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Daniela Meroni

CURRICULUM VITAE

INFORMAZIONI PERSONALI

COGNOME	MERONI
NOME	DANIELA
DATA DI NASCITA	02-01-1985

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EDUCATION

- *January 25, 2013*
PhD in Chemical Sciences at the **Università degli Studi di Milano** (supervisor: Prof. **Silvia Ardizzone**), funded by a **PhD Fellowship** by the Università di Milano (success rate 30%).
- *October 19, 2009*
Master's degree in Chemical Sciences at the **Università degli Studi di Milano** (*magna cum laude*; all marks $\geq 30/30$). The thesis was carried out during a research stay in Prof. **Dirk Poelman**'s group (**Ghent University, Belgium**), funded by an **ERASMUS** scholarship.

PREVIOUS POSITIONS

- *April 2017 – March 2020*
Research associate (ricercatore a tempo determinato di tipo A) at the Department of Chemistry of **Università degli Studi di Milano**
- *June 2014 - March 2017*
Recipient of a two-year **research fellowship** at **Università degli Studi di Milano**, renewed for an additional two years, as I was top-ranking in an evaluation of post-doctoral fellows at the Chemistry Department carried out by an expert review panel. I resigned to the research fellowship on March 2017 since I was appointed a research associate position.
- *January 2013 – December 2013*
Recipient of a one-year **research fellowship** at the **Università degli Studi di Milano** in the group of Prof. **Giuseppe Cappelletti** funded by **Regione Lombardia**

RESEARCH ACTIVITY IN INTERNATIONAL INSTITUTIONS

- *September 2008 - December 2008*
Research stay in the group of Prof. **Dirk Poelman** at the Department of Solid State Sciences of the **Ghent University (Belgium)** funded by an Erasmus scholarship
- *July-December 2011; April and August 2012:*
Repeated research stays in the prestigious group of Prof. **Ulrich S. Schubert** at the **Friedrich-Schiller-Universität Jena, Germany** funded by my PhD fellowship
- *January 2010, April 2013; January and May 2018:*
Short research stays at the **European Synchrotron Radiation Facility (ESRF)** in **Grenoble, France**, funded by ESRF
- *September 2013; December 2017; October 2018; April 2019:*
Short research stays at the **Elettra synchrotron** radiation facility in **Trieste, Italy** funded by Elettra

CAREER BREAKS

- *October 2014 - March 2015*
Maternity leave

AWARDS AND ACKNOWLEDGEMENTS

- Recipient of the **ENI award “Debutto in ricerca” 2015** for the best PhD research thesis defended in Italian Universities on energy and the environment. The Prize consisted in a specially struck gold medal of the Italian State Mint, bestowed by the Italian President, and the sum of € 25,000. My thesis was selected among over 190 applications by an International Scientific Commission, including the Nobel Laureate Sir Harold Kroto.
- **Italian nominee and selected young scientist** in the **65th Lindau Nobel Laureate Meeting**, the 4th Interdisciplinary Meeting with Nobel Laureates from the fields of Physics, Physiology or Medicine and Chemistry. My application was selected by the Fondazione Cariplo, University of Milan and by the Scientific review panel of the Lindau Nobel Laureate Meeting. My participation in the event was sponsored by Fondazione Cariplo, which covered entirely the participation costs.

- Recipient of **several grants for the participation in Specialist schools and Congresses**:
 - a. INSTM grant funding the registration and accommodation costs of the OXIDE2012 congress;
 - b. ECIS travel grant funding the registration fee of the ECIS2012 congress;
 - c. COST grant funding the travel and daily expenses for the School on Surface Analytical Techniques 2012;
 - d. Villigen Powder School grant funding the accommodation costs for the Powder Diffraction School 2010.
- Two of my conference contributions have been awarded **prizes for best poster presentations**:
 - a. Best poster prize 5th International Conference on Semiconductor Photochemistry (SP5) out of 70 poster presentations
 - b. Excellence award prize at the MIPOL2019 conference
- In 2016, I was selected among the Postdoctoral fellows of University of Milan to participate in the **CHANGES program** ("Creating Highly Innovative Academies for a new generation of ERC scientists"). All of the participation costs were covered by Regione Lombardia and Fondazione Cariplo.

SCIENTIFIC HABILITATIONS

- **National Scientific Habilitation** for Associate Professorship sector 03/A2 (Models and Methods for Chemical Sciences) validity from April 5, 2018 to April 5, 2027.
- **National Scientific Habilitation** for Associate Professorship sector 03/B2 (Chemical Fundamentals of Technologies) validity from August 19, 2019 to August 19, 2028

RESEARCH ACTIVITY

My research activity focuses on the development of oxide-based materials with tailored properties for advanced applications. The focus of my research activity has evolved in time from the study of nanosized particles to their integration into functional devices, thus mirroring the current evolution of research in materials science. The development of increasingly versatile synthetic strategies has allowed me to produce materials with tunable properties, thus broadening the range of investigated applications. As a result, the application area of my research activity has broadened in time: starting from photocatalysis for environmental remediation, I have extended my activity to materials with controlled wetting properties, then to sensors, and, more recently, to nanocarriers for controlled release of bioactive compounds. Furthermore, my research perspective has changed from a purely synthetic approach to a more fundamental one, in which an in-depth materials characterization is complemented by theoretical calculations in order to tailor the material properties for the desired application. In this respect, my research approach relies heavily on advanced characterizations such as synchrotron-based structural and surface techniques, which provide unparalleled insight in terms of *in situ* and *operando* characterizations. Such an interdisciplinary approach relies on a network of national and international collaborations that I developed in time (*vide infra*).

My main research interests are briefly described below. **References refer to the 12 selected publications.**

- Development of new oxide-based catalysts and photocatalysts for energy and environmental applications: most of my research activity on this topic has focused on the development of oxide-based photocatalysts for pollutant remediation. A large part of my research activity has been aimed at clarifying the role of the physicochemical properties of large band semiconductors (TiO₂, ZnO) on their photocatalytic activity. In this respect, we reported for the first time the degradation of mutagenic o-toluidine with tailored ZnO photocatalysts, showing that their morphological and surface properties play a fundamental role in promoting the pollutant mineralization and in preventing the photocatalyst inactivation [4]. A great deal of effort has also been devoted to the promotion of the photocatalyst activity under solar light irradiation, in particular in the visible region. In this context, I extensively investigated, combining experimental and theoretical insight, the role of lattice defects, heteroatoms and composites in promoting visible light activity of large band gap semiconductors. In this respect, we recently reported the preparation of ZnO/WO₃ composites via an innovative sonochemical approach, which proved highly efficient photocatalysts for the abatement of nitrogen oxides even under white LED lamps used for indoor lightning [11]. Some of my recent works have focused on the emerging issue of

the remediation of pharmaceuticals and personal care products, such as tetracycline [6] and diclofenac [12]. The degradation of these complex pollutants, increasingly present in wastewaters and surface waters, poses remarkable problems as reaction intermediates can show a toxicity higher than the parent compound. In this respect, we proved that the physicochemical properties of TiO_2 photocatalysts, especially in terms of surface features, greatly affect the degradation mechanism of tetracycline [6]. A detailed investigation of the reaction mechanism was also carried out in the case of diclofenac degradation by photocatalytic and sonophotocatalytic processes [12], showing the occurrence of highly synergistic effects in the combined process. The latter proved especially beneficial in demanding test conditions such as in the presence of electrolytes, which are ubiquitous in real water matrices and elicit detrimental effects on photocatalytic processes. In order to overcome the inherent limitations of photocatalysis in terms of pollutant abatement in real water matrices, we recently proposed an innovative alternative approach: the use of polyaniline-based hybrid sorbents for the rapid and efficient removal of water pollutants, such as dyes and toxic metals. My efforts on this topic have been directed at devising a novel green synthetic approach leading to high-performance sorbent materials without the use of the carcinogenic reagents usually adopted for their synthesis. We recently proposed a new green synthesis of PANI- TiO_2 composites induced by photocatalysis, leading to highly stable materials with excellent sorption properties and reusability [9]. Finally, I have recently started to apply my experience in the synthesis of oxide composites with tailored properties, to the preparation of catalysts for energy applications. In this respect, we developed oxide supported catalysts for the upgrading of lignocellulosic biomass, proving the crucial role of the oxide morphological and surface features in directing the reaction mechanism and in promoting the catalyst lifetime [8].

- Surface modification of oxide semiconductors for the development of functional hybrids: in order to tailor the surface properties of oxides, I have extensively investigated their functionalization with organosilanes and phosphonic acids. During my PhD, I carried out fundamental investigations to clarify the attachment mode of functionalizing agent molecules at the oxide surface, highlighting the importance of the nature of the organic chain on the structure of the resulting organic layer [1]. This insight was then applied to clarify the impact of the monolayer structure on surface properties like wetting, surface free energy and surface resistivity [5]. By a careful control of the surface morphology and by an appropriate choice of the functionalizing agent, surfaces with superhydrophobic and superoleophobic behavior were obtained [3]. The functionalized oxides can be integrated in complex devices by advanced lithography techniques, which can lead to surfaces with patterned properties. In this context, the lateral resolution of the pattern is crucial for advanced applications, such as sensors. In this respect, we reported for the first time the atomic force microscopy (AFM)-based lithography of alkylsilane-functionalized indium tin oxide films [2], leading to nanometer scale lateral control over the surface properties. Moreover, we also demonstrated the potential of photocatalytic lithography for patterning TiO_2 -based surfaces to obtain superhydrophobic/superhydrophilic contrast [3]. More recently, I started to apply this fundamental knowledge to the design of functional hybrids for advanced applications, such as sensors and nanocarriers. In this respect, we recently reported the selective functionalization of the inner lumen of halloysite nanotubes by phosphonic acids proving, for the first time, their controlled release activated by pH conditions [10].
- Integration of oxide nanostructured materials in functional devices for environmental monitoring: oxide films with tailored morphological features can also be applied to modulate the response of electrochemical sensors. In particular, we have investigated strategies to promote the electrochemical response of oxide-coated electrochemical sensors by favoring analyte diffusion at the electrode surface and reducing undesired fouling phenomena. Different innovative strategies were investigated to obtain the reliable detection of neurotransmitters, such as dopamine, in complex matrices. Besides the use of self-cleaning semiconductor films, depositing insulating oxide films with controlled porosity at the electrode surface enhanced selectivity and reduced biofouling phenomena by preventing the surface adsorption of interferents such as large proteins [7].

TEACHING

- **Teaching (docente – RTD-A):**
 1. Practical course of Physical Chemistry of Disperse Systems and Interfaces of the Master's Degree in Chemical Sciences (class LM 54)
 - A.Y. 2017-2018: 8 h of teaching laboratory (0.5 CFU)
 - A.Y. 2018-2019: 8 h of teaching laboratory (0.5 CFU)

2. Theoretical and practical course of Chemical methods for biotechnology of the Bachelor's degree in Industrial and Environmental Biotechnology (class L2)
A.Y. 2017-2018: 16 h (lectures) + 4 h (exercise) + 12 h (teaching laboratory) (8 CFU)
A.Y. 2018-2019: 16 h (lectures) + 4 h (exercise) + 12 h (teaching laboratory) (8 CFU)
 3. Nanotechnology for biomedical applications and biosensors of the Master's degree in Molecular Biotechnology and Bioinformatics (class LM-8)
A.Y. 2019-2020: 24 h (lectures) (3 CFU)
 4. Physical Chemistry of the degree in Medicinal Chemistry and Pharmaceutical Technology (class LM-13)
A.Y. 2019-2020: 16 h (lectures) (2 CFU)
- **Teaching assistant (codocenza – RTD-A)** for the practical course of Physical Chemistry I of the Bachelor's degree in Chemistry (class L-27):
A.Y. 2017-2018: 24 h
A.Y. 2018-2019: 36 h
A.Y. 2019-2020: 36 h
 - **Member of the examination committees** for the courses:
 1. Physical Chemistry of Disperse Systems and Interfaces (class LM 54, since A.Y. 2015-2016)
 2. Practical course of Physical Chemistry I (class L-27, since A.Y. 2015-2016)
 3. Chemical methods for biotechnology (class L2, since A.Y. 2017-2018)
 4. Nanotechnology for biomedical applications and biosensors (class LM-8, since A.Y. 2019-2020)
 5. Physical Chemistry (class LM-13, since A.Y. 2019-2020)
 - **Assistant** (ex art. 45) during practical courses:
 1. Practical course of Physical Chemistry I of the Bachelor's degree in Chemistry:
A.Y. 2010-2011: 7 h
 2. Analytical Chemistry of the Bachelor's degree in Environmental Science and Chemical and Toxicological Safety:
A.Y. 2011-2012: 16 h
 3. Practical course of Physical Chemistry I A of the Bachelor's degree in Chemistry:
A.Y. 2015-2016: 24 h
A.Y. 2016-2017: 24 h
 - **I developed a series of seminars** (4 h per year) and **practical demonstrations** of characterization techniques and equipment (6 h per year) for students of the **Master's Degree in Chemical Sciences and Industrial Chemistry** (A.Y. 2011-2012, 2012-2013, 2013-2014; 2015-2016; 2016-2017).

CORPORATE TRAINING COURSES

- **Speaker** during a **full-day training course** of personnel of Imerys Carbon & Graphite (February 1, 2017 - Milano) on the topics of adhesion, surface energy and adhesion (8 h).
- **Invited speaker** during a **full day workshop** (8 h) "Wetting and adhesion phenomena" at the **research center of IMERYS Graphite & Carbon** (Bodio, Switzerland - April 26, 2017)

SUPERVISION

- **Supervisor** (relatore) of **2 PhD students**:
 1. *Tommaso Taroni*, PhD in Chemistry, cycle XXXIII – **selected PhD student to attend the LERU Summer School (Edinburgh, UK - 2019)**
 2. *Carolina Cionti*, PhD in Chemistry, cycle XXXIV
- **Supervisor** (relatore) of **3 Master's students**:

1. *Stefano Clerici*, Master's Degree in Chemical Sciences, A.Y. 2018-2019
 2. *Tecla Carbonati*, Master's Degree in Chemical Sciences, A.Y. 2018-2019
 3. *Carolina Cionti*, Master's Degree in Chemical Sciences, A.Y. 2017-2018, **runner-up "Marinella Ferrari 2018" award for best Master's thesis – recipient of Mettler-Toledo grant**
- **Supervisor** (relatore) of **11 Bachelor's students**:
 1. *Stefano Clerici*, Bachelor's Degree in Chemistry, A.Y. 2016-2017
 2. *Marino Burba*, Bachelor's Degree in Chemistry, A.Y. 2017-2018
 3. *Alessandro De Melis*, Bachelor's Degree in Chemistry, A.Y. 2017-2018
 4. *Marco Bompieri*, Bachelor's Degree in Chemistry, A.Y. 2017-2018
 5. *Ruggero Rollini*, Bachelor's Degree in Chemistry, A.Y. 2018-2019
 6. *Massimo Bonzi*, Bachelor's Degree in Chemistry, A.Y. 2018-2019
 7. *Federica Gaia Miraglia*, Bachelor's Degree in Biotechnology, A.Y. 2018-2019
 8. *Paola Bertazzoli*, Bachelor's Degree in Chemistry, final discussion on March 30, 2020
 9. *Matteo Marchese*, Bachelor's Degree in Chemistry, final discussion on March 31, 2020
 10. *Gaetana Aleo*, Bachelor's Degree in Chemistry, expected discussion date July 2020
 11. *Raffaele Valota*, Bachelor's Degree in Biotechnology, expected discussion date July 2020
 - **Supervisor** of **two International students**:
 1. *Tania Melisa De la Peña Plata*, Master's student in Materials Science at the Centro de Investigación de Materiales Avanzados (CIMAV), Mexico: supervisor during her two-month research stay at the Department of Chemistry of UNIMI, A.Y. 2017-2018
 2. *Serena Del Bello*, Bachelor's student in Engineering at the University of Mulhouse, France: supervision during her eight-week research stay at the Department of Chemistry of UNIMI, A.Y. 2018-2019
 - **Cosupervisor** (correlatore) of **15 Master's students**:
 1. *Chiara Marchiori*, Master's Degree in Industrial Chemistry, A.Y. 2013-2014
 2. *Annalisa Guidi*, Master's Degree in Chemical Sciences, A.Y. 2013-2014
 3. *Claudia Ambrosi*, Master's Degree in Chemical Sciences, A.Y. 2014-2015
 4. *Luca Rimoldi*, Master's Degree in Chemical Sciences, A.Y. 2014-2015
 5. *Laura Baldaccioni*, Master's Degree in Chemical Sciences, A.Y. 2014-2015
 6. *Luca Porati*, Master's Degree in Chemical Sciences, A.Y. 2015-2016
 7. *Francesco Segrado*, Master's Degree in Chemical Sciences, A.Y. 2015-2016
 8. *Marta Tiberi*, Master's Degree in Chemical Sciences, A.Y. 2016-2017
 9. *Chiara Volpi*, Master's Degree in Chemical Sciences, A.Y. 2016-2017
 10. *Tommaso Taroni*, Master's Degree in Chemical Sciences, A.Y. 2016-2017, **runner-up "Marinella Ferrari 2018" award for best Master's thesis**
 11. *Luca Mariani*, Master's Degree in Chemical Sciences, A.Y. 2016-2017
 12. *Francesca Broglio*, Master's Degree in Chemical Sciences, A.Y. 2017-2018
 13. *Laura Tripaldi*, Master's Degree in Chemical Sciences, A.Y. 2017-2018
 14. *Silvia Lombardi*, Master's Degree in Industrial Chemistry, A.Y. 2018-2019
 12. *Cinzia Gasperini*, Master's Degree in Industrial Chemistry, A.Y. 2018-19
 13. *Gabriele Deshayes*, Master's Degree in Industrial Chemistry, expected discussion in October 2020
 14. *Setareh Habibisouraki*, Master's Degree in Industrial Chemistry, expected discussion in December 2020

15. *Federico Caldera*, Master's Degree in Industrial Chemistry, expected discussion in December 2020

- **Cosupervisor** (correlatore) of **8 Bachelor's students**:

1. *Claudia Ambrosi*, Bachelor's Degree in Chemistry, A.Y. 2012-2013
2. *Alessio Mariani*, Bachelor's Degree in Applied and Environmental Chemistry, A.Y. 2013-2014
3. *Elena Tasca*, Bachelor's Degree in Applied and Environmental Chemistry, A.Y. 2014-15
4. *Camilla Cova*, Bachelor's Degree in Chemistry, A.Y. 2014-2015
5. *Roberta Asta*, Bachelor's Degree in Applied and Environmental Chemistry, A.Y. 2015-2016
6. *Carolina Cionti*, Bachelor's Degree in Chemistry, A.Y. 2015-2016.
7. *Luca Bienati*, Bachelor's Degree in Applied and Environmental Chemistry, A.Y. 2016-17
8. *Hazel Angelie Carlos*, Bachelor's Degree in Chemistry, A.Y. 2016-2017.

POSITIONS OF TRUST

- **Invited reviewer for a "Postdoctoral Fellow renewal" application** to the **Research Foundation Flanders** – FWO (March 2017).
- **Invited reviewer** for the evaluation of a **research project application** to the “*Lead Agency project with ARRS*” by the **Research Foundation Flanders** – FWO (June 2018).
- **Invited Guest Editor** of the Special issue “*Preparation and Application of Hybrid Nanomaterials*” of the peer-review International journal **Nanomaterials** (IF₂₀₁₈ = 4.034) - 2017-2018 (issue closed on April 30, 2018)
- **Topic Editor** of the International peer-reviewed journal **Molecules** (IF₂₀₁₈ = 3.060) since September 2019
- **Editor** of the Special Issue “*Hybrid Materials for Advanced Applications*” of the International peer-reviewed journal **Molecules** (IF₂₀₁₈ = 3.060) – closing date August 31, 2020
- **Invited reviewer of over 50 journal articles** in 5 years for several International journals, including highly respected journals such as Nature Communications, Journal of Catalysis, ACS Applied Materials and Interfaces, and Chemical Engineering Journal.

ORGANIZATION OF SCIENTIFIC MEETINGS

- **Member of the Scientific Committee** of the **series of workshops “Energia e ambiente nella città del futuro”** (Milan, September 29-30, 2016)
- **Member of the Organizing Committee** of the **workshop “Onde, Minerali e Cristalli: Storia e Applicazioni”** (Milan, May 19, 2017)
- **Member of the Scientific Committee** and of the **Scientific Secretariat** of the **AIC congress - ICG (Italian Crystal Growth) Conference “Materials and methods in crystal growth”** (Milan, November 20-21, 2017)
- **Organizer of seminars by invited visiting scientists** at the **Department of Chemistry, UNIMI**:
 - a. Dr Sammy W. Verbruggen - “*Tuning the activity and stability of plasmonic photocatalysts*” – May 9, 2019
 - b. Prof. Dirk Poelman – “*Near-Infrared persistent luminescence for medical imaging*” – September 5, 2019

INSTITUTIONAL RESPONSIBILITIES

- **Invited member** of the **reading and examination committee for the doctoral thesis** of Iolanda Cimieri at the **Ghent University, Belgium** (PhD in Physics, defense on June 25, 2014)
- **Member of the Board of the Doctoral School in Chemical Sciences** (Collegio docenti dei Dottorati - A.Y. 2017/2018 – XXXIII CYCLE; A.Y. 2018/2019 – XXXIV cycle) at the University of Milan

- **Member of the Joint Commission Professors and Students** (Commissione Paritetica Docenti - Studenti) of the Department of Chemistry of the University of Milan (A.Y. 2017-2018; 2018-2019)
- **Member of the Teaching Board** (Collegio Didattico) of the **Department of Chemistry** (University of Milan, A.Y. 2017-2018, 2018-2019; 2019-2020)
- **Member of the Interdepartmental Teaching Board** (Collegio Didattico Interdipartimentale) of **Biotechnology** (K06, University of Milan, A.Y. 2017-2018, 2018-2019; 2019-2020)
- **Member of the Interdepartmental Teaching Board** (Collegio Didattico Interdipartimentale) of **Medicinal Chemistry and Pharmaceutical Technology** (University of Milan, A.Y. 2019-2020)
- **Member of the commission for the refresher course of high school professors** of the Department of Chemistry of UNIMI in the framework of the "Piano Lauree Scientifiche" project (Linea C) (A.Y. 2017-2018; 2018-2019; 2019-2020)
- **Member of degree panels for:**
 - a. Master's degree in *Chemical Sciences* (6 times) on October 5, 2015; February 26, 2016; February 28, 2017; October 6, 2017; February 26, 2018; October 24, 2018
 - b. Master's degree in *Industrial Chemistry* (2 times) on October 28, 2019; March 12, 2020
 - c. Bachelor's degree in *Chemistry* (2 times) on October 16, 2013; October 25, 2016
 - d. Bachelor's degree in *Pharmaceutical Biotechnology* (1 time) on March 18, 2020
 - e. Bachelor's degree in *Environmental Science and Chemical and Toxicological Safety* on March 18, 2020
- **Tutoring** of first year students of the Bachelor's degrees in Chemistry and Industrial Chemistry (A.Y. 2018-2019)

MAIN COLLABORATIONS

National and International collaborations attested by joint publications, student exchanges and congress presentations. A leading role in many of the active collaborations is testified by being corresponding author in joint publications.

- **Prof. Ulrich S. Schubert and Prof. Stephanie Hoepfner** at the Friedrich-Schiller-Universität of Jena (Germany) for the development of advanced functional materials, which has led to **one joint publication** (*Adv. Funct. Mater.* 2012, 22, 4376–4382), **and 3 oral and 1 poster presentations at International congresses** (ECIS2012, EuChemS2012, 2013 MRS Fall Meeting, NANOSMAT 2016).
- **Prof. Dirk Poelman** at the Ghent University (Belgium) for the study of photocatalytic and luminescent materials, which has led to **2 joint publications** (*Catal. Today* 2011, 161, 169-174; *ACS Omega* 2017, 22, 4376–4382), **3 congress contributions** (SCI 2009, SPEA6 2010, Sol-gel 2017) **and the joint supervision of 4 Master's students** (Luca Porati – A.Y. 2015-2016; Marta Tiberi – A.Y. 2016-2017; Tecla Carbonati – A.Y. 2018-2019; Gabriele Deshayes – A.Y. 2019-2020).
- **Prof. Kevin C. Prince** at Elettra (Trieste, Italy) and **Dr Robert G. Acres** at the Australian synchrotron for the advanced characterization of functionalized oxide films, which has led to **two joint publications** (*J. Phys. Chem. C* 2014, 118, 4797–4807; *J. Phys. Chem C* 2017, 121, 430–440).
- **Dr. Enrico Davoli** at the Mario Negri IRCCS of Milan (Italy) for the characterization of intermediates of photocatalytic reactions, which has led to **three joint publications** (*Appl. Catal. B* 2015, 178, 233–240; *Chem. Commun.* 2015; 51, 10459-10462; *J. Photochem. Photobiol. A* 2017, 332, 534–545) **and one congress contribution** (SPEA8 2014).
- **Dr Margherita Maiuri**, then at Princeton University (USA), now POLIMI, which has led to **one joint publication** (*Chem. Mater.* 2016, 28, 409–410).
- **Dr Liliana Licea Jimenéz** at the Centro de Investigación de Materiales Avanzados (CIMAV, Mexico), which has led to the **joint supervision of a Master's student** (Tania Melisa De la Peña Plata – A.Y. 2016-2017).

- **Prof. Giuseppina Cerrato** at the University of Turin (Italy), for the advanced characterization of nanostructured materials, which has led to **6 joint publications** (*J. Nanopart. Res.* 2012, 14(8):1–15; *J. Mater. Sci.* 2014, 49, 2734–2744; *J. Phys. Chem. C* 2015, 119, 15390–15400; *Appl. Catal. B* 2015, 178, 233–240; *Catal. Today*, 2018, 313, 40–46; *Catal. Today*, 2019, 328, 210–215) and **4 congress contributions** (OXIDE 2012, ECIS 2014, SPEA8 2014).
- **Prof. Paolo Scardi** and **Prof. Matteo Leoni** at the University of Trento (Italy), which has led to **one joint publication** (*J. Phys. Chem. C* 2012, 116, 1764–1771).
- **Dr Guido Panzarasa**, then at the Swiss Federal Laboratories for Materials Science and Technology - EMPA (Switzerland), now at ETH (Switzerland), which has led to **three joint publications** (*Analyst* 2015, 140, 1486–1494; *RSC Adv.* 2015, 5, 71210–71214; *Anal. Bioanal. Chem.* 2016, 1–11) and **11 congress contributions**.
- **Prof. Massimo Morbidelli** at POLIMI and ETH, Zurich, for the development of catalysts for biooil upgrading, which has led to **one joint publication** (*Fuel*, 2019, 243, 501–508) and one congress presentation.
- **Dr Guido Soliveri**, then at Montreal Polytechnique, for the development of modified electrodes based on oxide materials, which has led to **two joint publications** (*Electrochem. Commun.* 2017, 81, 102–105; *Electrochim. Acta*, 2018, 291, 73–83)
- **Prof. Paolo Ghigna** at the University of Pavia, Italy, for the synchrotron based characterization of oxide materials, which has led to **several joint funded projects** (Elettra 20180253; NFFA), **one manuscript under review and one in preparation, and two congress presentations**
- **Prof. Daria C. Boffito** at Montreal Polytechnique, for the development of advanced oxidation processes for emerging pollutant abatement, which has led to **one joint publication** (*Ultrason. Sonochem.* 2020, 67, 105123)

OUTREACH ACTIVITIES

- **Mentor** of the Italian team during the 44th **International Chemistry Olympiad** (July 21–30, 2012 - Washington, DC, USA)
- **Invited speaker** at the “**Research Talent**” meeting with high school students from the **ENIScuola** network, at the *ENI Congress Centre* (Rome - October 6, 2015).
- **Invited speaker** at a workshop held at the **Museo Nazionale della Scienza e della Tecnologia** in the framework of the *Mathinside project* (December 11, 2015).
- **Invited speaker** in the cycle of seminars “LA SCIENZA NEL 3° MILLENNIO - L’Uomo e l’Ambiente” organized by **Prof. Gabriella Consonni** and **Prof. Giuseppe Gavazzi**, and promoted by the *Verderio municipalità*: “Pianura Padana: una delle regioni più inquinate d’Europa. le cause dell’inquinamento atmosferico e i rischi per la salute” (February 26, 2016))
- **Assistant** (ex art. 45) for the Smart Energy laboratory for high school students in the framework of the activities of the “Piano Nazionale Lauree Scientifiche” (18 h, February 6–10, 2017).
- **Supervisor** of a high school student during two-week **internships in the laboratories of the Department of Chemistry of UNIMI**, in the framework of the activities of the “Commissione Orientamento” and of “Alternanza Scuola Lavoro”:
 1. *Passoni Veronica* (June 2017) – IIS Torno, Castano Primo
 2. *Labanca Simone* (June 2018) – IIS Torno, Castano Primo
 3. *Gambaro Stefano* (June 2018) – IIS Torno, Castano Primo
 4. *Giacomo Trenti* (June 2019) - IIS Torno, Castano Primo
 5. *Poli Alessandro* (June 2019) - IIS Torno, Castano Primo
- **Organization of the closing ceremony of the “2nd Crystal growth” contest for high school students** (Milan, May 19, 2017)
- **Seminar “Modificare la bagnabilità delle superfici: dalla natura all’industria” for high school teachers** within the framework of the Piano Lauree Scientifiche (PLS) (Laboratorio aggiornamento docenti, September 26, 2018)

- **Laboratory activity** “*Deposizione di coatings ibridi per l’ottenimento di superfici superidrofobiche*” for **high school teachers** within the framework of the Piano Lauree Scientifiche (PLS) (Laboratorio aggiornamento docenti, September 28, 2018)
- **Hands-on activity for preschoolers** “*Oggi sono uno scienziato: miscugli e colori, introduzione alla chimica sperimentale*” at the kindergarten Lezzeni (February 12, 2019)
- **Coach of 6 high school students** (4 two-hour meetings during a semester) for their participation at the Giochi della Chimica 2019 in the framework of the project “**ChimiAllena 2019**” at the Department of Chemistry, UNIMI
- **Seminar** “*Produzione di biocombustibili da scarti alimentari*” and laboratory activity “*Smaltimento di oli alimentari usati e loro recupero per la sintesi di biodiesel*” for **high school teachers** within the framework of the Piano Lauree Scientifiche (PLS) (Laboratorio aggiornamento docenti, September 16, 2019)
- **Laboratory activity** “*Smaltimento di oli alimentari usati e loro recupero per la sintesi di biodiesel*” for **high school teachers** within the framework of the Piano Lauree Scientifiche (PLS) (Laboratorio aggiornamento docenti, September 27, 2019)
- **Laboratory activity** “*Deposizione di coatings ibridi per l’ottenimento di superfici superidrofobiche*” for **high school students** within the framework of the Piano Lauree Scientifiche (PLS) (Laboratorio avvicinamento alla chimica):
February 13, 2019: 4 h
February 12, 2020: 4 h
- **Member of the Organizing Committee** of the **IUPAC Global Women Breakfast 2020** in Milan (February 12, 2020)

GRANTS AND FUNDING

Funded projects and grants

1. Role: Main proposer (PI)
Type of call: International competitive call
Funding scheme: beamtime allocation
Facility: **European Synchrotron Radiation Facility** (ESRF, Grenoble)
Title: *Probing local and long-range structure of N-doped TiO₂-based composite (TiO₂, Sn/SnO₂) materials for advanced photo-electrochemical applications (MA-3713)*
Result: 15 shifts allocated and funding for travel and accommodation
Equivalent funded amount*: € 54.000
Date: January 24-25, 2018; May 3-7, 2018
2. Role: Main proposer (PI)
Type of call: International competitive call
Funding scheme: beamtime allocation
Facility: **Elettra Synchrotron** (Trieste, Italy)
Title: *Structural and electronic characterization of chemisorbed species on halloysite nanotubes: a combined XPS and NEXAFS study (20170306)*
Result: 24 shifts allocated
Equivalent funded amount*: € 86.400
Date: December 13-16; December 18-22, 2017
3. Role: Coproponent
Type of call: International competitive call
Funding scheme: beamtime allocation
Facility: **Elettra Synchrotron** (Trieste, Italy)
Title: *Operando XAS on SnO₂ gas sensors at the Sn L_{2,3}-edges (20180253)*
Result: 18 shifts allocated
Equivalent funded amount*: € 64.800
Date: October 3-9, 2018
4. Role: Coproponent

Type of call: International competitive call
Funding scheme: beamtime allocation
Facility: **Elettra synchrotron** (Trieste, Italy)
Title: *Investigation of electronic features of $\text{TiO}_2\text{:Nb,N}$ transparent conducting films by high-resolution and resonant photoelectron spectroscopies (20130115)*
Result: 15 shifts allocated
Equivalent funded amount*: € 54.000
Date: September 16- 20, 2013

5. Role: Coproponent

Type of call: International competitive call
Funding scheme: beamtime allocation
Facility: **Elettra synchrotron** (Trieste, Italy)
Title: *Structural and electronic characterization of chemisorbed species on TiO_2 transparent films: a combined XPS and NEXAFS study (20130151)*
Result: 12 shifts allocated
Equivalent funded amount*: € 43.200
Date: October 07-12, 2013

6. Role: Coproponent

Type of call: International competitive call
Funding scheme: beamtime allocation
Facility: **European Synchrotron Radiation Facility** (ESRF, Grenoble)
Title: *Progress in the understanding of structural and electronic properties of codoped N,Nb- TiO_2 nanopowders as transparent conducting oxides for optoelectronic applications (MA-1979)*
Result: 9 shifts allocated and funding for travel and accommodation
Equivalent funded amount*: € 32.400
Date: February 26-28, 2014

4. Role: Recipient

Type of call: National competitive call
Funding scheme: *Finanziamento Annuale Individuale delle Attività Base di Ricerca, FFABR*
Funding body: **Ministero dell'Istruzione dell'Università e della Ricerca (MIUR)**
Result: funded - final evaluation 77 (average value for CHIM/02: 54, threshold value: 31)
Funded amount: € 3.000
Date: 2017-2018.

5. Role: Main proposer (PI)

Type of call: UNIMI call
Funding scheme: Piano di Sostegno alla ricerca – 2015/2017 - Linea 2, terzo rinnovo – Azione A
Funding body: **Università degli Studi di Milano**
Title: *Solid state investigation of nanostructured $\text{TiO}_2\text{:N,Sn}$ materials for advanced applications*
Result: funded
Funded amount: € 7.000
Date: 2017

6. Role: Main proposer (PI)

Type of call: UNIMI call
Funding scheme: Piano di Sostegno alla ricerca – 2015/2017 - Linea 2, terzo rinnovo – Azione A
Funding body: **Università degli Studi di Milano**
Title: *Clarifying the surface processes in N-doped $\text{TiO}_2\text{/SnO}_2$ heterojunctions*
Result: funded
Funded amount: € 2.200
Date: 2018

7. Role: Team member

Type of call: International competitive call
Funding scheme: Nanoscience Foundry and Fine Analysis
Funding body: **MIUR**
Title: *XPS and operando soft X-ray absorption investigation on SnO_2 gas sensors*
Result: funded
Date: 2018

8. Role: Team member
 Type of call: regional competitive call
 Funding body: **Regione Lombardia and Consorzio INSTM**
 Title: *GREEN STICKERS – Formulazione di coating adesivi a base acqua per la realizzazione di lastre flessografiche come base per resine foto-reticolabili*
 Result: funded
 Date: 2016-2017
9. Role: Team member
 Type of call: regional competitive call
 Funding scheme: Sperimentazione d'iniziativa di sviluppo, valorizzazione del capitale umano e trasferimento dei risultati della ricerca con ricaduta diretta sul territorio lombardo
 Funding body: **Regione Lombardia**
 Title: *Nanomaterials for environmental electrochemical sensors" (NANOSENS)*
 Result: funded
 Date: 2013-2014

* Equivalent funded amount estimated according to *Industrial Research at NSLS-II, 2014 report* (<https://www.bnl.gov/ps/industry/files/pdf/NSLS-II-Industry-Workshop-White-Paper-2014.pdf>, p. 9) considering an equivalent cost of € 3.600 per each allocated shift

Positively evaluated projects and grants

1. Role: Coproponent
 Type of call: International competitive call
 Funding scheme: beamtime allocation
 Facility: **Elettra synchrotron** (Trieste, Italy)
 Title: *Operando soft X-ray absorption investigation on SnO₂ gas sensors (20180244)*
 Result: positively evaluated – not allocated

SCIENTIFIC COLLABORATIONS WITH INDUSTRIAL PARTNERS

1. Role: Principal investigator
 Project title: *Studio delle caratteristiche morfologiche di polveri con proprietà elettrocatalitiche tramite determinazioni di area superficiale e distribuzione dimensionale dei pori*
 Industrial partner: **Industrie De Nora**
 Date: 2017-2020
2. Role: Principal investigator
 Project title: *Valutazione preliminare di prodotti disponibili nel mercato per fornire rivestimenti con proprietà autopulenti, disinfettanti e di bonifica dell'aria*
 Industrial partner: **Autogrill S.r.l.**
 Date: 2017
3. Role: Principal investigator
 Project title: *Indagine esplorativa delle caratteristiche massive e di superficie di campioni di idrossido di alluminio di diversa origine*
 Industrial partner: **Nuova Sima S.r.l.**
 Date: 2017
4. Role: Principal investigator
 Project title: *Studio di stabilità ed efficacia nel tempo di rivestimenti attivi per esterni in relazione alla qualità dell'aria*
 Industrial partner: **Autogrill S.r.l.**
 Date: 2018-2019
5. Role: Principal investigator
 Project title: *Studio delle caratteristiche morfologiche di materiali elettrocatalitici*
 Industrial partner: **Industrie De Nora**
 Date: 2019-2021

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- Consorzio Interuniversitario Nazionale per la Scienza e la Tecnologia dei Materiali (INSTM) since 2010

FULL LIST OF CONGRESS CONTRIBUTIONS

Personally delivered oral presentations

- **Lectio Magistralis**
 1. D. Meroni*, *Nanostructured semiconductor films: synthesis, surface functionalization and innovative applications*, ENI award 2015 Ideas for a brighter future - Naples, Italy - October 7, 2015 - Type: **Lectio magistralis - Personal invitation** - Language: English
- **Keynote Presentation at a National conference - personal invitation:**
 1. D. Meroni*, L. Lo Presti, M. Ceotto, G. Cappelletti, *Synchrotron radiation in environmental remediation: Shedding light on the structural and electronic properties of second generation photocatalysts*, XXIII Italian Synchrotron Radiation Society (SILS) meeting - Trento, Italy - July 8-10, 2015 - Type: **Keynote presentation – Personal invitation** - Language: English
- **One Oral Presentation at a prestigious International conference upon personal invitation:**
 1. D. Meroni*, S. Hoeppener, S. Ardizzone, U.S. Schubert, *Surface modification of ITO layers by AFM-based electrooxidative lithography*, 4th Congress of the European Association for Chemical and Molecular Sciences (4th EuCheMS) – Prague, Czech Republic –August 26–30, 2012. Type: **Oral presentation - Personal invitation** - Language: English
- **Nine Oral Presentations (and one yet to be delivered) at International congresses – invited by review:**
 1. D. Meroni*, S. Hoeppener, S. Ardizzone, U.S. Schubert, *Scanning probe electro-oxidative lithography of OTS monolayers on ITO films: A Scanning Kelvin Probe Microscopy investigation*, 26th Conference of the European Colloid and Interface Society (ECIS2012) – Malmö, Sweden – September 2-7, 2012. Type: **oral presentation - invited by review** - Language: English
 2. G. Soliveri, D. Meroni*, G. Cappelletti, R. Annunziata, S. Ardizzone, G. Cerrato, *Wettability features of nano-oxides: the tailoring of the attachment modes of siloxane*, V Workshop on Oxide Based Materials (OXIDE2012) – Turin, Italy – September 24-26, 2012. Type: **oral presentation - invited by review** - Language: English
 3. D. Meroni*, G. Soliveri, V. Pifferi, G. Panzarasa, G. Cappelletti, L. Falcicola, S. Ardizzone, *Self-cleaning electrochemical sensors based on TiO₂/Ag nanoparticles/SiO₂ multilayers*, 11th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT2016) – Aveiro, Portugal - September 6-9, 2016 - Type: **oral presentation – Invited by review** - Language: English
 4. D. Meroni*, L. Lo Presti, L. Silvestrini, M. Ceotto, S. Ardizzone, *Experimental and theoretical tools for studying TiO₂ defects: A methodological lesson from N-doping*, 21st International Conference on Semiconductor Photocatalysis & Solar Energy Conversion (SPASEC-21) – Atlanta (USA) – November 13-16 – Type: **oral presentation – Invited by review** - Language: English
 5. D. Meroni*, L. Lo Presti, L. Silvestrini, M. Ceotto, S. Ardizzone, *Oxygen vacancies and nonmetal dopant species in anatase TiO₂: A lesson learned?*, 21st International Conference on Solid State Ionics (SSI-21) – Padua, Italy – June 18-23, 2017– Type: **oral presentation – Invited by review** - Language: English
 6. L. Porati, D. Meroni*, D. Poelman, *Sol-gel synthesis of CaTiO₃:Pr³⁺ red phosphors: tailoring the synthetic parameters for luminescent and afterglow applications*, 19th International Sol-Gel Conference (Sol-gel2017) – Liege, Belgium – September 3-8, 2017 - Type: **oral presentation – Invited by review** - Language: English
 7. D. Meroni*, L. Tripaldi, L. Rimoldi, L. Lo Presti, *Structural and electronic properties of N-doped TiO₂/SnO₂ photocatalysts for air pollutant remediation*, International Symposium on Inorganic and Environmental Materials (ISIEM2018) – Gent, Belgium – June 17-21, 2018 – Type: **oral presentation – invited by review** – Language: English

8. S. Clerici, C. Cionti, L. Lo Presti, D. Meroni*, S. Ardizzone, *Tailoring The Structural And Electronic Features Of N-Doped TiO₂/SnO₂ Photocatalysts For Pollutant Degradation* - 6th Conference on the Environmental Applications of Advanced Oxidation Processes (EAAOP6) – June 26-30, 2019 – Portorose, Slovenia – Type: **oral presentation – invited by review** – Language: English
 9. D. Meroni*, C. Gasperini, A. Di Michele, S. Ardizzone, C.L. Bianchi, *Ultrasound-assisted synthesis of WO_x-decorated ZnO photocatalysts for NO_x abatement* – 4th Conference of the Asia-Oceania Sochemical Society (4-AOSS) – September 19-21, 2019 – Nanjing, China – Type: **oral presentation – invited by review** – Language: English
 10. C. Cionti, C. Della Pina, D. Meroni*, E. Falletta, S. Ardizzone, *UV-induced synthesis of polyaniline (PANI)-TiO₂ composites: mechanistic insight and application as sorbent for wastewater remediation* 4th Milan Polymer Days Congress (MIPOL2020) – due in March 9-11, 2020 postponed due to the coronavirus pandemic – Milan, Italy – Type: **oral presentation – invited by review** – Language: English
- **Two Oral Presentations at National workshops - personal invitation:**
 1. D. Meroni*, *Energia solare per il disinquinamento dell'aria e dell'acqua*, workshop “Energia e ambiente nella città del futuro” – Milano (Italy) – September 29-30, 2016– Type: **oral presentation – Personal invitation** - Language: Italian
 2. S. Ardizzone, D. Meroni*, *Materiali con bagnabilità controllata. Un'ispirazione dalla natura*, workshop at the Istituto Lombardo Accademia di Scienze e Lettere – March 22, 2018 - Type: **oral presentation** – personal invitation – Language: Italian
 - **Four Oral Presentations at National congresses – invited by review:**
 1. D. Meroni*, S. Ardizzone, C.L. Bianchi, G. Cappelletti, D. Poelman, *Nanostructured TiO₂ films by spin coating for air remediation*, XXIII Congresso della Società Chimica Italiana – Sorrento, Italy – July 5-10, 2009. Type: **Oral presentation - Invited by review** - Language: Italian
 2. D. Meroni*, G. Cappelletti, S. Ardizzone, I. Biraghi, *Complete mineralization of bisphenol A by the combination of ozonation and photocatalysis*, Giornate dell'Elettrochimica Italiana Elettrochimica per il Recupero Ambientale (GEIERA2010) – Modena, Italy – September 5-10, 2010. Type: **oral presentation - Invited by review** - Language: Italian
 3. D. Meroni*, V. Pifferi, L. Falciola, G. Soliveri, G. Cappelletti, S. Ardizzone, *Electrochemical synthesis and applications of transparent titania layers*, Giornate dell'Elettrochimica Italia (GEI 2013) - Pavia, Italy - September 22-27, 2013. Type: **Oral presentation – Invited by review** - Language: Italian
 4. D. Meroni*, T. Taroni, L. Rimoldi, K. Fidecka, S. Cauteruccio, R. Vago, E. Licandro, S. Ardizzone, *Nanocarriers based on nanometric natural and synthetic oxides: the role of the linker-oxide interactions*, XI INSTM Conference – Ischia, Italy - July 12-15, 2017 - Type: **oral presentation – Invited by review** - Language: English

Other oral congress presentations:

- O1. D. Meroni, S. Ardizzone, M. Ceotto, R. Annunziata, L. Raimondi, M. Benaglia, G. Cappelletti, *Organic-inorganic hybrids: the role played by surface energy and structure of the hydrophobizing molecule*, 25th European Colloid and Interface Society Congress (ECIS2011) – Berlin, Germany – September 4-9, 2011.
- O2. D. Meroni, S. Ardizzone, U. S. Schubert, S. Hoepfner, *Substrate Effects on the Oxidation Process of Self-Assembled Monolayers*, Materials Research Society Fall Meeting (2013 MRS Fall Meeting) - Boston, Massachusetts (USA) - December 1-6, 2013.
- O3. G. Soliveri, D. Meroni, G. Cappelletti, S. Ardizzone, *Self-cleaning and photocatalytic lithography in hydrophobic/oleophobic nanotitania layers*, Smart and Functional Coatings (SFC 2013) - Turin, Italy - September 26-27, 2013.
- O4. M. Ceotto, L. Lo Presti, G. Cappelletti, L. Falciola, D. Meroni, F. Spadavecchia, S. Ardizzone, *Doped Titania Nanocrystals Explained By Experimental And DFT Characterizations*, XLI Congresso Nazionale di Chimica Fisica - Alessandria, Italy - June 23-27, 2013.
- O5. M. Ceotto, L. Lo Presti, L. Loconte, D. Meroni, L. Falciola, V. Pifferi, G. Soliveri, G. Cappelletti, C.D. Aieta, R.G. Acres, S. Ardizzone, *Doped nano-titania: theoretical insight into structure-property*

relationships, XXV Congresso Nazionale della Società Chimica Italiana (SCI2014) - Rende, Italy - September 7-12, 2014.

- O6. V. Pifferi, G. Soliveri, S. Ardizzone, G. Cappelletti, D. Meroni, L. Falciola, G. Panzarasa, K. Sparnacci *Innovative engineered sensors based on silica, silver nanoparticles and titania with self-cleaning features*, 6th International Conference on Nanotechnology: Fundamentals and Applications - Barcelona, Spain – July 15-17, 2015.
- O7. V. Pifferi, G. Soliveri, G. Panzarasa, G. Cappelletti, S. Ardizzone, D. Meroni, L. Falciola *Self-cleaning properties of a silica/silver nanoparticles/titania sandwich sensor*, Giornate dell'Elettrochimica Italiana (GEI2015) - Bertinoro, Italy - September 20-24, 2015.
- O8. V. Pifferi, G. Soliveri, G. Cappelletti, D. Meroni, S. Ardizzone, G. Panzarasa, K. Sparnacci, L. Falciola, *Self-cleaning features of an innovative engineered sensor based on silica, silver nanoparticles and titania*, Giornata del Gruppo Interdivisionale Sensori della Società Chimica Italiana (GS2015) - Parma, Italy - June 15-17, 2015.
- O9. V. Pifferi, G. Soliveri, G. Panzarasa, S. Ardizzone, G. Cappelletti, D. Meroni, K. Sparnacci, L. Falciola, *The Power of Three: Silica-Silver-Titania Engineered Sensors bearing photocatalytic self-cleaning features*, International Workshop on the Electrochemistry of Electroactive Materials (WEEM) - Bad Herrenalb, Germany - May 31-June 5, 2015.
- O10. V. Pifferi, G. Soliveri, G. Panzarasa, S. Ardizzone, G. Cappelletti, D. Meroni, L. Falciola, *Photo-renewable nanostructured electroanalytical sensor for neurotransmitters detection in body fluid mimics* - CEN Nanomedicine Symposium – Milan, Italy - October 18, 2016
- O11. V. Pifferi, G. Soliveri, G. Cappelletti, D. Meroni, S. Ardizzone, G. Panzarasa, L. Falciola *Photo-renewable engineered sensor based on silica, silver nanoparticles and titania*, 19th Topical Meeting of the International Society of Electrochemistry - Auckland, New Zealand – April 17-20, 2016
- O12. L. Rimoldi, V. Pifferi, F. Segrado, G. Soliveri, L. Falciola, S. Ardizzone, D. Meroni, *The interplay between pore size and wettability in solid-templated silica films*. 21st International Conference on Solid State Ionics (SSI-21) – Padua, Italy – June 18-23, 2017.
- O13. V. Pifferi, G. Di Liberto, G. Soliveri, G. Panzarasa, D. Meroni, S. Ardizzone, M. Ceotto, L. Lo Presti, L. Falciola, *Silver nanoparticles/nanostructured TiO₂ interface: a photo-renewable “silver-ions electrode” for neurotransmitters detection*, 21st Topical Meeting of the International Society of Electrochemistry - Szeged, Hungary – April 23-26, 2017.
- O14. L. Falciola, V. Pifferi, L. Rimoldi, D. Meroni, G. Soliveri, S. Ardizzone, *Electroanalytical signal amplification and selectivity features of “insulating” and mesoporous solidtemplated silica films*. 69th Annual Meeting of the International Society of Electrochemistry – Bologna (Italy) - September 2-7, 2018.
- O15. P. Ghigna, M. Fracchia, A. Minguzzi, D. Meroni, G. Cappelletti, P. Torelli, V. Bonanni, *Operando and in situ soft X-ray Absorption Spectroscopy in Electrochemistry*. 69th Annual Meeting of the International Society of Electrochemistry – Bologna (Italy) - September 2-7, 2018.
- O16. V. Sabatini, L. Rimoldi, D. Meroni, H. Farina, M.A. Ortenzi, S. Ardizzone, *Photocatalytic hybrid devices: an innovative strategy for pollutants removal from water*. 5th International Conference and Exhibition on Polymer Chemistry and 30th International Conference on Materials Chemistry & Science - Toronto (Canada) – August 26-28, 2018.
- O17. L. Falciola, V. Pifferi, L. Rimoldi, D. Meroni, G. Soliveri, S. Ardizzone, *Mesoporous silica networks with improved diffusion and interference-rejecting properties for electroanalytical sensing*. Faraday Discussion Conference: Electrochemistry at Nano-Interfaces – Bath, UK – June 26-28, 2018.
- O18. L. Falciola, V. Pifferi, L. Rimoldi, F. Segrado, G. Soliveri, D. Meroni, S. Ardizzone, *Preparation and electrochemical characterization of “insulating” or mesoporous solid-templated silica films*. Giornate dell'Elettrochimica Italiana (GEI 2018) – Sestriere, Italy – January 21-25, 2018
- O19. P. Ghigna, M. Fracchia, A. Minguzzi, D. Meroni, P. Torelli, L. Braglia, R. Edla, *Gas sensing mechanisms of metal oxides semiconductors by in situ soft X-ray absorption spectroscopy*, XLVII Congresso Divisione di Chimica Fisica – Rome, Italy - July 1-4, 2019

Poster presentations in International congresses:

* when presenting author

- P1. D. Meroni*, S. Ardizzone, G. Cappelletti, C. Oliva, C. Pirola, D. Poelman, H. Poelman, *N-doped TiO₂ Nanoparticles. Photocatalytic Degradation of Ethanol and Acetaldehyde in the Gas Phase*, 6th European meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA6) – Prague, Czech Republic – June 13-16, 2010.
- P2. F. Spadavecchia, C. Oliva, G. Cappelletti, S. Ardizzone, I. Biraghi, S. Cappelli, D. Meroni*, *The role of the nitrogen source in affecting the features of second generation photocatalysts*, 25th European Colloid and Interface Society Congress (ECIS2011) – Berlin, Germany – September 4-9, 2011.
- P3. B. Sironi, V. Pifferi, S. Ardizzone, C. Cappelletti, I. Biraghi, D. Meroni*, *Modulation of the interfacial features of nanometric TiO₂ by template-mediated synthesis*, 25th European Colloid and Interface Society Congress (ECIS2011) – Berlin, Germany – September 4-9, 2011.
- P4. D. Meroni*, V. Pifferi, B. Sironi, G. Cappelletti, L. Falciola, S. Ardizzone, G. Cerrato, *Mesoporous TiO₂ as scaffold for Bi-promoted photocatalysts*, V Workshop on Oxide Based Materials (OXIDE2012) – Turin, Italy – September 24-26, 2012.
- P5. G. Soliveri, D. Meroni*, G. Cappelletti, R. Annunziata, S. Ardizzone, *Roughness influence on the attachment modes of siloxanes on TiO₂ surfaces*, 26th Conference of the European Colloid and Interface Society (ECIS2012) – Malmö, Sweden – September 2-7, 2012.
- P6. G. Cappelletti, S. Ardizzone, D. Meroni*, M. Ceotto, C. Biaggi, M. Benaglia, L. Raimondi, *Surface Free Energy of Bare and Fluorinated Siloxanes: Comparing Experimental Evaluation and Dipole Moments Calculations*, 26th Conference of the European Colloid and Interface Society (ECIS2012) – Malmö, Sweden – September 2-7, 2012.
- P7. F. Spadavecchia, D. Meroni, G. Cappelletti, S. Ardizzone, S. Regazzoni, *N, Ag codoped nano-TiO₂: the effect of synthetic parameters on gas phase photocatalytic activity*, 7th European meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA7) – Oporto, Portugal – June 17–20, 2012.
- P8. V. Pifferi, G. Cappelletti, S. Ardizzone, L. Falciola, C. Di Bari, F. Spadavecchia, D. Meroni, G. Cerrato, E. Davoli, *Photo-mineralization of noxious o-toluidine water pollutant by nano-ZnO. The role of the oxide synthetic route on the kinetic path*, 8th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA8) - Thessaloniki, Greece - June 25-28, 2014.
- P9. D. Meroni, A. Guidi, G. Soliveri, G. Panzarasa, V. Pifferi, L. Falciola, G. Cappelletti, S. Ardizzone, *Photocatalytic investigation of sandwiched TiO₂/SiO₂ films stuffed with tailored silica and silver nanoparticles*, 8th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA8) - Thessaloniki, Greece - June 25-28, 2014.
- P10. G. Soliveri, D. Meroni, A. Antonello, G. Cappelletti, S. Ardizzone, *Transparent Titania Layers For Indoor Pollution Remediation*, 4th International Conference on Semiconductor Photochemistry (SP4) - Prague, Czech Republic - June 23-27, 2013.
- P11. G. Soliveri, V. Aina, R. Annunziata, G. Cappelletti, G. Cerrato, L. Falciola, D. Meroni, V. Pifferi, S. Ardizzone, *Influence of the Silane Coupling Agent and of the Temperature of Deposition on the Structure of the Silica Surface Layer*, 28th Conference of the European Colloid and Interface Society (ECIS2014) - Limassol, Cyprus - September 7-12, 2014.
- P12. G. Soliveri, V. Sabatini, D. Meroni, H. Farina, A. Colombo, *Superhydrophobic and photoactive films on polymer surfaces*, 28th Conference of the European Colloid and Interface Society (ECIS2014) - Limassol, Cyprus - September 7-12, 2014.
- P13. L. Rimoldi, G. Soliveri, D. Meroni, G. Panzarasa, *Ta doped nanostructured TiO₂ for liquid phase photodegradation reactions*, 5th International Conference on Semiconductor Photochemistry (SP5) - St. Petersburg, Russia - July 27-31, 2015 **BEST POSTER AWARD**
- P14. L. Rimoldi, C. Ambrosi, G. Soliveri, G. Cappelletti, S. Cappelli, M. Ceotto, L. Lo Presti, D. Meroni, C. Oliva, S. Ardizzone, *Second generation photocatalysts by metal and nitrogen codoping. The role of Ta and Nb*, 5th International Conference on Semiconductor Photochemistry (SP5) - St. Petersburg, Russia - July 27-31, 2015
- P15. L. Lo Presti, M. Ceotto, D. Meroni, F. Spadavecchia, L. Loconte, L. Falciola, G. Cappelletti, S. Ardizzone, *Towards the understanding of structure-properties relationships in N,Nb doped TiO₂ nanopowders: a multidisciplinary experimental and DFT approach*, Sagamore XVIII conference on charge, spin and momentum densities - S. Margherita di Pula, Italy - June 7-12, 2015

- P16. G. Soliveri, V. Pifferi, G. Panzarasa, S. Ardizzone, G. Cappelletti, D. Meroni, K. Sparnacci, L. Falciola, *Self-Cleaning Properties in Engineered Sensors for Dopamine Electroanalytical Detection*, Analytical Science Twitter Poster Conference, Royal Society of Chemistry - WEB Conference on TWITTER - February 5-6, 2015
- P17. L. Rimoldi, D. Meroni, E. Falletta, A.M. Ferretti, S. Ardizzone, *An investigation on the bulk and surface properties of Ta-TiO₂ nanomaterials*, 1st international conference on advanced energy materials (AEM 2016) - Guildford, UK – September 12-14, 2016.
- P18. D. Meroni*, H. Liu, U.S. Schubert, S. Hoeppener, *Nanopatterning of Octadecyltrichlorosilane (OTS) Self-Assembled Monolayers By Probe-based Lithography: Extending the Range of Substrates*, 11th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT2016) – Aveiro, Portugal - September 6-9, 2016.
- P19. L. Rimoldi, D. Meroni, V. Pifferi, L. Falciola, G. Cappelletti, S. Ardizzone, *Mineralization of emerging pollutant mixtures in water by immobilized TiO₂ photocatalysts under solar light*, 9th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA9) – Strasbourg, France – June 13-17, 2016.
- P20. E. Pargoletti, S. Mostoni, G. Rassu, V. Pifferi, D. Meroni, L. Falciola, G. Cappelletti, *From UV to Solar Irradiation Sources: ZnO Versus Bi₂O₃ Photocatalytic Performances*, 9th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA9) – Strasbourg, France – June 13-17, 2016.
- P21. L. Falciola, V. Pifferi, L. Rimoldi, F. Segrado, G. Soliveri, D. Meroni, S. Ardizzone, *Controlled Mesopores of Solid-Templated Silica: Preparation and Electrochemical Characterization*, 68th Annual Meeting of the International Society of Electrochemistry (ISE) - Providence, Rhode Island, USA - 27 August - 1 September 2017.
- P22. K. Fidecka, T. Taroni, S. Cauteruccio, D. Meroni, L. Rimoldi, R. Vago, E. Licandro, S. Ardizzone, *Halloysite nanotubes as innovative carriers for (bio)organic molecules*, 9th International Symposium on Nano and Supramolecular Chemistry (ISNSC) - Naples, Italy - September 4-7, 2017.
- P23. L. Rimoldi, F. Broglia, D. Meroni, S. De Vecchi, M. Morbidelli, S. Ardizzone, *The role played by the catalyst physicochemical features on guaiacol hydrodeoxygenation*, 9th International Conference on Advanced Nano Materials – Aveiro, Portugal - July 19-21, 2017.
- P24. L. Rimoldi, E. Pargoletti, D. Meroni, E. Falletta, G. Cappelletti, *Degrading emerging pollutants by binary and ternary TiO₂/SnO₂/ZnO mixed phase systems*, 5th European Conference on Environmental Applications of Advanced Oxidation Processes (EAAOP5) - Prague, Czech Republic - June 25-29, 2017.
- P25. T. Taroni, D. Meroni*, L. Rimoldi, K. Fidecka, D. Maggioni, S. Ardizzone, *Phosphonic acids as selective functionalizing agents: a study on halloysite surface modification based on model oxides*. 32nd Conference of the European Colloid and Interface Society (ECIS) - Ljubljana, Slovenia - September 2-7, 2018.
- P26. D. Meroni*, T. Taroni, L. Rimoldi, S. Cauteruccio, K. Fidecka, R. Vago, S. Franchi, K.C. Prince, E. Licandro, S. Ardizzone. *Helicene grafting on halloysite nanotubes for drug delivery: layer structure, surface selectivity and pH triggered drug release*. 32nd Conference of the European Colloid and Interface Society (ECIS) - Ljubljana, Slovenia - September 2-7, 2018.
- P27. K. Fidecka, J. Giacoboni, D. Meroni, D. Maggioni, T. Taroni, S. Cauteruccio, R. Vago, E. Licandro, *Halloysite nanotubes (HNTs) functionalization with various (bio) organic molecules*. DTU Nanotech Summer School on Drug Delivery – Denmark - August 13-24, 2018.
- P28. T. Taroni, D. Meroni, L. Rimoldi, K.T. Fidecka, S. Ardizzone, *Halloysite nanotubes as multifarious drug delivery systems: is selective functionalization possible?* 16th Conference of the International Association of Colloid and Interface Scientists - Rotterdam (Netherlands) – May 21-25, 2018.
- P29. L. Rimoldi, D. Meroni, C. Gadiyar, R. Buonsanti, S. Ardizzone, *VOCs Photocatalytic Degradation By Oxidic Materials In Films. Achieving Enhanced Activity By Creating Heterostructures*. 10th European meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA10) – Almeria (Spagna) – June 4-8, 2018.
- P30. V. Sabatini, L. Tripaldi, L. Rimoldi, D. Meroni, H. Farina, M.A. Ortenzi, S. Ardizzone, *Environmental Remediation In Large Water Basins By Photocatalysis: A Multilayer Hybrid Device Accepts The*

Challenge. 10th European meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA10) - Almeria (Spagna) - June 4-8, 2018.

- P31. V. Sabatini, D. Meroni, L. Rimoldi, H. Farina, M.A. Ortenzi, S. Ardizzone, *Application of Photocatalytic Hybrid Composites in Waste Water Treatment*, 2nd Milan Polymer Days Congress (MIPOL2018) - Milano – February 14-16, 2018
- P32. C. Cionti, E. Falletta, D. Meroni, C. Della Pina, S. Ardizzone, *Green synthesis of highly porous Polyaniline (PANI) supported by TiO₂*, 2nd Milan Polymer Days Congress (MIPOL2018) - Milano – February 14-16, 2018. **EXCELLENT POSTER AWARD**
- P33. C. Cionti, E. Falletta, D. Meroni*, C. Della Pina, S. Ardizzone, *Polyaniline/TiO₂ Composites: Green Photocatalytic Synthesis And Application In Wastewater Remediation* - 6th Conference on the Environmental Applications of Advanced Oxidation Processes (EAAOP6) – June 26-30, 2019 – Portorose, Slovenia
- P34. C. Cionti, C. Della Pina, D. Meroni, E. Falletta, S. Ardizzone. *PANI-TiO₂ composites: the mechanism behind a green process*. 3rd Milan Polymer Days (MIPOL) 2019 – March 11-13, 2019 – Milan, Italy.
- P35. T. Taroni, V. Sabatini, M. Bompieri, M.A. Ortenzi, R. Rampazzo, D. Meroni, S. Ardizzone. *Halloysite nanotubes as promising candidates for the preparation of Polyamide-6 nanocomposites*. 3rd Milan Polymer Days (MIPOL) 2019 – March 11-13, 2019 – Milan, Italy.
- P36. C. Cionti, E. Falletta, D. Meroni, C. Della Pina, S. Ardizzone. *UV-induced synthesis of polyaniline-TiO₂ hybrids: a mechanistic study*. 7th International Conference on Semiconductor Photochemistry (SP7) - September 11-14, 2019 – Milan, Italy.
- P37. T. Taroni, S. Lombardi, V. Pifferi, L. Falciola, V. Sabatini, D. Meroni, S. Ardizzone. *Photoactive TiO₂ films with controlled porosity for the preparation of innovative devices*. 7th International Conference on Semiconductor Photochemistry (SP7) - September 11-14, 2019 – Milan, Italy.
- P38. D. Meroni*, C.L. Bianchi, C.F. Kait, D.C. Boffito, C. Pirola, *Ultrasound-enhanced photodegradation of Diclofenac Na*, 4th Conference of the Asia-Oceania Sochemical Society (4-AOSS) – September 19-21, 2019 – Nanjing, China

Poster presentations in National congresses:

* when presenting author

- P1. D. Meroni*, V. Pifferi, F. Spadavecchia, M. Vescovi, I. Biraghi, *Tailored TiO₂ nanoparticles by means of template and microemulsion routes*, XXXIX Congresso Nazionale di Chimica Fisica (CF2010) – Stresa, Italy – September 20-24, 2010.
- P2. C. Oliva, F. Spadavecchia, D. Meroni, G. Cappelletti, S. Ardizzone, S. Cappelli, *EPR features of second generation photocatalysts*, XXXIX Congresso Nazionale di Chimica Fisica (CF2010) – Stresa, Italy – September 20-24, 2010.
- P3. D. Meroni*, G. Cappelletti, R. Annunziata, M. Benaglia, S. Rossi, M. Ratti, S. Ardizzone, *The nature of the hydrophobic layer in hybrid nanomaterials*, XXXIX Congresso Nazionale di Chimica Fisica (CF2010) – Stresa, Italy – September 20-24, 2010.
- P4. G. Soliveri, D. Meroni, B. Sironi, G. Cappelletti, S. Ardizzone, *Nanometric TiO₂-based materials for environmental remediation and self-cleaning*, Giornate dell'Elettrochimica Italiana Elettrochimica per il Recupero Ambientale (GEIERA2012) – Santa Marina Salina, Messina, Italy – June 17–22, 2012.
- P5. D. Meroni, V. Pifferi, L. Falciola, G. Soliveri, M. Ceotto, L. Lo Presti, G. Cappelletti, S. Ardizzone, *A Novel Route For Preparation Of Transparent, Mechanically Robust And Photoactive Titania Films*, XLI Congresso Nazionale di Chimica Fisica - Alessandria, Italy - June 23-27, 2013.
- P6. V. Sabatini, G. Soliveri, H. Farina, D. Meroni, M. Ortenzi, A. Colombo, G. Di Silvestro, *Photoactive and hyper hydrophobic inorganic film supported on polymeric membranes*, XXI Convegno dell'Associazione Italiana di Scienza e Tecnologia delle Macromolecole - Turin, Italy - September 14-19, 2014.

FULL LIST OF PUBLICATIONS

Total output:

- 52 articles and 2 invited editorials published on International peer-reviewed journals
- 1 invited book chapter
- 3 conference proceedings
- 1 article on a National journal

of which 10 as first author, 28 as corresponding author, and 16 without PhD supervisor.

Total citations (April 18, 2020): 833 (Scopus)/ 964 (Scholar) citations; **H-index**: 19 (Scopus)/ 20 (Scholar)

Media coverage by the International media, *Scientific American* (January 27, 2015) and *Chemistry World* (January 23, 2015), National newspapers, *Repubblica* (October 6, 2015 and interview on March 8, 2017), *La Stampa* (October 11, 2015) and *Il giorno* (interview on October 17, 2015), *MIT Technology Review Italia* (September 2, 2016), and online and local newspapers, *Linkiesta* (interview October 9, 2015), *Il giornale di Erba* (interview on October 17, 2015).

Book chapters:

1. “*Physicochemical tailoring of material surface properties*” (**invited book chapter**), S. Ardizzone, I. Biraghi, G. Cappelletti, D. Meroni, F. Spadavecchia, in: L. Rimondini (Ed.), *Surface tailoring of inorganic materials for biomedical applications*, Bentham, London, **2012**, pp. 3-42.

Editorials on International peer-reviewed journals:

1. “*Debuting in Research: The Vision of Two ENI Award Winners - Photoactive Materials in the Year of Light: Light for Matter or Matter of Light?*” (**invited editorial**), M. Maiuri, D. Meroni, *Chemistry of Materials*, **2016**, 28, 409–410. **CORRESPONDING AUTHOR**
2. “*Preparation and Application of Hybrid Nanomaterials*” (**invited editorial**), D. Meroni, S. Ardizzone, *Nanomaterials*, **2018**, 8(11), 891. **FIRST AND CORRESPONDING AUTHOR**

Published articles on International peer-reviewed journals:

1. “*Siloxane-TiO₂ Hybrid Nanocomposites. The Structure of the Hydrophobic Layer*” (**original research article**), F. Milanese, G. Cappelletti, R. Annunziata, C. L. Bianchi, D. Meroni, S. Ardizzone, *Journal of Physical Chemistry C*, **2010**, 114, 8287–8293.
2. “*Photocatalytic removal of ethanol and acetaldehyde by N-promoted TiO₂ films: The role of the different nitrogen sources*” (**original research article**), D. Meroni, S. Ardizzone, G. Cappelletti, C. Oliva, M. Ceotto, D. Poelman, H. Poelman, *Catalysis Today*, **2011**, 161, 169-174. **FIRST AND CORRESPONDING AUTHOR.**
3. “*Mesoporous Titania Nanocrystals by Hydrothermal Template Growth*”, (**original research article**), G. Cappelletti, S. Ardizzone, F. Spadavecchia, D. Meroni, I. Biraghi, *Journal of Nanomaterials*, **2011**, 597954.
4. “*Tailored TiO₂ layers for the photocatalytic ozonation of cumylphenol, a refractory pollutant exerting hormonal activity*” (**original research article**), S. Ardizzone, G. Cappelletti, D. Meroni, F. Spadavecchia, *Chemical Communications*, **2011**, 47, 2640-2642.
5. “*Interplay between Chemistry and Texture in Hydrophobic TiO₂ Hybrids*” (**original research article**), D. Meroni, S. Ardizzone, G. Cappelletti, M. Ceotto, M. Ratti, R. Annunziata, M. Benaglia, L. Raimondi, *Journal of Physical Chemistry C*, **2011**, 115, 18649–18658. **FIRST AND CORRESPONDING AUTHOR.**
6. “*Bisphenol A endocrine disruptor complete degradation using TiO₂ photocatalysis with ozone*” (**original research article**), A. Colombo, G. Cappelletti, S. Ardizzone, I. Biraghi, C. L. Bianchi, D. Meroni, C. Pirola, F. Spadavecchia, *Environmental Chemistry Letters*, **2012**, 10, 55–60.
7. “*About the nitrogen location in nanocrystalline N-doped TiO₂: Combined DFT and EXAFS approach*” (**original research article**), M. Ceotto, L. Lo Presti, G. Cappelletti, D. Meroni, F. Spadavecchia, R. Zecca, M. Leoni, P. Scardi, C. L. Bianchi, S. Ardizzone, *Journal of Physical Chemistry C*, **2012**, 116, 1764–1771.

8. "Probe-based Electro-oxidative Lithography of OTS SAMs Deposited onto Transparent ITO Substrates" (**original research article**), D. Meroni, S. Ardizzone, U.S. Schubert, S. Höppener, *Advanced Functional Materials*, **2012**, 22, 4376–4382. **FIRST AUTHOR**
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12. "Ultra-Traces Detection by Gold-Based Electrodes in As(III) Novel Photoremediation" (**original research article**), V. Pifferi, S. Ardizzone, G. Cappelletti, L. Falciola, D. Meroni, *Electrocatalysis*, **2013**, 4, 306–311. **LAST AUTHOR**
13. "Electrochemically assisted deposition of transparent, mechanically robust TiO₂ films for advanced applications" (**original research article**), G. Maino, D. Meroni, V. Pifferi, L. Falciola, G. Soliveri, G. Cappelletti, S. Ardizzone, *Journal of Nanoparticle Research*, **2013**, 15, 2087–2097. **CORRESPONDING AUTHOR.**
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26. "Electrochemical sensors cleaned by light: a proof of concept for on site applications towards integrated monitoring systems" (**original research article**), V. Pifferi, G. Soliveri, G. Panzarasa, S. Ardizzone, G. Cappelletti, D. Meroni, L. Falciola, *RSC Advances*, **2015**, 5, 71210-71214.
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30. "Green and low cost tetracycline degradation processes by nanometric and immobilized TiO₂ systems" (**original research article**), L. Rimoldi, D. Meroni, G. Cappelletti, S. Ardizzone, *Catalysis Today*, **2017**, 281, 38–44. **CORRESPONDING AUTHOR**
31. "Tailored routes for home-made Bi-doped ZnO nanoparticles. Photocatalytic performances towards o-toluidine, a toxic water pollutant" (**original research article**), S. Mostoni, V. Pifferi, L. Falciola, D. Meroni, E. Pargoletti, E. Davoli, G. Cappelletti, *Journal of Photochemistry and Photobiology A: Chemistry*, **2017**, 332, 534–545.
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34. "Zn- vs Bi-based oxides for o-toluidine photocatalytic treatment under solar light" (**original research article**), E. Pargoletti, S. Mostoni, G. Rassu, V. Pifferi, D. Meroni, L. Falciola, E. Davoli, M. Marelli, G. Cappelletti, *Environmental Science and Pollution Research*, **2017**, 24, 8287-8296.
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37. "Sol-Gel Synthesis of CaTiO₃:Pr³⁺ Red Phosphors: Tailoring the Synthetic Parameters for Luminescent and Afterglow Applications" (**original research article**), D. Meroni, L. Porati, F. Demartin, D. Poelman, *ACS Omega*, **2017**, 2, 4972–4981. **FIRST AND CORRESPONDING AUTHOR**

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41. "Wetting Modification by Photocatalysis: A Hands-on Activity To Demonstrate Photoactivated Reactions at Semiconductor Surfaces" (**original article**), L. Rimoldi, T. Taroni, D. Meroni, *Journal of Chemical Education*, **2018**, 95 (12), 2216–2221. **CORRESPONDING AUTHOR - FRONT COVER**
42. "TiO₂-SiO₂-PMMA terpolymer floating device for the photocatalytic remediation of water and gas phase pollutants" (**original research article**), V. Sabatini, L. Rimoldi, L. Tripaldi, D. Meroni, H. Farina, M. Ortenzi, S. Ardizzone, *Catalysts*, **2018**, 8(11), 568. **CORRESPONDING AUTHOR**
43. "Role of the growth step on the structural, optical and surface features of TiO₂/SnO₂ composites" (**original research article**), L. Rimoldi, D. Meroni, E. Pargoletti, I. Biraghi, G. Cappelletti, S. Ardizzone, *Royal Society Open Science*, **2019**, 6, 181662. **PERSONAL INVITATION - CORRESPONDING AUTHOR**
44. "Insights on the photocatalytic degradation processes supported by TiO₂/WO₃ systems. The case of ethanol and tetracycline" (**original research article**), L. Rimoldi, A. Giordana, G. Cerrato, E. Falletta, D. Meroni, *Catalysis Today*, **2019**, 328, 210-215. **LAST AND CORRESPONDING AUTHOR**
45. "Guaiacol hydrodeoxygenation as a model for lignin upgrading. Role of the support surface features on Ni-based alumina-silica catalysts" (**original research article**), F. Broglia, L. Rimoldi, D. Meroni, S. De Vecchi, M. Morbidelli, S. Ardizzone, *Fuel*, **2019**, 243, 501-508. **CORRESPONDING AUTHOR**
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Data

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Luogo

Faggeto Lario