

PERSONAL INFORMATION

Valentina Nicolini

✉ valentina.nicolini@unimore.it

Sex Female | Date of birth 0 | Nationality Italian

ACTUAL POSITION

Laboratory technician

WORK EXPERIENCE

16 Feb 2023 - Now

Laboratory technician

Università degli Studi di Modena e Reggio Emilia, Modena, Italy

- Laboratory assistance in chemistry courses. Technical support in organization and execution of seminars and laboratory experiences with high school students, as well as in public engagement activities.

[Education, Public Engagement](#)

1 Sep 2022 – 14 Feb 2023

Maths and science middle school teacher

Bilingual Middle School, Modena, Italy

- Maths and science teaching in middle school, design and execution of science laboratories

[Education](#)

Oct 2022 – Nov 2022

External expert

IC3 Modena – Mattarella, Modena, Italy

- Design and execution of science laboratories in the frame of PON project

[Education](#)

1 Oct 2021 – 30 Jun 2021

Maths and science middle school teacher

IC3 Modena – Mattarella, Modena, Italy

- Maths and science teaching in middle school, design and execution of science laboratories in the frame of PON project

[Education](#)

Jul 2020 – 30 Sep 2021

Physical and chemical characterization division coordinator

Qura srl, Mirandola, Italy

- Management and execution of physical and chemical characterizations on materials; development of coating-related tests on prototypes and products; research of coating solutions and their application on biomedical devices; coordinator of three people

[Biomedical devices](#)

09 Oct 2018 – 30 Sep 2021

Research and Development scientist

Qura srl, Mirandola, Italy

- Coating solutions research, writing of test protocols and test reports in compliance with international regulations and standards (ISO and FDA guidance); development of new test protocols for biomedical devices; execution of functional tests on prototypes and products;

Biomedical devices

17 Jan 2017 – 18 Jul 2018

Post-Doc Position

University of Modena and Reggio Emilia, Modena (Italy) and Litokol S.p.A., Rubiera (Italy)

- Management and execution of physical and chemical characterizations on materials; development of new products and new technical tests, in compliance with the international regulations (ISO), to verify their performances. Research project focused on building adhesives and resin-based products, carried out as a collaboration between the Department of Chemical and Geological Sciences of University of Modena and Reggio Emilia (Italy) and Litokol S.p.A. (Rubiera, Italy)

Building adhesives and resin

01 Jul 2014 – 31 Oct 2014

Collaborator (co.co.pro)

Tec-Star srl, Castelfranco, Italy

- Development of different coating materials obtained via sol-gel process, and evaluation of their antibacterial and hydrophobic properties. Development of new organosilane coatings for metals with different properties. Investigation on the functionalization of metal nanoparticles to include them in the organosilane coatings.

Nanotechnologies

11 Apr 2013 – 10 Oct 2013

Laboratory technician, Postgraduate training

Tec-Star srl, Castelfranco, Italy

- Development of a patent for an anti-sticking coating for metal moulds (*Process for the surface treatment of metal moulds for the injection of plastic materials therein and moulds treated therewith*; **Inventors: Valentina Nicolini**, L. Marzani, L. Rettighieri; patent number: WO2015090538 A1). Synthesis of sol-gel coatings containing hybrid organic-inorganic silanes, and tests of their performances.

Nanotechnologies

EDUCATION AND TRAINING

1 Jan 2014-31 Dec 2016

PhD in Models and Methods for Material and Environmental Sciences

Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia, Modena (Italy)

- Synthesis and characterization of bioactive glasses *via* melting, sol-gel and EISA processes and evaluation of their biocompatibility and antioxidant activity with several chemical and physical techniques. Writing of scientific papers published in peer-reviewed journals. Advisor of several bachelor students. Attending in both national and international conferences. Science outreach experiences with high school students.

05 Nov 2015-16 Feb 2016

Visiting PhD student

Departamento de Química Inorgánica y Bioinorgánica, Facultad de Farmacia, Universidad Complutense de Madrid, Madrid (Spain)

Hosting professor: Antonio Jesús Salinas Sánchez

Nov 2009 – 12 Apr 2012

Master's degree in Chemical Sciences

University of Modena and Reggio Emilia, Modena (Italy)

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1 Feb 2011 – 31 Jul 2011

Erasmus student

NanoGeoScience group, Department of Chemistry, Copenhagen University, Copenhagen (Denmark)

Hosting professor: Susan Stipp

Sep 2006 – 13 Nov 2009

Bachelor's degree in Chemistry

University of Modena and Reggio Emilia, Modena (Italy)

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PERSONAL SKILLS

Mother tongue Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

Communication skills

- Excellent interaction capability with students of all school level and with university students.
- Excellent interaction capability with general public in science outreach events

Job-related skills (Instruments)

- UV-Vis
- FT-IR
- SEM-EDS
- ICP

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Independent user	Independent user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user

- good command of office suite (word processor, spread sheet, presentation software)
- good command of scientific graphing and data analysis software acquired during the PhD

Driving licence B

ADDITIONAL INFORMATION

Publications

- **Nicolini V.** et al. Mesoporous bioactive glasses doped with cerium: investigation over enzymatic-like mimetic activities and bioactivity. *Ceramics International* (2019), doi: 10.1016/j.ceramint.2019.07.080
- Benedetti F., Amidani L., **Nicolini V.** et al. Role of cerium oxide in bioactive glasses during catalytic dissociation of hydrogen peroxide. *Phys. Chem. Chem. Phys.* (2018), doi: 10.1039/C8CP02271B
- Benedetti F., Luches P., **Nicolini V.**, et al. Structure of active cerium sites within bioactive glasses. *J Am Ceram Soc.* (2017);100:5086–5095, doi: 10.1111/jace.15049
- **Nicolini V.** et al. Cerium-doped bioactive 45S5 glasses: spectroscopic, redox, bioactivity and biocatalytic properties. *J Mater Sci* (2017), 52: 8845, doi: 10.1007/s10853-017-0867-2 – **Selected as one of the 12 papers nominated for the 2017 Robert W. Cahn Best Paper Prize** (<http://www.springer.com/gp/materials/cahn-prize-2017>)
- **Nicolini V.** et al. The effect of composition on structural, thermal, redox and bioactive properties of Ce-containing glasses. *Mater Des* 97, 73–85 (2016), doi: 10.1016/j.matdes.2016.02.056
- **Nicolini V.** et al. SiO₂-CaO-P₂O₅ Bioactive Glasses: A Promising Curcuminoids Delivery System. *Materials* 9:290 (2016), doi: 10.3390/ma9040290
- Malavasi G, **Nicolini V.** et al. Catalytic Bioactive Glasses: Catalase Mimetic Activity, an Example. *J Appl Biomater Funct Mater* 2016; 14(1): e95, eISSN 2280-8000, doi: 10.5301/jabfm.5000272
- **Nicolini, V.** et al. Evidence of Catalase Mimetic Activity in Ce³⁺/Ce⁴⁺ Doped Bioactive Glasses. *J. Phys. Chem. B* 119, 4009–4019 (2015), doi: 10.1021/jp511737b
- **Nicolini V.** et al. Biovetri come potenziali drug delivery systems ed impianti con proprietà antiossidanti. *Atti del XII convegno nazionale AIMAT, AIMAT.* ISBN 9788894040203, 67- 73 (2014)

Conferences

18 Dec 2015

- National Meeting - XV Giornata della Chimica dell'Emilia Romagna, Modena. Poster: Comparison between antioxidant and bioactivity properties of P-containing and P-free mesoporous bioactive glasses doped with cerium oxide. V. Nicolini, G. Malavasi

15 May 2015

- National Meeting - Tracciabilità ed autenticità dei prodotti alimentari

11-14 Jul 2014

- International Meeting – Fundamentals and Applications of Cerium Dioxide in Catalysis, Udine. Poster: Superoxide dismutase and catalase mimic like activity of Cerium-doped bioglasses, Nicolini V., Malavasi G., Luches P. et al.

18 Dec 2014

- National Meeting - XIV Giornata della Chimica dell'Emilia Romagna, Parma. Poster: Comparison between catalase mimic activity in phospho-silicate and phosphate-free CeO₂ doped bioglasses. V. Nicolini, G. Malavasi

21-24 Sep 2014

- National Meeting – XII Convegno Nazionale AIMAT, Lecce. Poster: Biovetri come potenziali drug delivery systems ed impianti con proprietà antiossidanti, Nicolini V., Malavasi G., Ferrari E. et al.

17-18 Jun 2014

- National Meeting - IX Workshop Nazionale Sol-Gel, Parma. Oral: Sol-Gel and EISA bioglasses as delivery systems for anticancer molecules, Nicolini V., Malavasi G., Lusvardi G. et al.

13-14 Mar 2014

- National Meeting - Winter Modeling, Modena.

PhD Schools

30 Aug-04 Sep 2015

- 9° Scuola Nazionale SCS2015 “Il ricercatore visibile: Nuovi modi di fare e comunicare la scienza”

Teaching experiences

2009-Now

- Private tuitions in scientific subjects

2014-2018

- Laboratory teaching assistant in undergraduate courses and in demonstrations for high school students

Science outreach experiences

Sep 2025	European night of researchers
Sep 2024	European night of researchers
Sep 2023	European night of researchers
Jan 2016 – 2021	Member of “Minerva – Associazione di divulgazione scientifica”. Participation in public events and writing of scientific articles addressed to the web community
Jan – Mar 2015	Guide for the “Cristalli ai raggi X” exhibition, organized by the Department of Chemical and Geological Sciences of University of Modena and Reggio Emilia.
Sep 2016	European night of researchers Speaker at “Mani in pasta” workshop, organized by University of Modena and Reggio Emilia in the contest of the “European Heritage Days”
Professional certifications	
Jun 2012	Professional qualification as “Chemist” (section A)