,11,2009.html>

<http://www.noticierodigital.com/forum/viewtopic.php?t=595885>

<http://www.vtv.gov.ve/noticias-ciencia-y-salud/26488>

<http://www.andaluciainformacion.es/portada/?a=94328&i=1>

<http://www.vivir-sano.net/salud/deteccion-precoz-de-celulas-cancerigenas/>

<http://www.madridiario.es/2009/Noviembre/ciencia-tecnologia/noticias/178851/biosensores-para-detectar-tumores-en-2-minutos.html>

<http://www.ecuadorciencia.org/blog.asp?id=5882>

<http://www.puntodereferencia.com/desarrollan-un-metodo-experimental-capaz-detectar-celulas-tumorales-en-2-minutos/>

<http://www.vtv.gov.ve/noticias-ciencia-y-salud/26488>

<http://www.enfoques365.net/N7596-descubren-biosensores-que-detectan-cancer-en-2-minutos.html>

<http://diarionecochea.com/2009/11/22/desarrollan-un-metodo-experimental-capaz-detectar-celulas-tumorales-en-2-minutos/>

<http://www.rnv.gov.ve/noticias/?act=ST&f=21&t=113807>

<http://www.laestrella.com.pa/mensual/2009/11/22/contenido/13342918.asp>

<http://www.lne.es/sociedad-cultura/2009/11/23/descubren-biosensores-detectan-celulas-cancerigenas-minutos/837822.html>

<http://peru21.pe/noticia/372250/metodo-capaz-detectar-celulas-cancerigenas-dos-minutos>

<http://www.diarioinformacion.com/cultura/2009/11/23/descubren-biosensores-capaces-detectar-celulas-tumorales-2-minutos/954223.html>

<http://mymanuel.wordpress.com/2009/11/23/>

<http://www.radiomundial.com.ve/yvke/noticia.php?t=37285&imprimir=1>

<http://www.radiomundial.com.ve/yvke/noticia.php?37285>

http://www.canalboinc.com/modules/newbb/viewtopic.php?topic_id=1481&forum=96&post_id=14630

<http://www.rtve.es/mediateca/videos/20100103/linformatiu-cap-setmana-03-01-2010/660231.shtml>

News on the article: Adriano Ambrosi, Federico Airò, Arben Merkoçi, “Enhanced Gold Nanoparticle based ELISA for Breast Cancer Biomarker”, Analytical Chemistry, Published in the web, D.o.i. 10.1021/ac902492c

[La Vanguardia](#), [Europa Press](#), [ADN](#), [ABC](#), [QUE](#), [Terra](#), [Yahoo](#), [El Confidencial](#), [El Economista](#), [Gente](#), [La Información](#), [Hoy](#), [El Comercio](#), [Las Provincias](#), [Deia](#), [El Diario Montañés](#), [Nanotecnológica](#), [Diario de Salud](#), [Ideal](#), [BarcelonaReporter](#)

News on the article: Gemma Aragay, Josefina Pons, Arben Merkoçi, “Recent Trends in Macro, Micro and Nanomaterials Based Tools and Strategies for Heavy Metals Detection”, Chemical Review, 2011, dx.doi.org/10.1021/cr100383r

UAB, <http://www.uab.cat/servlet/Satellite/noticias/detalle-de-una-noticia-1099409749848.html?noticiaid=1302242486030>

Noticias de la ciencia:

http://noticiasdelaciencia.com/not/867/nanotecnologia_para_la_deteccion_de_contaminantes_en_agua/

News on the article by Maria Guix, Jahir Orozco, Miguel García, Wei Gao, Sirilak Sattayasamitsathit, Arben Merkoçi, Alberto Escarpa, Joseph Wang, “Superhydrophobic Alkanethiol-Coated Microsubmarines for Effective Removal of Oil”, ACS Nano 2012, Published online 10.1021/nn301175b

First 'Microsubmarines' Designed to Help Clean Up Oil Spills, ScienceDaily (May 2, 2012) (<http://www.sciencedaily.com/releases/2012/05/120502123435.htm>)

News at El Mundo about Nanopaper: <http://www.elmundo.es/economia/2015/09/01/55e5800d268e3eb02f8b4582.html>

News about graphene <http://www.infosalus.com/salud-investigacion/noticia-grafeno-puede-mejorar-nanobiosensores-aplicados-biomedicina-20150526130940.html>

News about graphene printing technology: <http://www.agenciasinc.es/Noticias/Metodo-low-cost->

[para-imprimir-dispositivos-basados-en-grafeno](#)

News about graphene printing: <http://www.nanowerk.com/nanotechnology-news/newsid=42562.php>

News about ink-jet printing technology: http://www.tendencias21.net/Transistores-impresos-con-una-tinta-que-lleva-anticuerpos-diagnosticaran-enfermedades_a38437.html

News about DNA sensing: <http://www.nanowerk.com/nanotechnology-news/newsid=41959.php>

News about the optical sensors: <http://www.nanowerk.com/spotlight/spotid=40756.php>

News about graphene transistor: <http://www.azonano.com/news.aspx?newsID=30609>

News about the nanochannel: <http://www.nanowerk.com/spotlight/spotid=20257.php>

News about the paper-based test: <http://www.nanowerk.com/nanotechnology-news/newsid=41823.php>

News about cancer cell monitoring: <http://www.nanowerk.com/spotlight/spotid=26149.php>

SUPERVISION OF PhD THESIS

- 1997 Majlinda Vasjari
Analytical characterisation of acid precipitation in Tirana city using optical as well as electrochemical methods, Tirana University, Albania (Coodirector Prof. A.Çullaj)
- 2003 Miquel Albareda
[Development of screen printed biosensors for application in agriculture](#)
Autonomous University of Barcelona (Coodirector: .S.Alegret)
- 2008 María Teresa Castañeda Briones
Electrochemical stripping analysis and nanoparticles for affinity biosensors
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain
- 2008 Georgina Alarcón Ángeles
Desarrollo de Métodos de Cuantificación de Dopamina (DA), Azometina-H (AzH) y Ácido Ascórbico (AA) basados en Sistemas Supramoleculares DA/AA/AzH con β -Ciclodextrina (β -CD) y Dodecil sulfato de sodio (SDS)
Universidad Autónoma Metropolitana Unidad Iztapalapa, Mexico, (Coodirector : María Teresa Ramirez Silva)

-
- 2009 Sergio Marín Mancebo
SYNTHESIS AND APPLICATIONS OF NANOPARTICLES IN BIOSENSING SYSTEMS
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: S.Alegret)
 - 2009 Briza Pérez López
CARBON NANOTUBES FOR ELECTROCHEMICAL (BIO)SENSING
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: M. del Valle)
 - 2011 Gemma Aragay
MACRO, MICRO AND NANOBASED TOOLS FOR HEAVY METALS DETECTION
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: J.Pons)
 - 2012 Marisa Maltez da Costa
Electrocatalytic Nanoparticle Based Sensing for Diagnostics
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: A.Escosura)
 - 2013 Adaris Maria López Marzo
Nanostructured micromaterials and devices for sensing and removing of chemical contaminants
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: J.Pons)
(20.06.2013)
 - 2013 Maria Guix Noguera
NANO/MICROMATERIALS AND MOTORS IN (BIO)SENSING APPLICATIONS
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain.
(15.07.2013)
 - 2013 Eden Morales Narváez
Nanomaterials Based Microarray Platforms for biodetection
Universitat Politècnica de Catalunya, ESAII, Barcelona, Spain
(24.07.2013)
 - 2013 Claudio Parolo
Plastic and paper platforms for nanoparticle based immunosensors
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: A.Escosura)
(26.07.2013)
 - 2013 Mariana Medina Sánchez
Improved biosensing applications using lab-on-a-chip and other platforms
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: S.Miserere)
(15.11.2013)
 - 2014 Marisol Espinoza Castañeda
STUDY AND DEVELOPMENT OF NEW BIOSENSORS BASED ON NANOPARTICLES AND NANOCHANNELS
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: A.Escosura)
(21.07.2014)
 - 2014 Ruslán Raulievich Alvarez Diduk
"Study of the influence of the structure of B-ring of flavonoids in their acidity constants and antioxidant capacity"
Universidad Autónoma Metropolitana Unidad Iztapalapa, Mexico, (Coodirector : María Teresa Ramirez Silva), (August 2014)
 - 2014 Miquel Cadevall
"Bismuth based (nano)materials and platforms for (bio)sensing" by, Universitat Autònoma de Barcelona, (Coodirector: J.Ros)

(14.11.2014)

- [2014 Erika Rodríguez Sevilla](#)

“Evaluation of enzyme immobilization methods for biosensors construction”.

Universidad Autónoma Metropolitana Unidad Iztapalapa, Mexico, (Coodirector : María Teresa Ramirez Silva), (August 2014)

- 2015 Lourdes Rivas

“Electrochemical and optical nanoparticle-based biosensors for point-of-care applications”
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Co-directors: Alfredo de la Escosura y Josefina Pons)

(26.01.2015)

- 2015 Alejandro Chamorra

“Electrochemical and optical nanomaterial-based biosensors for diagnostic applications”

Autonomous University of Barcelona, Bellaterra (Barcelona), Spain

(9.11.2015)

- 2015 Helena Monton

“Development of Quantum Dot-based tools for in vitro and biosensing applications”

Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Coodirector: Dr. Carme Nogués)

(13.11.2015)

- 2015 Flavio Pino

“Development of nanomaterials for environmental monitoring”

Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Co-director: Carmen Mayorga Martinez)

(16.11.2015)

- 2015 Everson Thiago Santos Gerôncio Da Silva

“Construction and development of point-of-care testing devices with electrochemical detection in paper”

Institute of Chemistry - UNICAMP, Campinas-SP, Brazil (Co-director: Lauro T. Kubota)

(19.05.2015)

- 2016 Xavier Llopis

Integrated analytical biosystems for industrial and environmental applications

Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Co-director: Salvador Alegret, Julian Alonso)

(05.02.2016)

- 2017 Bentolhoda Heli

Bacterial cellulose supported sensor for bacteria and gas detection development

Polytechnique Montréal, Monthreal, Canada (Co-director Prof. Abdellah Aji)

(04.11.2017)

- 2017 Alejandro Zamora

Nanobiosensors for diagnostics applications

Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Co-directors: Carmen C. Mayorga Martinez and Edén Morales Narváez)

(11.11.2017)

- 2017 Andrzej Chalupniak

Development of novel electrochemical and optical lab-on-a-chip platforms for contaminants and biomarkers sensing
Autonomous University of Barcelona, Bellaterra (Barcelona)
(27.11.2017)

- 2017 Jie Liu
Toxicity Bioassay and Bioremediation of Diuron Pollution Using Microorganism-decorated Nano Biocomposites
Department of Pesticides, South China Agricultural University, Guangzhou, China (Co-director: Dr. Prof. Guohua Zhong)
(03.12.2017)
- 2018 Daniel Quesada-González
"Design and application of nanomaterial-based lateral flow devices"
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain
(26.10.2018)
- 2018 Carme Martinez
Inkjet-Printed Devices for Chemical- and Biosensing Applications
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Co-Director, Eloi Ramon)
(13.12.2018)
- 2019 Lorenzo Russo
Designing advanced nanomaterials for next generation in vitro diagnostics: development of optical and electrochemical biosensors based on hollow AuAg nanoparticles for determination of viral and bacterial infections
Autonomous University of Barcelona, Bellaterra (Barcelona), Spain (Co-Director, Victor Puentes)
(18.01.2019)

Master thesis

- 2002 Sergi Carrévalo Gil, Estudi analític de l'aplicació d'un elèctrode grafit-epoxi en l'anàlisi de metalls pesants en aigua potable amb la tècnica DPASV. Automatització amb un sistema de flux continu. Autonomous University of Barcelona
- 2004 Xavier Llopis
Flow injection (micro) biosystems based on magnetical particles and electrochemical detections
Autonomous University of Barcelona (Coodirector Prof.S.Alegret)
- 2005 Marta Aldavert
Development of novel immunosystems based nanoparticles
Autonomous University of Barcelona
(Coodirector Prof.M. del Valle)
- 2005 Sergi Marin
Synthesis of quantum dots and their integration into DNA detection systems
Autonomous University of Barcelona (Coodirector Prof.S.Alegret)
- 2006 Georgina Alarcón Angeles
Nanostructured biosensor designs for dopamine
UAM, Mexico (Coodirector Prof. M.T. Ramírez Silva)
- 2009 Maria Guix Noguera

Carbon nanotubes modified electrochemical biosensr for phenol detection
Autonomous University of Barcelona.

- 2009 Claudio Parolo
Electrochemical Characterization of Gold Nanoparticles for Biomedical Diagnostics Applications
Università degli Studi di Padova (Coodirector Prof. Flavio Maran)
- 2010 Miquel Cadevall Riera
Bismuth nanoparticles for ink-jet printing of heavy metals sensors,
Autonomous University of Barcelona (Coodirector, Josep Ros)
- 2010, Mariana Medina
Nanobioelectronics based platforms for lab-on-a-chip applications
Autonomous University of Barcelona
- 2010, Marisol Espinoza Castañeda
Prussian blue nanoparticles for biosensing applications
Autonomous University of Barcelona
- 2010, Federico Airò
APPLICATION OF NANOPARTICLES TO THE ANALYSIS OF BIOMARKES
UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA, Italy (Coodirectors: Francesco Peri, Adriano Ambrosi)
- 2011, Irene Xochilt Cantarelli
Biosensori elettrochimici a base di quantum dot e microparticelle magnetiche
UNIVERSITÀ DEGLI STUDI DI PADOVA, Facoltà di Scienze MM. FF. NN., Dipartimento di Scienze Chimiche, UNIVERSITÀ DEGLI STUDI DI PADOVA. (Coodirector: Prof. Flavio Maran)
- 2012, Luis Miguel Baptista Pires
“Development of graphene based platforms for biosensing applications”, MASTER IN NANOTECHNOLOGY AND MATERIALS SCIENCE, MASTER THESIS PRESENTATION
Autonomous University of Barcelona

Master thesis with older programmes

- 1988 Agim Seiti, Analytical aspects of potassium ion determination in blood samples
Tirana University
- 1988 Luan Bregu, Development of a conductimetric device for use in quantitavive analysis
Tirana University
- 1989 Edmond Mehmeti, The design and application of copper ion selective electrode for use in industrial monitoring Tirana University
- 1992 , Determination of amonium ion in biological samples using ammonium ion selective electrode, Tirana University
- 1998 Susana Braga, Development and analytical characterisation of a biosensor for D-amygdalin, Autonomous University of Barcelona
- 1999 Markéta Vašková, ISE developed by electrochemically mediated imprinting polypyrrole
Autonomous University of Barcelona
- 1999 Alice Kotulanová, Voltammetric analysis of three aminoacids, lysin, tryptophane and tyrosin, Autonomous University of Barcelona

LANGUAGES

Albanian, Catalan, Spanish, English, Italian, French