Dr. Omar Azzaroni

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PERSONAL DATA

Birthplace/date: Bernal, Buenos Aires (Argentina), March 18, 1974
Citizenship(s): Argentina/Italy

EDUCATIONAL BACKGROUND

1999 – Lic. in Chemistry (Universidad Nacional de La Plata)
2004 – Ph.D. in Chemistry (Universidad Nacional de La Plata)

PROFESSIONAL EXPERIENCE

2008 - present	CONICET Researcher – Principal Investigator
2010 - present	Adjunt Professor of Physical Chemistry – Universidad Nacional de La Plata
2007 - 2008	*Humboldt Research Fellow*, Max-Planck-Institut für Polymerforschung (Mainz – Germany)
2005 - 2006	*Marie Curie Research Fellow*, Melville Laboratory for Polymer Synthesis – Department of Chemistry – University of Cambridge (United Kingdom)
2004 - 2005	Postdoctoral Research Associate, Melville Laboratory for Polymer Synthesis – Department of Chemistry – University of Cambridge (United Kingdom)

LEADERSHIP EXPERIENCE

2019 – 2022	Group Leader of the *CEST-UNLP Partner Lab for Bioelectronics*
2012 – 2018	Group Leader of the *AIT-CONICET Partner Lab for Advanced Supramolecular Materials*
2013 – present	Head of *NanoBioSens* – ANPCyT Technology Platform (Nanomedicine and Diagnostics R&D)
2013 – 2018	Lead Scientist – NANOPETRO, A consortium between CONICET and Y-TEC devoted to research and innovation for the oil and gas industry.
2012 – 2015	Deputy Director, Instituto de Investigaciones Fisicoquímicas Teóricas y Aplicadas (INIFTA – CONICET – Universidad Nacional de La Plata)
2014 – 2015	Chair, CONICET Selection Committee (Chemistry)
2009 – 2013	*Group Leader of the Max Planck Partner Group for Functional Supramolecular Bioconjugates* – Max Planck Society (Germany)
2008 - present	*Head of the Soft Matter Laboratory* (INIFTA–CONICET–UNLP)

RESEARCH FELLOWSHIPS

2007 – 2008 *Alexander von Humboldt Research Fellowship* - Alexander von Humboldt Stiftung (Germany).
Host: Prof. Wolfgang Knoll, Department of Materials Science, Max-Planck-Institut für Polymerforschung (Mainz, Germany).

2005- 2006 *International Incoming Marie Curie Research Fellowship* (European Union´s Sixth Framework Programme on Research & Development).
Host: Prof. Wilhelm Huck, Melville Laboratory for Polymer Synthesis – Department of Chemistry – University of Cambridge (United Kingdom).

HONORS AND AWARDS

2020 Georg Forster Research Award - Alexander von Humboldt Stiftung (Germany).

2013 Konex Award - Physical, Inorganic and Analytical Chemistry (Argentina).

2012 Houssay Prize in Chemistry - Ministry of Science and Technology (Argentina).

2012 *Featured Group of the Month"* (June). Soft Matter World – Global Research Network (ICMR-NSF, USA).

2010 *Ranwel Caputto Award* – National Academy of Sciences (Argentina).

2010 *Tadeo Haenke Award* - la Academia Nacional de Ciencias Exactas, Físicas y Naturales (ANCEFN).

2005 *Honorable Mention of the IUPAC Prize for Young Chemists*", International Union of Pure and Applied Chemistry.

REVIEWING ACTIVITIES

Journals *Science, Nature Reviews Materials*, *Nature Nanotechnology, Nature Communications, Science Advances, Angewandte Chemie International Edition*, *Chemical Society Reviews*, *Proceedings of the National Academy of Sciences of the United States of America*, *Accounts of Chemical Research*, *Advanced Materials*, *Journal of the American Chemical Society*, *ACS Nano, ACS Macro Letters*, *Chemistry – A European Journal, Chemistry – An Asian Journal, Small*, *Chemical Science, ChemBioChem, Chemical Physics Letters*, *Advanced Functional Materials*, *Advanced Materials Interfaces*, *NPG Asia Materials*, *Macromolecular Symposia, Macromolecules*, *Macromolecular Rapid Communications*, *Polymer International, Journal of Polymer Science, Part A: Chemistry*, *Biomacromolecules, Journal of Physical Chemistry*, *Physical Chemistry Chemical Physics*, *ACS Applied Materials & Interfaces, Industrial & Engineering Chemistry Research*, *Journal of Organic Chemistry*, *Organic Letters*, *Analytical Chemistry*, *Langmuir, Sensors and Actuators B: Chemical, Materials Science and Engineering C: Materials for Biological Applications, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Polymer*, *Polymer Bulletin*, *Polymer Chemistry*, *Nano Letters*, *Nanotechnology*, *New Journal of Physics, Nanoscale*, *Soft Matter*, *Microfluidics and Nanofluidics*, *RSC Advances, Journal of Materials Chemistry A*, *Measurement Science and Technology*, *Current Nanoscience*, *Encyclopedia of Polymer Science and Technology*, *Applied Surface Science, Journal of Colloid and Interface Science*, *Journal of Solid State Electrochemistry*, *International Journal of Biological Macromolecules*, *Journal of Physics and Chemistry of Solids*, *Physical Review Letters*, *Electrochimica Acta*, *Biosensors and Bioelectronics*, *Advanced Materials Interfaces.*

Funding Agencies	- *Agencia Nacional de Promoción Científica y Tecnológica* (ANPCyT – Argentina). - *Consejo Nacional de Investigaciones Científicas y Técnicas* (CONICET – Argentina). - *Comisión Nacional de Investigación Científica y Tecnológica* (CONICYT – Chile). - *Agency for Science, Technology and Research* (A*STAR – Singapore). - *Laboratório Nacional de Luz Síncrotron* (LNLS) (Brazil). - *Czech Science Foundation* (Czech Republic). - *Austrian Science Fund* (FWF) - FWF Der Wissenschaftsfonds (Austria) - *The Netherlands Organization for Scientific Research* (*De Nederlandse Organisatie voor Wetenschappelijk Onderzoek)* (NOW - The Netherlands). - *Fundación Bunge & Born* (Argentina). - *Irish Research Council* (Ireland)

GRANT FUNDING

2021 - 2023	Agencia I+D+I – Award: ARGENVAC Title: Development and preclinical evaluation of vaccine against COVID-19 infection using polymeric nanoadjuvants. Role: Co-PI (PI: Prof. Guillermo Docena – UNLP)
2020 - 2022	Agencia I+D+I – Award: PICT-2018-4684 Title: Early detection of kidney disease using graphene field-effect transistors Role: PI
2019 - 2022	CEST Centre for Electrochemistry and Surface Technology GmbH (Austria) Title: *"Partner Group for Exploratory Research on Bioelectronics"* (Contract for Strategic Scientific Cooperation between CEST and Universidad Nacional de La Plata) Role: PI
2018 - 2022	Agencia I+D+I – Award: PICT-2017-1523 Title: Biomimetic nanodevices based on solid-state nanopores: design, construction and applications. Role. PI
2017 - 2021	Agencia I+D+I – Award: PICT-2016-1680 Title: *Functional heterostructures based on metal-organic frameworks: synthetic aspects, caracterization and applications in energy conversion.* Role: PI
2015 - 2018	International Research Staff Exchange Scheme (IRSES) – European Union Title: *"Hybrid Drug Delivery Systems upon Mesoporous Materials, Self-Assembled Therapeutics and Virosomes"* (HYMADE) (Proposal number: 645686) Role: Co-PI (PI: Dr. Sergio Moya, CIC BiomaGUNE, Spain)
2014 - 2016	Agencia I+D+I – Award: PICT-2013-0905 Title: *Polymer brushes: synthetic aspects, caracterization and applications.* Role: PI
2014 - 2016	DFG-CONICET Title: "*Harnessing Functional Confinement in Multiblock Copolymer-Based Thin Films for Permselective Transport of Electroactive Species"* Role: Co-PI together with Profs. Galo Soler-Illia, Marcus Müller and Philipp Vana.)
2014 - 2016	*CONICET – Award: PIP0370* *Title: Construction of functional Interfacial nanoarchitectures through layer-by-layer assembly.*

Role: PI

2014 - 2017 International Research Staff Exchange Scheme (IRSES) – European Union
Title: *"Hierarchical Functionalization of Graphene for Multiple Device Fabrication"* (HIGRAPHEN) (Proposal number: 612704)
Role: Co-PI (PI: Dr. Sergio Moya, CIC BiomaGUNE, Spain)

2013 - 2019 *Austrian Institute of Technology*
Title: "Exploratory Research for Advanced Technologies in Supramolecular Materials Science" (Contract for Strategic Scientific Cooperation between AIT and CONICET).
Role: PI

2013 - 2017 ANPCyT – Award: FS NANOTEC 01/2012
Title: *Design and Development of Nanoproducts for the Oil Industry*
Role: PI

2011 - 2013 International Research Staff Exchange Scheme (IRSES) - European Union
Title: *"Transport Studies on Polymer Based Nanodevices and Assemblies for Delivery and Sensing".* (TRASNADE)
Role: Co-PI (PI: Dr. Sergio Moya, CIC BiomaGUNE, Spain)

2010 - 2013 *ANPCyT – Award:* PICT-PRH 163/08
Title. Soft Nanotechnology: Molecular Design of Interfaces Using Macromolecular Arquitectures
Role: PI

2009 - 2013 Max Planck Society
Title: *"Molecular Recognition in Functional Bionanoassemblies and Supramolecular Bioconjugates".* (POLY0008) - Max Planck Partner Group
Role: PI

TEACHING EXPERIENCE - COURSES TAUGHT AT UNIVERSIDAD NACIONAL DE LA PLATA

Undegraduate Courses
Electrochemistry (undergraduate course - one semester)
Surface and Colloid Chemistry (undergraduate course - one semester)
Polymer Science (undergraduate course - one semester)
Advanced Characterization Techniques (undergraduate course - one semester)

***Doctoral Training Programme* - Graduate Education on Soft Matter Science**

The Soft Matter Laboratory organises specialist courses and transferable skills seminars as part of the Doctoral Training Programme. PhD students are also encouraged to attend doctoral training courses organised by other institutions and/or to include relevant regular course units in their Doctoral Training Programme.

Seminars in transferable skills offer training aimed at broadening the skills of, and/or increasing the awareness of skills acquired by, the PhD student. Key areas are: communication skills, leadership and personal efficiency, career management and scientific project management.

In this Doctoral Training Programme PhD students acquire experience in soft matter research within an industrial and multidisciplinary environment through industrially-inspired PhD projects.[1] Students learn to

[1] https://softmatter.quimica.unlp.edu.ar/?page_id=4919

appreciate the business context and multidisciplinarity of soft matter science and to develop business awareness. Within this framework, PhD students develop a mind-set for learning through problem-solving.

RESEARCH SUPERVISION

RESEARCHERS

Name	*Position*	*Time Period*
Dr. Diego Pallarola	CONICET Researcher	2014-2016
Dr. Waldemar Marmisollé	CONICET Researcher	2013 - 2019
Dr. Alberto Albesa	CONICET Researcher	2013 - 2019
Dr. Gabriel Longo	CONICET Researcher	2014 - 2019
Dr. M. Lorena Cortez	CONICET Researcher	2015-2019
Dr. Juan Martín Giussi	CONICET Researcher	2015 - 2020
Dr. Mariana Tasso	CONICET Researcher	2015 - 2019
Dr. Catalina von Bildering	CONICET Researcher	2016 - 2020
Dr. Agustín Picco	CONICET Researcher	2018 - present
Dr. Juliana Scotto	CONICET Researcher	2020 - present
Dr. Esteban Piccinini	CONICET Researcher	2022 - present

POSTDOCS

Name	*Research Topic*	*Time Period*
Dr. Diego Pallarola	Supramolecular Bioconjugates	2009-2010
Dr. Annette Brunsen	Hybrid Mesoporous Materials	2010-2011
Dr. Carolina Díaz	Soft Biointerfaces	2011 - 2013
Dr. M. Lorena Cortez	Supramolecular Materials	2012 - 2014
Dr. Eliana Maza	Macromolecular Interfaces	2013 - 2015
Dr. Juan Giussi	Polymer Synthesis	2013 - 2015
Dr. Jimena Tuninetti	Responsive Polymer Surfaces	2013-2015
Dr. Gisela Díaz	Synthesis of Macrosurfactants	2015 - 2017
Dr. Cintia Contreras	Hybrid Mesoporous Materials	2015 - 2017
Dr. Ana Sol Peinetti	Biomimetic Nanopore Devices	2017 - 2018
Dr. Juliana Scotto	Conducting Polymers	2017 - 2019
Dr. Maximiliano Agazzi	Self-assembled microgels	2018 - 2020
Dr. Santiago Herrera	Self-assembled drug delivery systems	2018 - 2020
Dr. Luciano Sappia	Bioelectronic platforms	2018 - 2020
Dr. Vanina Cayón	Nanopore Biosensing	2019 - present
Dr. Yamili Toum-Terronés	Nanopore Biosensing	2019 - present

DOCTORAL STUDENTS

Name	*Research Topic*	*Time Period*
Marcos Coustet	Polymer Synthesis	2010 - 2014
Agustín Picco	Self-Assembled Systems	2010 – 2014
Facundo Gilles	Solid-state nanopores	2012 – 2017
Gonzalo Pérez Mitta	Nanopore devices	2013 - 2017
Nicolás Muzzio	Biointerfaces	2013 - 2017
Sebastián Alberti	Hybrid mesoporous materials	2013-2018

Esteban Piccinini	Biosensing devices	2014 - 2019
Juan Allegretto	Metal-organic frameworks	2016 - 2020
Gustavo Segovia	Metal-organic frameworks	2016 - 2020
Agustín Iborra	Macrosurfactants	2016 - 2021
Gonzalo Fenoy	Conducting polymers	2016 - 2021
Gregorio Laucirica	Nanopore devices	2018 – present
Eugenia Apuzzo	Nanoadjuvants	2021 – present
Melody Candia	Graphene biosensors	2021 - present
Marjorie Montero	Organic bioelectronics	2022 - present

INVITED SEMINAR AND CONFERENCE PRESENTATIONS

- *"Nanoporous membranes as biomimetic signal-transducing nanosystems"*. Technische Universität Graz (Austria) - May 19, 2022.

- *"Label-Free Biosensors Based on Graphene Field-Effect Transistors for the Detection of Biomarkers".* Università degli Studi di Parma (Italy). May 13, 2022.

- *"Enzymes Integrated with Graphene Field-Effect Transistors for Biosensing Applications"* – Royal Society of Chemistry Desktop Seminar, March 4, 2022.

- "*Nano-architected polymer films based on surface-bound microgels - Unusual properties and novel applications".* Simposio Argentino de Polímeros – 2021 – Bahía Blanca - Argentina

- *"Solid-state nanopores as biomimetic signal-transducing nanosystems. Nature as a source of inspiration for engineering nanofluidic devices".* 33rd International Conference on Science and Technology of Complex Fluids (ICSTCF) October 26, 2021, Mexico.

- *"Label-Free Sensors Based on Graphene Field-Effect Transistors for the Detection of Biomarkers"* - 2do Simposio de Nanomateriales 2D, Grafeno, Dispositivos y Aplicaciones, December 3, 2020, Buenos Aires, Argentina.

  "Surface-bound microgels: Unusual properties and novel applications of nano-architected polymer films" TU Graz - Workshop on Soft Matter – February 7, 2019. Graz, Austria.

- *"Label-Free Sensors Based on Graphene Field-Effect Transistors for the Detection of Biomarkers"*- AIT-CEST Symposium - *Bioelectrochemistry, Surfaces, and more…* 2019. February 6, 2019, Tulln, Austria

- *"Surface-bound microgels: Unusual properties and novel applications of nano-architected polymer films"* XVI Simposio Latinoamericano de Polímeros – SLAP 2018, November 7-9, 2018, Mar del Plata, Argentina.

- *"Nanogated Mesoporous Thin Films. Putting Polymer Brushes to Work..."* International Workshop on Self-Assembly and Hierarchical Materials in Biomedicine, October 8-10, 2018, San Sebastián, Spain,

– *"Biomimetic Integrated Nanosystems Based on Nanofluidic Diodes: Towards "Iontronic" Transduction of Chemical, Physical and Biological Signals"* Winter School on Biophotonics and Bioelectronics, February 22, 2018 – Hirschegg – Austria.

– *"Bioinspired integrated nanosystems based on solid-state nanopores: "iontronic" transduction of biological, chemical and physical stimuli"* Department of Nanobiotechnology, Universität für Bodenkultur Wien (BOKU), February 15, 2018 - Vienna – Austria.

– *"Bioinspired integrated nanosystems based on solid-state nanopores: "iontronic" transduction of biological, chemical and physical stimuli"* Department of Chemistry, Imperial College London, February 14, 2018 - London – UK.

– *"Bioinspired integrated nanosystems based on solid-state nanopores: "iontronic" transduction of biological, chemical and physical stimuli"* Department of Chemistry, University College London (UCL), February 13, 2018 - London – UK.

– "*Self-Assembled Soft Hybrid Materials Designed through Materials Nanoarchitectonics: Putting Layer-by-Layer Assembly to Work…"* HYMADE Meeting, October 19, 2017 - Yerevan – Armenia.

– *"Oral Communication".* HYMADE Training Session, October 18, 2017 - Yerevan – Armenia.

– *"Integrated Design of Addressable Nanofluidic Devices Based on Asymmetric Solid-State Nanopores".* iNAPO Workshop, June 8-9, 2017 – Darmstadt – Germany.

– *"Nanoporos de Estado Sólido – Nanosistemas Biomiméticos para la Transducción de Señales Físicas, Químicas y Biológicas".* XX Congreso Argentino de Fisicoquímica y Química Inorgánica, May 16-19, 2017 - Villa Carlos Paz, Córdoba, Argentina.

– *"Solid-state nanopores as biomimetic signal-transducing nanosystems. Learning from nature to design nanofluidic devices"* Frontiers in Physical Sciences Humboldt Kolleg – November 16, 2016 – Ciudad Autónoma de Buenos Aires – Argentina.

– *"Solid-state nanopores as biomimetic signal-transducing nanosystems. Nature as a source of inspiration for engineering nanofluidic devices".* Invited Seminar – CIBION – September 1, 2016 – Ciudad Autónoma de Buenos Aires – Argentina.

"Biomimetic Integrated Nanosystems Based on Solid-State Nanopores. "Iontronic" Transduction of Biological, Chemical and Physical Stimuli". "Bioelectrochemistry and more…" – CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie, June 13, 2016 – Wiener Neustadt – Austria.

– *"Towards Advanced Hybrid Interfacial Architectures by Combining Micro- and Mesoporous Materials with Polymeric Building Blocks"* HYMADE Meeting – Collège de France, March 17, 2016 – Paris, France.

"Nanostructures and Functionalities in Organic and Polymer Thin Films: Soft Chemistry Meets Surface Science" HYMADE Training Sessions – Collège de France, March 15, 2016 – Paris, France.

– *"Functions of Self-Assembled Bioelectrochemical Interfaces Designed Through Materials Nanoarchitectonics".* CIC BiomaGUNE Seminar, March 10, 2016, San Sebastián – Spain.

- *"Surface Molecular Engineering Using Polymeric and Supramolecular Assemblies: From Complex Interfaces to Advanced Hybrid Materials"* HYMADE – Kick-Off Meeting, March 13, 2015 – San Sebastián, Spain.

- *"Nanotecnología con Materia Blanda: Un Enfoque Químico Hacia el Diseño de Nanomateriales Funcionales"* Jornadas de Ciencia y Técnica – Fac. Cs. Exactas – UNLP, November 14, 2014.

- *"Macromolecular Architectures Confined in Nanopore Systems: Transforming Macromolecular Functionality into Macroscopic Reality",* NANOCÓRDOBA 2014, October 22, 2014 – Córdoba, Argentina.

- *"Química Macromolecular en Dos Dimensiones: Diseño Molecular de Superficies Poliméricas Multifuncionales",* Cuartas Jornadas de Química Inorgánica "Prof. Dr. Pedro J. Aymonino", October 21, 2014 – Facultad de Ciencias Exactas – Universidad Nacional de La Plata.

- *"Nanoporos de Estado Sólido Modificados con Ensamblados Macromoleculares: Oportunidades para el Desarrollo de Arquitecturas Funcionales Biomiméticas".* V Encuentro Argentino de Materia Blanda – La Plata – September 15, 2014.

- *"Supramolecular Self-Assemblies as Structural and Functional Units for the Construction of Bioelectrochemical Interfaces",* "Bioelectrochemistry and more…" A symposium honoring Dr. Renate Naumann – Austrian Institute of Technology, June 17, 2014 – Viena – Austria.

- *"Diseño Molecular de Superficies de Electrodo Mediante Autoensamblado Iónico: Aplicaciones en Biosensado Electroquímica".* "3er Taller Argentino de Ciencias Ambientales", May 20, 2014, Córdoba – Argentina

- *"Macromoléculas en Entornos Nanoconfinados: Oportunidades para el Desarrollo de Nuevos Materiales Funcionales",* Universidad Nacional de San Martín (UNSAM), April 30, 2014 – San Martín, Pcia. de Buenos Aires, Argentina.

- *"Molecular Design of Electrode Surfaces Using Ionic Self-Assembly: Applications in Biosensing and Bioelectrochemistry".* 2nd International Workshop: Simulations Of/At Electrode Interfaces, CEST Center of Electrochemical Surface Technology, June 26, 2013 – Wiener Neustadt, Austria.

- *"Nanoquímica con Materia Blanda"* – Mesa Redonda *"Nanoquímica en la Argentina"* XXIX Congreso Argentino de Química, Mar del Plata, October 3-5, 2012 - Argentina

  "Recognition-Driven Layer-by- Layer Construction of Multiprotein Assemblies on Surfaces: A Biomolecular Toolkit for Building up Bioelectrochemical Interfaces". Austrian Institute of Technology Kick-Off Meeting, JUFA Schloss Sommerau, July 11-13, 2012 – Semmering, Austria

- *"Macromolecular Assemblies Confined in Solid-State Nanopores: Bioinspired Design of Functional Nanoarchitectures"*. First German-Argentine Workshop on Soft Matter. March 8-9, 2012. Georg-August-Universität Göttingen – Göttingen, Alemania.

- *"Confinamiento de Monocapas Macromoleculares en Macro-, Meso- y Nanoporos – Diseño y Construcción de Nanosistemas Biomiméticos y Nuevos Materiales Funcionales"*. V Encuentro de Física y Química de Superficies, October 27-29, 2011 – Rosario, Argentina.

- *"Macromolecular Assemblies Confined in Nanopores as Biomimetic Nanosystems: Transforming Macromolecular Functionality into Macroscopic Reality".* Xiangshan Science Conference on Biomimetic Materials and Devices: Structure, Dynamics and Function, Chinese Academy of Sciences (CAS), Beihang University, Beijing – China – 2011.

- *"Nanotecnología con Materia Blanda".* Academia Nacional de Ciencias (ANC), Córdoba – Argentina – September 9,2011. Disertación correspondiente a la entrega del "Premio Ranwel Caputto 2010" en Química de la ANC.

- *"Enabling "Soft Nanotechnology" with Macromolecular Assemblies in Hard Nanoporous Templates".* Pan-American Advanced Studies Institute (PASI) in Scalable, Functional Materials. San José – Costa Rica – 2011.

- *"Biomimetic Solid-State Nanopores: Preparation, Properties and Applications".* Pan-American Advanced Studies Institute (PASI) in Scalable, Functional Materials. San José – Costa Rica – 2011.

- *"Soft Nanotechnology".* I-CAMP 2011 School, Inter-Continental Advanced Materials for Photonics Summer/Winter School, Buenos Aires – Argentina – 2011.

- *"Nanostructures and Functionalities in Polymer Thin Films".* I-CAMP 2011 School, Inter-Continental Advanced Materials for Photonics Summer/Winter School, Buenos Aires – Argentina – 2011.

- *"Soft Matter in Nanoconfined Environments".* Humboldt Kolleg – International Conference on Physics. La Plata – Argentina, March 27-31, 2011.

- *"Redox-Active Supramolecular Bioconjugates: Recognition-Driven Assembly of Functional Biointerfaces".* Gordon Research Conference on Biointerface Science, Les Diablerets – Switzerland, 2010.

- *"Diseño Molecular de Interfaces Utilizando Macromoléculas y su Aplicación a la "Nanotecnología con Materia Blanda"".* XXVIII Congreso Argentino de Química, Buenos Aires – Argentina, 2010.

- *"Materia Blanda en Entornos Nanoconfinados: Oportunidades para el Desarrollo de Nuevos Materiales Funcionales".* 95ª Reunión Nacional de la Asociación Física Argentina, Malargüe – Argentina, 2010.

- *"Diseño Molecular de Interfaces Utilizando Macromoléculas y su Aplicación a la "Nanotecnología con Materia Blanda"* XVI Congreso Argentino de Fisicoquímica y Química Inorgánica, Salta – Argentina, 2009.

- *"Polymer Brushes in Confined Environments: New Challenges and Opportunities for Designing Advanced Functional Materials".* 73rd Prague Meeting on Macromolecules: New Frontiers in Macromolecular Science, Prague – Czech Republic, 2009.

- *"Functional Organic Thin Films based on Polyelectrolyte Brushes".* 12th International Conference on Organized Thin Films (LB-12), July 1-5, Kraków, Poland – 2007.

- *"Counterion–Dependent Wettability of Surfaces Modified with Cationic Brushes".* Materials Research Society (MRS), Spring Meeting – San Francisco, April 18, 2006 – USA.

- *"Chemistry at Surfaces with the Aid of Polymer Brushes".* 3rd-IUPAC-sponsored International Symposium on Macro- and Supramolecular Architectures and Materials (MAM-06): Practical Nano-Chemistry and Novel Approaches, Tokyo, May 28, 2006, Japan.

- *"Responsive Surfaces Based on Polyelectrolyte Brushes: Design and Applications".* Instituto per la Sintesi Organica e la Fottoreattività (ISOF) – CNR. Bologna, January 19, 2006 – Italy.

- *"Development of Alternative Methods of Micro– and Nanofabrication Methods Based on Molecular Self–Assemblies at Electrochemical Interfaces"* XVII Congreso de la Sociedad Iberoamericana de Electroquímica – La Plata, April 3, 2006 – Argentina.

- *"Dynamic Control of Interfacial Properties Using Polyelectrolyte Brushes".* International Symposium on Surface Science and Nanotechnology, November 14-17, 2005 – Omiya, Japan.

- *"Dynamic Control of Interfacial Properties Using Polyelectrolyte Brushes".* Melville–CPI Joint Seminar. IMTEK, Albert–Ludwigs–Universität, Freiburg, December 7, 2005, Freiburg – Germany.

- *"Engineering the Interfacial Properties of Materials Using Polyelectrolyte Brushes".* 208th Meeting of The Electrochemical Society, Los Angeles, 2005 – USA.

- *"Collapse of Polyelectrolyte Brushes Driven by Ion Pairing Interactions"* 79th American Chemical Society Colloid and Surface Science Symposium – Clarkson University, June 12, 2005. Potsdam – USA.

- *"Building–Up Switchable and Responsive Surfaces by Means of Polyelectrolyte Brushes".* INQUIMAE – Facultad de Ciencias Exactas y Naturales – Universidad de Buenos Aires, August 1, 2005. Buenos Aires – Argentina.

- *"Responsive Polyelectrolyte Brushes: From Basic Studies to Potential Applications".* Melville Lectureship 2005 (Young Investigator Lecture), Cambridge, 2005 – United Kingdom.

- *"Unconventional Methods for Molding Materials at the Micro- and Nanoscale"* Instituto de Microelectrónica de Madrid, October 10, 2003. Madrid – Spain.

- *"Surface Nanopatterning of Ceramic Thin Films by a Replica–Molding Approach"* "Latin American Congress of Surface Science and Its Applications", December 7, 2003, Pucón – Chile.

- *"Nanostructuring of Ceramic Surfaces by a Non-Hard Lithographic Approach",* Spring College on Science at the Nanoscale, May 28, 2004, Trieste – Italy.

- *"Surface Patterning of MEMS-Related Materials",* Pan–American Advanced Studies Institute on Microelectromechanical Systems, June 28, 2004, Bariloche – Argentina.

PUBLICATIONS [H-index: 52; Citations: 9412[2]]

226. *"Biofunctionalization of Graphene-Based FET Sensors through Heterobifunctional Nanoscaffolds: Technology Validation Toward Rapid COVID-19 Diagnostics and Monitoring".*
E. Piccinini, G.E Fenoy, A.L Cantillo, J.A Allegretto, J. Scotto, J.M Piccinini, W.A Marmisollé, **O. Azzaroni.**
Advanced Materials Interfaces, (2022)2102526.

226. "*Post-synthetic modification and chemical modulation of the ZIF-8 MOF using 3-mercaptopropionic acid (MPA): a multi-technique study on thermodynamic and kinetic aspects".*
G.M. Segovia, J.A. Allegretto, J.S. Tuninetti, L.B. Pizarro, A.S. Picco, M. Ceolín, T.U. Lüdtke, E. Bindini, D. Di Silvio, S.E. Moya, **O. Azzaroni**, M. Rafti.
Molecular Systems Design & Engineering (2022) https://doi.org/10.1039/D1ME00080B

225. *"Synthesis of core-brush fluorescent silica nanoparticles with tunable hydrophilicity by ATRP method"*
M.L. Vera, J.M. Giussi, A. Canneva, **O. Azzaroni**, A. Calvo.
Colloids and Surfaces A: Physicochemical and Engineering Aspects 634 (2022) 128011

224. *"Highly sensitive urine glucose detection by graphene field-effect transistors functionalized with electropolymerized nanofilms"*
G.E. Fenoy, W.A. Marmisollé, W. Knoll, **O. Azzaroni**
Sensors & Diagnostics 1 (2022) 139-148.

223. *"Nanofluidic osmotic power generators–advanced nanoporous membranes and nanochannels for blue energy harvesting"*
G. Laucirica, M.E. Toimil-Molares, C. Trautmann, W. Marmisollé, **O. Azzaroni.**
Chemical Science 12 (2021) 12874-12910.

222. *"Mesoporous thin films onto graphene FETs: nanofiltrated, amplified and extended field-effect sensing"*
S. Alberti, E. Piccinini, P.G. Ramírez, G.S. Longo, M. Ceolín, **O. Azzaroni**
Nanoscale 13 (2021) 19098-19108.

221. *"Direct detection of human adenovirus and SARS-CoV-2 with ability to inform infectivity using a DNA aptamer-nanopore sensor"*
A.S. Peinetti, R.J. Lake, W. Cong, L. Cooper, Y. Wu, Y. Ma, G.T. Pawel, M.E. Toimil-Molares, C. Trautmann, L. Rong, B. Mariñas, **O. Azzaroni**, Y. Lu
Science Advances, 7 (2021) eabh2848

220. *"Functionalization Strategies of PEDOT and PEDOT:PSS Films for Organic Bioelectronics Applications"*
G.E. Fenoy, **O. Azzaroni,** W. Knoll, W.A. Marmisollé.
Chemosensors 9 (2021) 212.

[2] Source: Google Scholar – http://scholar.google.com/citations?user=ZvgAu5oAAAAJ&hl=en&oi=ao

219. *"Nanoarchitectonics of Metal Organic Frameworks and PEDOT layer-by-layer electrodes for boosting Oxygen Reduction Reaction"*
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