



**DEPARTMENT OF  
MATERIALS SCIENCE**

Via Roberto Cozzi, 55  
I-20125 Milano (I)

**Dr. Roberto Nisticò, PhD**  
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*Date and Place of Birth* 04/04/1987, Torino (TO)  
*Nationality* Italian citizenship  
*Gender* Male  
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*Personal website* [Roberto Nisticò \(researchgate.net\)](http://Roberto.Nisticò(researchgate.net))  
**Scopus Author ID:** 55224717100; **WOS Researcher ID:** E-5568-2016; **ORCID:** 0000-0001-8986-5542.

### RESEARCH ACTIVITY

Roberto Nisticò (RN) is Fixed-Time Assistant Professor (RTD-b), i.e. tenure track Associate Professor, in General and Inorganic Chemistry at the University of Milano-Bicocca (Department of Materials Science, Italy). Up today, RN published more than 80 publications on renowned international journals (mostly as first and/or corresponding author) and two book chapters. Additionally, RN is member of the Editorial Board of the journal *Inorganics*. The research activity of RN mainly focuses on several aspects at the interface between inorganic chemistry, and materials science, always looking for novel and appealing solutions for a sustainable future. The principal field of interest is the development of magnet-responsive nanomaterials (i.e., iron oxides, ferrites) and other inorganic systems for the environmental remediation of contaminated (waste)water, (photo)catalysis, and energetic applications.

### BIBLIOMETRIC INDICATORS (Scopus Database)

Number of Publications: **80**; Citations: **2106**; H-index: **24**.

### BIBLIOMETRIC INDICATORS (WOS Database)

Number of Publications: **79**; Citations: **1867**; H-index: **24**.

### CAREER

*Feb 2022 – today* Fixed-Time **Assistant Professor** (RTD-b), University of Milano-Bicocca, Milano, Italy  
*General and Inorganic chemistry, CHIM/03 – 03/B1*

*Oct 2020 – Dec 2021* **GMP QC Analyst**, PolyCrystalLine SpA, QC-Unit, Medicina (BO), Italy

*Feb 2019 – Oct 2020* Permanent **Researcher**, Bio-ON SpA, CNS-Unit, Castel S. Pietro Terme (BO), Italy

*Jan 2017 – Feb 2019* Fixed-Time **Researcher** (RTD-a), Polytechnic Institute of Torino, Torino, Italy  
*Materials Science and Engineering, ING-IND/22 – 09/D1*

*Mar 2016 – Jan 2017* **Post-Doc**, University of Torino, Torino, Italy  
*An integrated approach for the treatment of micropollutants: oxidation, membrane technologies and new adsorbing materials*

*Mar 2015 – Feb 2016* **Post-Doc**, University of Torino, Torino, Italy  
*Use of natural substances for obtaining useful materials for environmental applications*

### EDUCATION AND TRAINING

*Jan 2015* **PhD Chemical and Materials Sciences**, University of Torino, Supervisor: Dr. G. Magnacca  
*Development of oxidic and polymeric materials for controlled transport and/or release. Rank: Excellent*

*Dec 2011* **Professional Certification**, Chemist sect. A, Order of Chemists of Piemonte and Valle d'Aosta

*Oct 2011* **MSc Industrial Chemistry**, University of Torino, Tutors: Dr. G. Magnacca, Dr. M.G. Faga (CNR)  
*Physico-chemical characterization of hernioplasty polypropylenic meshes functionalized with antibiotic agent. Marks: 110/110 cum laude*

*Oct 2009* **BSc Industrial Chemistry**, University of Torino, Tutor: Prof. L. Costa  
*Oxidation mechanism after e-beam irradiation of polypropylene films. Marks: 104/110*

## EDITORIAL ACTIVITY

- **Inorganics** (ISSN 2304-6740, MDPI)
  - Member of the **Editorial Board** (since 2022)
  - Member of the **Section Board “Inorganic Materials”** (since 2022)
  - Member of the **Topical Advisory Board** (2021-2022)
  - Member of the **Reviewer Board** (since 2021)
  - Guest Editor SI** *Feature Papers in Inorganic Materials 2024*. Online (2024)
  - Guest Editor SI** *New Advances into Nanostructured Oxides II*. Online (2024)
  - Guest Editor SI** *10<sup>th</sup> Anniversary of Inorganics: Inorganic Materials*. Published online and printed as a book (2024)
  - Guest Editor SI** *New Advances into Nanostructured Oxides*. Published online and printed as a book (2023)
  - Guest Editor SI** *Smart Tools for Smart Applications: New Insights into Inorganic Magnetic Systems and Materials*. Published online and printed as a book (2021)
- **Frontiers in Environmental Engineering** (ISSN 2813-5067 Frontiers)
  - Environmental Catalysis Sect.:* Member of the **Reviewer Board** (since 2024)
- **Polymers** (ISSN 2073-4360, MDPI)
  - Member of the **Reviewer Board** (since 2020)
- **Frontiers in Materials** (ISSN 2296-8016, Frontiers)
  - Carbon-Based Materials Sect.:* Member of the **Reviewer Board** (since 2018)
- **Frontiers in Chemistry** (ISSN 2296-2646, Frontiers)
  - Inorganic Chemistry Sect.:* Member of the **Reviewer Board** (since 2018)
- **Journal of Nanomaterials** (ISSN 1687-4110, Hindawi)
  - Guest Editor SI** *Environmental Sustainability in the Synthesis and Characterization of Hybrid/Composite Nanomaterials*. Published online (2018)



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**Reviewer**

**Nature Publishing Group** (Scientific Reports).

**ACS** (ACS Applied Materials and Interfaces).

**RSC** (Journal of Materials Chemistry B, New Journal of Chemistry, RSC Advances).

**Elsevier** (Applied Surface Science, Chemical Physics Letters, International Journal of Biological Macromolecules, Journal of Analytical and Applied Pyrolysis, Journal of Hazardous Materials, Journal of Materials Science and Technology, Journal of Photochemistry and Photobiology A: Chemistry, Journal of the European Ceramic Society, Materials Letters, Materials Science and Engineering C, Polymer Degradation and Stability, Science of the Total Environment).

**Wiley** (Chemistry Select).

**Springer** (Cellulose, Journal of Materials Science, Journal of Polymers and the Environment, Korean Journal of Chemical Engineering, Water Air and Soil Pollution).

**MDPI** (Clean Technologies, Coatings, Energies, Inorganics, International Journal of Molecular Science, Magnetochemistry, Marine Drugs, Materials, Metals, Molecules, Nanomaterials, Polymers, Sustainability).

**Taylor and Francis** (International Journal of Smart and Nano Materials).

**IOP** (Materials Research Express).

**Sage** (Polymers and Polymer Composites).

**Others:** *BMC - Springer Nature* (BMC Biotechnology) *AIP* (Applied Physics Letters), *BME-PT and GTE* (eXPRESS Polymer Letters), *Frontiers* (Frontiers in Chemistry).

## AWARDS

2023

“Premio Gian Giacomo Drago e Fausta Rivera Drago” provided by the Istituto Lombardo Accademia di Scienze e Lettere (Italy) – 2023 Edition. This Award is intended for a young researcher (under 40 years of age) who has distinguished himself/herself for relevant studies in the field of the environmental protection. Motivation: “For his research aimed at the development of magnetic nanomaterials properly functionalized and silica- and titania-based porous nanomaterials for the environmental remediation of contaminated water, also exploiting photocatalytic processes”. **Winner.**

2022

“Premio Giovani Talenti”, Young Talents Award of the University of Milano-Bicocca (Italy) with the sponsorship of the Accademia Nazionale dei Lincei (Italy) – 2022 Edition. This Award is intended for young researchers (under 36 years of age) working at the University of Milano-Bicocca. Category Chemical Sciences and Earth Sciences. Motivation: “For his high-level works in the field of materials science and in particular of magnetic nanomaterials properly functionalized at the surface with products of biological origin”. **Winner of the Second Prize.**

2022

“Inorganics 2020 Best Paper” Award, for the category: Review, provided by the journal Inorganics (MDPI, Switzerland). For the best paper/review published during the year 2020. Selected publication: R. Nisticò, F. Cesano, F. Garello, Magnetic materials and systems: Domain structure visualization and other characterization techniques for the application in the materials science and biomedicine. Inorganics 8 (2020) 6, pp.1-59. DOI: 10.3390/inorganics8010006. **Winner.**

2018

“Alfredo Di Braccio” Award, provided by the Accademia Nazionale dei Lincei (Italy). For a scholar in Chemistry. **Finalist (not winner) with mention of merit by the examining Committee.**

2017

N° 3 “Publons Peer Review Awards” (n°3), provided by Publons, and Web of Science (WOS). For being among the “Top Reviewers for the Polytechnic Institute of Turin” in 3 categories: i) Materials Science, ii) Engineering, iii) Physics & Astronomy. **Winner.**

2014

“Macrogiovani 2014”, provided by the Associazione Italiana di Scienze e Tecnologie delle Macromolecole (AIM). For the best oral presentation during the XXI Convegno Nazionale AIM of Torino (Italy). **Winner.**

## NATIONAL QUALIFICATIONS

- **General and Inorganic Chemistry [S.C. 03/B1]**  
as Full Professor. Validity from 08/06/2023 to 08/06/2034  
as Associate Professor. Validity from 01/02/2022 to 01/02/2033
- **Materials Science and Engineering [S.C. 09/D1]**  
as Associate Professor. Validity from 31/05/2021 to 31/05/2032
- **Environmental & Cultural Heritage Chemistry [CHIM/12; S.C. 03/A1]**  
as Associate Professor. Validity from 12/11/2020 to 12/11/2031
- **Industrial Chemistry [S.C. 03/C2]**  
as Associate Professor. Validity from 13/05/2019 to 13/05/2030
- **Experimental Physics of Condensed Matter [S.C. 02/B1]**  
as Associate Professor. Validity from 26/07/2018 to 26/07/2029
- **Applied Physics [FIS/07; S.C. 02/D1]**  
as Associate Professor. Validity from 12/09/2018 to 12/09/2029

## MEMBERSHIPS

- **National Interuniversity Consortium of Materials Science and Technology (INSTM)**  
*As Member of the Energy and Environment Section. Since 2022*
- **Italian Chemical Society (SCI) – ID: 18367**  
*as Member of the Inorganic Chemistry Division. Since 2022*  
*as Member of the Physical Chemistry Division. From 2012 to 2020*
- **Associazione Italiana di Scienza e Tecnologia delle Macromolecole (AIM)**  
*as Member of the Scientific Committee. From 2013 to 2015*  
*as Member. From 2012 to 2020*
- **Order of Chemists of Piemonte and Valle d’Aosta**  
*as Member. From 2012 to 2016*

## VISITING PERIODS

Oct 2015 – Nov 2015

**National University of Comahue, PROBIEN**, Neuquen, Argentina

*Project: Magnetic materials from natural sources for wastewater treatments*

*Supervisors: Prof. M.E. Parolo, Dr. L. Carlos*

Sep 2015 – Oct 2015

**National University of La Plata, INIFTA**, La Plata, Argentina

*Project: Magnetic materials from natural sources for environmental applications*

*Supervisor: Prof. D.O. Martire*

Apr 2015 – May 2015

**National Polytechnic Institute of Toulouse, AGROMAT**, Tarbes, France

*Project: Extruded biobased composite films from urban biowaste as added value products*

*Supervisors: Prof. C. Vaca-Garcia, Dr. P. Evon*

Jun 2014 – Aug 2014

**Max-Planck Institute of Colloids and Interfaces**, Potsdam-Golm, Germany

*Project: Synthesis of functional nanoporous oxides and their hybrids under hypersaline conditions*

*Supervisors: Prof. M. Antonietti, Dr. N. Fechler*

Jun 2013 – Aug 2013

**Max-Planck Institute of Colloids and Interfaces**, Potsdam-Golm, Germany

*Project: Sol-gel chemistry of silica under hypersaline conditions*

*Supervisors: Prof. M. Antonietti, Dr. N. Fechler*

## DIDACTIC/TEACHING ACTIVITY

University of Milano-Bicocca

**Coordination and Organometallic Chemistry**

*as Titular Teacher (Laboratory). MSc Chemical Sciences and Technologies (IT)*

*as Member of the Evaluation Committee of the course*

*Academic Years: 2022/2023, 2023/2024*

University of Milano-Bicocca

**Inorganic Chemistry I and Laboratory**

*as Titular Teacher (Laboratory). BSc Chemical Sciences and Technologies (IT)*

*as Member of the Evaluation Committee of the course*

*Academic Years: 2021/2022, 2022/2023, 2023/2024*

Polytechnic of Torino

**Science and Technology of Materials and Metallurgy**

*as Assistant Teacher. BSc Aerospace Engineering (IT)*

*Academic Years: 2017/2018*

Polytechnic of Torino

**Concept Design – Materials and Technology for the Design**

*as Assistant Teacher. BSc Design and Visual Communication (IT)*

*Academic Years: 2016/2017*

University of Torino

**Chemistry of Polymeric Materials**

*Laboratory Assistant. MSc Industrial Chemistry (IT)*

*Academic Years: 2016/2017*

University of Torino

**Inorganic Industrial Chemistry with Laboratory**

*Laboratory Assistant. BSc Industrial Chemistry (IT)*

*Academic Years: 2012/2013*

## PROJECTS

### PRINCIPAL INVESTIGATOR (PI)

**2023-on going** **PERFECT – Photo(Electro)catalysis for Renewable FuEls produCTion**  
*as Principal Investigator (Total budget: 224,950 EUR) and Unit Principal Investigator (Unit budget: 78,118 EUR) as Fixed-Time Researcher (RTD-b) at University of Milano-Bicocca (4.0 Person Months)*  
 Progetti di ricerca di Rilevante Interesse Nazionale - PRIN 2022 PNRR (D.D. n. 1409 del 14-09-2022).  
 Fundend by Ministero dell'Università e della Ricerca (MUR).  
 ERC field: PE5 – Synthetic Chemistry and Materials.  
 Project code: P2022TK9B9.

### UNIT PI

**2023-on going** **MAPEC - MAgnetic field assisted Photo(Electro) CO<sub>2</sub> Conversion**  
*as co-Principal Investigator (Total budget: 203,229 EUR) and Unit Principal Investigator (Unit budget: 47,500 EUR) as Fixed-Time Researcher (RTD-b) at University of Milano-Bicocca (4.0 Person Months)*  
 Progetti di ricerca di Rilevante Interesse Nazionale - PRIN 2022 (D.D. n. 104 del 02-02-2022).  
 Fundend by Ministero dell'Università e della Ricerca (MUR).  
 ERC field: PE5 – Synthetic Chemistry and Materials.  
 Project code: 2022599NR3.

### PARTECIPANT

**2018-2019** **DEFLeCT - Digital tEchnology For Lung Cancer Treatment**  
*as Fixed-Time Researcher (RTD-a) at Polytechnic of Torino (0.4 Person Months)*  
 Piemonte Regional project 2018-2021 (Call Piattaforma Tecnologica “Salute e Benessere”).

**2017-2018** **Composite materials for flexible production riser construction**  
*as Fixed-Time Researcher (RTD-a) at Polytechnic of Torino*  
 Research contract with ENI SpA, Unit GEBr - Breakthrough initiative management.

**2016** **SFERA - Solar Facilities for the European Research Area**  
*as Post-Doc at University of Torino*  
 SFERA program (EC-CIEMAT-PSA; contract n°312643).

**2015-2017** **MicroBusters - An integrated approach for the treatment of micropollutants: oxidation, membrane technologies and new adsorbing materials**  
*as Post-Doc at University of Torino*  
 Research financial support 2014 (Torino call2014 L2 126).  
 Funded by Compagnia di San Paolo and University of Torino.

**2015-2018** **Mat4treat - Enhancing water quality by developing novel materials for organic pollutant removal in tertiary water treatments**  
*as Post-Doc at University of Torino (2.0 Person Months)*  
 Marie Skłodowska-Curie Research and Innovation Staff Exchange (EU H2020-MSCA-RISE-2014).  
 Project Code: 645551

**2015** **Extruded biobased composite films from urban biowaste added value products**  
*as Post-Doc at University of Torino*  
 COST-European Cooperation in Science and Technology EUBis Action TD1203.  
 Project Code: COST-STSM-TD1203-26977).

**2012-2014** **OXPOLISTI - Development of oxidic and polymeric materials for stimuli responsive applications**  
*as PhD student at University of Torino*  
 Research financial support 2011. Funded by University of Torino.  
 Project Code: ORTO114XNH.

**2011-2013** **PREVI - Prevenzione e cura dell'infezione in ernioplastica, in chirurgia urologica/uroginecologica e wound care**  
*as MSc and PhD student at University of Torino*  
 European Project POR-FESR ASSE I (I.1.3 Innovation and SME; Regione Piemonte; 2010-2013).



**PUBLICATIONS LIST** (corresponding author)

- 1) I. Tagliaro, M. Mariani, R. Akbari, M. Contardi, M. Summa, F. Saliu, **R. Nisticò**, C. Antonini, PFAS-free superhydrophobic chitosan coating for fabrics. **Carbohydr. Polym.** 333 (2024) 121981. DOI: 10.1016/j.carbpol.2024.121981.
- 2) **R. Nisticò**, R. Mantovan, M. Cantoni, C. Rinaldi, M. Malandrino, S. Mostoni, M. D'Arienzo, B. Di Credico, R. Scotti, Hydrothermal synthesis of Cu-substituted Ni ferrites: Structural, morphological, and magnetic properties. **Journal of Alloys and Compounds** 981 (2024) 173628. DOI: 10.1016/j.jallcom.2024.173628.
- 3) D. Montini, C. Cara, M. D'Arienzo, B. Di Credico, S. Mostoni, **R. Nisticò**, L. Pala, R. Scotti, Recent advances on porous siliceous materials derived from waste. **Materials** 16 (2023) 5578. DOI: 10.3390/ma16165578.
- 4) B. Di Credico, E. Manzini, L. Viganò, C. Canevali, M. D'Arienzo, S. Mostoni, **R. Nisticò**, R. Scotti, Silica nanoparticles self-assembly process in polymer composites: Towards advanced materials. **Ceramics International** 49 (2023) 26165-26181. DOI: 10.1016/j.ceramint.2023.05.125.
- 5) L. Mirizzi, M. D'Arienzo, **R. Nisticò**, G. Fredi, S. Dirè, E. Callone, A. Dorigato, L. Giannini, S. Guerra, S. Mostoni, B. Di Credico, R. Scotti, Al<sub>2</sub>O<sub>3</sub> decorated with polyhedral silsesquioxane units: An unconventional filler system for upgrading thermal conductivity and mechanical properties of rubber composites. **Composites Science and Technology** 236 (2023) 109977. DOI: 10.1016/j.compscitech.2023.109977.
- 6) L. Lavagna, **R. Nisticò**, An Insight into the chemistry of cement—A review. **Applied Science** 13 (2023) 203. DOI: 10.3390/app13010203.
- 7) S.F. Orsini, L. Cipolla, S. Petroni, S. Dirè, R. Ceccato, E. Callone, R. Bongiovanni, S. Dalle Vacche, B. Di Credico, S. Mostoni, **R. Nisticò**, L. Raimondo, R. Scotti, M. D'Arienzo, Synthesis and characterization of alkoxysilane-bearing photoreversible cinnamic side groups: A promising building-block for the design of multifunctional silica nanoparticles. **Langmuir** 38 (2022) 15662-15671. DOI: 10.1021/acs.langmuir.2c02472.
- 8) **R. Nisticò**, M. D'Arienzo, B. Di Credico, S. Mostoni, R. Scotti, The role of inorganic fillers in electrostatic discharge composites. **Inorganics** 10 (2022) 222. DOI: 10.3390/inorganics10120222.
- 9) **R. Nisticò**, A comprehensive study on the applications of clays into advanced technologies, with particular attention on biomedicine and environmental remediation. **Inorganics** 10 (2022) 40. DOI: 10.3390/inorganics10030040.
- 10) F. Caldera, **R. Nisticò**, G. Magnacca, A. Matencio, Y.K. Monfared, F. Trotta, Magnetic composites of dextrin-based carbonate nanosponges and iron oxide nanoparticles with potential application in targeted drug delivery. **Nanomaterials** 12 (2022) 754. DOI: 10.3390/nano12050754.
- 11) **R. Nisticò**, L. Lavagna, E. Aimo Boot, P. Ivanchenko, M. Lorusso, F. Bosia, N.M. Pugno, D. D'Angelo, M. Pavese, Improving rubber concrete strength and toughness by plasma-induced end-of-life tire rubber surface modification. **Plasma Processes and Polymers** 18 (2021) 2100081. DOI: 10.1002/ppap.202100081.
- 12) M.L. Tummino, **R. Nisticò**, F. Franzoso, A. Bianco Prevot, P. Calza, E. Laurenti, M.C. Paganini, D. Scalarone, G. Magnacca, The "Lab4treat" outreach experience: Preparation of sustainable magnetic nanomaterials for remediation of model wastewater. **Molecules** 26 (2021) 3361. DOI: 10.3390/molecules26113361.
- 13) L. Lavagna, **R. Nisticò**, S. Musso, M. Pavese, Functionalization as a way to enhance dispersion of carbon nanotubes in matrices: a review. **Materials Today Chemistry** 20 (2021) 100477. DOI: 10.1016/j.mtchem.2021.100477.
- 14) M.L. Tummino, **R. Nisticò**, C. Riedo, D. Fabbri, M. Cerruti, G. Magnacca, Waste cleaning waste: Combining alginate with biowaste-derived substances in hydrogels and films for water cleanup. **Chemistry – A European Journal** 27 (2021) 660-668. DOI: 10.1002/chem.202003250.
- 15) I. Corazzari, F. Turci, **R. Nisticò**, TGA coupled with FTIR gas analysis to quantify the vinyl alcohol unit content in ethylene-vinyl alcohol copolymer. **Materials Letters** 284 (2021) 129030. DOI: 10.1016/j.matlet.2020.129030.
- 16) **R. Nisticò**, Zirconium oxide and the crystallinity hallows. **Journal of the Australian Ceramic Society** 57 (2021) 225-236. DOI: 10.1007/s41779-020-00529-2.

- 17) **R. Nisticò**, A synthetic guide toward the tailored production of magnetic iron oxide nanoparticles. **Boletin de la Sociedad Espanola de Ceramica y Vidrio** 60 (2021) 29-40. DOI: 10.1016/j.bsecv.2020.01.011.
- 18) D. Suarez-Riera, A. Merlo, **L. Lavagna**, **R. Nisticò**, M. Pavese, Mechanical properties of mortar containing recycled *Acanthocardia tuberculata* seashells as aggregate partial replacement. **Boletin de la Sociedad Espanola de Ceramica y Vidrio** 60 (2021) 206-210. DOI: 10.1016/j.bsecv.2020.03.011.
- 19) **R. Nisticò**, Polyethylene terephthalate (PET) in the packaging industry. **Polymer Testing** 90 (2020) 106707. DOI: 10.1016/j.polymertesting.2020.106707.
- 20) **R. Nisticò**, F. Guerretta, P. Benzi, G. Magnacca, Chitosan-derived biochars obtained at low pyrolysis temperatures for potential application in electrochemical energy storage devices. **International Journal of Biological Macromolecules** 164 (2020) 1825-1831. DOI: 10.1016/j.ijbiomac.2020.08.017.
- 21) L. Lavagna, D. Burlon, **R. Nisticò**, V. Brancato, A. Frazzica, M. Pavese, **E. Chiavazzo**, Cementitious composite materials for thermal energy storage applications: a preliminary characterization and theoretical analysis. **Scientific Reports** 10 (2020) 12833. DOI: 10.1038/s41598-020-69502-0.
- 22) **L. Lavagna**, S. Marchisio, A. Merlo, **R. Nisticò**, M. Pavese, Polyvinyl butyral-based composites with carbon nanotubes: Efficient dispersion as a key to high mechanical properties. **Polymer Composites** 41 (2020) 3627-3637. DOI: 10.1002/pc.25661.
- 23) **R. Nisticò**, L. Lavagna, D. Versaci, P. Ivanchenko, P. Benzi, Chitosan and its char as fillers in cement-base composites: A case study. **Boletin de la Sociedad Espanola de Ceramica y Vidrio** 59 (2020) 186-192. DOI: 10.1016/j.bsecv.2019.10.002.
- 24) **L. Lavagna**, **R. Nisticò**, M. Sarasso, M. Pavese, An analytical mini-review on the compression strength of rubberized concrete as a function of the amount of recycled tires crumb rubber. **Materials** 13 (2020) 1234. DOI: 10.3390/ma13051234.
- 25) M.L. Tummino, G. Magnacca, D. Cimino, E. Laurenti, **R. Nisticò**, The innovation comes from the sea: Chitosan and alginate hybrid gels and films as sustainable materials for wastewater remediation. **International Journal of Molecular Sciences** 21 (2020) 550. DOI: 10.3390/ijms21020550.
- 26) **R. Nisticò**, F. Cesano, **F. Garello**, Magnetic materials and systems: Domain structure visualization and other characterization techniques for the application in the materials science and biomedicine. **Inorganics** 8 (2020) 6. DOI: 10.3390/inorganics8010006.
- 27) S. Tabasso, M. Ginero, L. Tomasso, **E. Montoneri**, **R. Nisticò**, M. Francavilla, Integrated biochemical and chemical processing of municipal bio-based waste to obtain bio based products for multiple uses. The case of soil remediation. **Journal of Cleaner Production** 245 (2020) 119191. DOI: 10.1016/j.jclepro.2019.119191.
- 28) M.E. Peralta, **R. Nisticò**, F. Franzoso, G. Magnacca, L. Fernandez, M.E. Parolo, E. Garcia Leon, **L. Carlos**, Highly efficient removal of heavy metals from waters by magnetic chitosan-based composite. **Adsorption** 25 (2019) 1337-1347. DOI: 10.1007/s10450-019-00096-4.
- 29) **R. Nisticò**, A. Bianco Prevot, **G. Magnacca**, L. Canone, S. Garcia-Ballesteros, A. Arques, Sustainable magnetic materials (from chitosan and municipal biowaste) for the removal of Diclofenac from water. **Nanomaterials** 9 (2019) 1091. DOI: 10.3390/nano9081091.
- 30) **R. Nisticò**, P. Rivolo, C. Novara, F. Giorgis, New branched flower-like Ag nanostructures for SERS analysis, **Colloids and Surfaces A: Physicochemical and Engineering Aspects** 578 (2019) 123600. DOI: 10.1016/j.colsurfa.2019.123600.
- 31) **E. Montoneri**, **R. Nisticò**, M. Francavilla, Demineralisation of municipal biowaste hydrolysates. **ChemistrySelect** 4 (2019) 7551-7554. DOI: 10.1002/slct.201900369.
- 32) **R. Nisticò**, **L. Carlos**, High yield of nano zero-valent iron (nZVI) from carbothermal synthesis using lignin-derived substances from municipal biowaste. **Journal of Analytical and Applied Pyrolysis** 140 (2019) 239-244. DOI: 10.1016/j.jaap.2019.03.022.
- 33) **R. Nisticò**, P. Rivolo, F. Giorgis, Tips and tricks for the surface engineering of well-ordered morphologically driven silver-based nanomaterials. **ChemistryOpen** 8 (2019) 508-519. DOI: 10.1002/open.201900007.



- 34) **R. Nisticò**, C. Novara, A. Chiadò, P. Rivolo, F. Giorgis, Cysteine-mediated synthesis of silver nanonets and their use for Surface Enhanced Raman Scattering (SERS). **Materials Letters** 247 (2019) 208-210. DOI: 10.1016/j.matlet.2019.03.121.
- 35) V. Polliotto, F.R. Pomilla, V. Maurino, G. Marci, **A. Bianco Prevot**, **R. Nisticò**, G. Magnacca, M.C. Paganini, L. Ponce Robles, L. Perez, S. Malato, Different approaches for the solar photocatalytic removal of micro-contaminants from aqueous environment: Titania vs. hybrid magnetic iron oxides. **Catalysis Today** 328 (2019) 164-171. DOI: 10.1016/j.cattod.2019.01.044.
- 36) **R. Nisticò**, F. Guerretta, P. Benzi, G. Magnacca, D. Mainero, E. Montoneri, Thermal conversion of municipal biowaste anaerobic digestate to valuable char. **Resources** 8 (2019) 24. DOI: 10.3390/resources8010024.
- 37) F. Guerretta, G. Magnacca, F. Franzoso, P. Ivanchenko, **R. Nisticò**, Sodium alginate conversion into char via pyrolysis at the onset temperature. **Materials Letters** 234 (2019) 339-342. DOI: 10.1016/j.matlet.2018.09.127.
- 38) L. Lavagna, **R. Nisticò**, S. Musso, M. Pavese, Hydrophobic cellulose ester as a sustainable material for simple and efficient water purification processes from fatty oils contamination. **Wood Science and Technology** 53 (2019) 249–261. DOI: 10.1007/s00226-018-1060-8.
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- I) **R. Nisticò**, H. Idriss, L. Carlos, E. Aneggi, T.R. Jensen, *10th Anniversary of Inorganics: Inorganics Materials*. Printed Edition of the Special Issue published in **Inorganics**, MDPI, Basel (Switzerland), 2024. ISBN: 978-3-7258-0407-8.
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### INVITED COMMUNICATIONS AT CONFERENCES, WORKSHOPS AND SEMINARS

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## POSTERS

- i) M. Colombo, M. D'Arienzo, M. Zappalorto, A. Pontefisso, **R. Nisticò**, R. Scotti, B. Di Credico, S. Mostoni, Glass fiber decorated with SiO<sub>2</sub> and reduced graphene oxide: a versatile system to simultaneously upgrade mechanical and electrical properties of GF reinforced polymer composites (60\_827), In: *E-MRS Fall Meeting 2023*, Varsavia (Poland) 18-21 September 2023. Poster (ENG).
- ii) **R. Nisticò**, M. D'Arienzo, A. Amighini Alerhush, L. Mirizzi, S. Dirè, G. Fredi, A. Dorigato, E. Callone, S. Mostoni, B. Di Credico, R. Scotti, Effect of the surface functionalization on alumina-based fillers for enhancing the thermal conductivity of polymeric nanocomposites (P56), In: *XLIX Italian Conference of Inorganic Chemistry – Congresso Nazionale della Divisione di Chimica Inorganica della SCI*, Perugia (Italy) 12-15 September 2023. Poster (ENG).
- iii) M. D'Arienzo, P. Mariani, S. Mascotto, S. Mostoni, L. Raimondo, A. Sassella, B. Di Credico, **R. Nisticò**, R. Scotti, EPR spectroscopy as an unconventional tool for monitoring the exsolution process in Cu-doped SrTiO<sub>3</sub> (P23), In: *XLIX Italian Conference of Inorganic Chemistry – Congresso Nazionale della Divisione di Chimica Inorganica della SCI*, Perugia (Italy) 12-15 September 2023. Poster (ENG).
- iv) **R. Nisticò**, M. D'Arienzo, A. Amighini Alerhush, L. Mirizzi, S. Dirè, G. Fredi, A. Dorigato, E. Callone, S. Mostoni, B. Di Credico, R. Scotti, Alumina-based fillers functionalized with polyhedral silsesquioxane units for enhancing the thermal conductivity of polymeric nanocomposites (P49), In: *XIV International School of Organometallic Chemistry*, Camerino (Italy) 7-11 September 2023. Poster (ENG).



- v) S. Dirè, D. Bugnotti, E. Callone, R. Ceccato, S. Petroni, L. Cipolla, R. Bongiovanni, S. Dalle Vacche, L.H. Esposito, A. Vitale, S.F. Orsini, B. Di Credito, S. Mostoni, **R. Nisticò**, R. Scotti, M. D'Arienzo, Biostar-Pack: preparation of starch nanocomposites towards the valorization of organic food waste for sustainable packaging (P16), In: *XIII Congresso Nazionale AICInG e II Congresso Nazionale della Divisione di Chimica per le Tecnologie della SCI*, Milano (Italy) 25-28 June 2023. Poster (ENG).
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#### PARTECIPATION TO HIGH-LEVEL (INTER)NATIONAL SCHOOLS

- 1) *XIV International School of Organometallic Chemistry*, organized by the University of Camerino, Camerino (Italy) 7-11 September 2023 (ENG).
- 2) *High-level course "Apprendere ed insegnare nell'Higher Education"*, organized by Polytechnic Institute of Torino, Torino (Italy) 20 February – 20 June 2017 (IT).
- 3) *International Winter School "Molecules@Surfaces"*, organized by University of Torino, Bardonecchia (Italy), 31 January – 5 February 2016 (ENG).
- 4) *XXXV Convegno-Scuola AIM "Mario Farina": Caratterizzazione di materiali polimerici, Tecniche per polimeri in soluzione*, organized by Associazione Italiana di Scienza e Tecnologia delle Macromolecole, Gargnano (Italy), 19-23 May 2014 (IT).
- 5) *Scuola di Chemiometria*, organized by University of Genova, Genova (Italy), 21-24 January 2013 (IT).
- 6) *XXXIII Convegno-Scuola AIM "Mario Farina": Sintesi di materiali polimerici*, organized by Associazione Italiana di Scienza e Tecnologia delle Macromolecole, Gargnano (Italy), 21-25 May 2012 (IT).

### SUPERVISED POSTDOCS AND RESEARCH FELLOWS LISTS

- 1) Tatiana Rodriguez Flores (University of Milano-Bicocca).  
Title: *Development of Fe-containing magnetic nanomaterials for the photo(electro)catalysis* (2024, Ongoing, ENG). Period: from 2024/06/01 to 2025/05/31 (12 months, planned)

### SUPERVISED PHD STUDENTS LISTS

- 1) Falak Shafiq (University of Milano-Bicocca). PhD Materials Science and Nanotechnology (ENG), 39<sup>th</sup> cycle.  
Title: *Photo(Electro)catalysts for Renewable FuEls produCTion (PERFECT)* (2024, ENG).  
Period: from 2024/01/08 to 2027/01/07 (36 months, on going).
- 2) Haleema Khanzada (Kaunas University of Technology, Lithuania). *Erasmus+ Traineeship*.  
Period: from 2024/01/08 to 2024/06/07 (5 months, on going).

### SUPERVISED STUDENTS LISTS

- 1) Gaia Maria Spinoni (University of Milano-Bicocca). BSc Chemical Sciences and Technologies (IT).  
Title: *Valorizzazione di rifiuti e trasformazione in catalizzatori per la riduzione dell'ossigeno* (2024, on going, IT).
- 2) Davide Melotto (University of Milano-Bicocca). BSc Chemical Sciences and Technologies (IT).  
Title: *Sintesi attraverso metodi di "soft chemistry" di ossidi di Cu nanostrutturati per la catalisi* (2024, on going, IT).
- 3) Daniele Valenzisi (University of Milano-Bicocca). BSc Chemical Sciences and Technologies (IT).  
Title: *Sintesi e caratterizzazione di ferriti magnetiche a base Cu, Co, Ni, Zn, e sistemi misti per applicazione in ambito catalitico* (2024, on going, IT).
- 4) Denise Pauline Bernardo (University of Milano-Bicocca / Katholieke Universiteit Leuven, Belgium). MSc Sustainable Materials (ENG).  
Title: *Designing a new generation of high-performance building materials: Plasma functionalization of super insulative silica aerogels particles* (2024, on going, ENG). As UNIMIB Assessors.
- 5) Edoardo Caravà (University of Milano-Bicocca). BSc Chemical Sciences and Technologies (IT).  
Title: *Analisi di controllo di matrici acquose (acque reflue) e valutazione degli esiti mediante approccio olistico alla stima dell'incertezza di misura secondo la Norma ISO 11352:2012* (2024, IT).
- 6) Veronica Radice (University of Milano-Bicocca). MSc Materials Science (ENG).  
Title: *Low ice adhesion properties of chitosan electrolyte hydrogel* (2024, ENG).
- 7) Gabriele Bona (University of Milano-Bicocca). BSc Chemical Sciences and Technologies (IT).  
Title: *Sintesi attraverso metodi di "soft chemistry" e caratterizzazione di nanoparticelle magnetiche a base di ossidi di ferro per applicazione nel risanamento ambientale* (2023, IT).
- 8) Lorenzo Demuru (University of Milano-Bicocca). MSc Chemical Sciences and Technologies (IT).  
Title: *Sintesi laser-assistita, caratterizzazione e ottimizzazione di nanoparticelle plasmoniche per la realizzazione di sensori ottici multicanale.* (2023, IT).
- 9) Massimiliano Mariani (University of Milano-Bicocca). MSc Materials Science (ENG).  
Title: *Polysaccharide-based materials and coatings* (2023, ENG).
- 10) Sofia Faina (University of Milano-Bicocca). MSc Chemical Sciences and Technologies (IT).  
Title: *Filler ibridi a base di allumina e sepiolite per applicazione in nanocomposti polimerici termicamente conduttivi e con proprietà di self-healing* (2023, IT).
- 11) Alexia Micaela Schirripa (University of Milano-Bicocca). BSc Materials Science (IT).  
Title: *Sintesi e caratterizzazione di sistemi a base di ZnO per applicazioni in vulcanizzazione* (2023, IT).
- 12) Andreia Amighini Alerhush (University of Milano-Bicocca). BSc Materials Science (IT).  
Title: *Filler ibridi a base di silice e allumina per applicazioni in nanocompositi polimerici termicamente conduttivi* (2022, IT).
- 13) Davide Burlon (Polytechnic of Torino). MSc Energy and Nuclear Engineering (IT).  
Title: *Cement-based composite materials for thermochemical heat storage* (2018, ENG).



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- 14) Davide Palma (University of Torino). MSc Environmental Chemistry (IT).  
*Title: Fotodegradazione di caffeina in presenza di materiali ibridi magnetici contenenti sostanze organiche derivate da compost (2017, IT).*
- 15) Federico Guerretta (University of Torino). MSc Clinical, Forensic Chemistry and Doping Control (IT)  
*Title: Carboni da sostanze naturali a basso costo: Preparazione, caratterizzazione e applicazione (2016, IT).*

*Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196. Dichiaro che quanto riportato nel presente Curriculum Vitae corrisponde a verità ai sensi del D.P.R. 445/2000.*

Milano (MI), 03/05/2024

Dr. Roberto Nisticò, PhD