



Simone De Micco

ID: CA95777FQ Nationality: Italian Date of birth: 05/12/1998

Place of birth: PAVULLO NEL FRIGNANO, Italy Phone number: (+39) 3391318045

✓ Email address: simone.demicco598@gmail.com

✓ Email address: simone.demicco@unimore.it

in LinkedIn: <https://it.linkedin.com/in/simone-de-micco-4599ba225>

📍 Home: Via Giuseppe Garibaldi 1, 41026 Pavullo Nel Frignano, Modena (Italy)

📍 Work: Via P. Vivarelli 10, 41125 Modena (Italy)

ABOUT ME

I hold a Master's degree in Chemistry from the University of Modena and Reggio Emilia. After completing my studies, I carried out a research fellowship at the Enzo Ferrari Department of Engineering (DIEF, University of Modena and Reggio Emilia), focusing on the study and development of biomaterials. Currently, I am further consolidating my expertise through a PhD program dedicated to the study and characterization of biomaterials for dental applications (zirconia) and tissue engineering (bioactive glasses).

WORK EXPERIENCE

🏢 **Università degli studi di Modena e Reggio Emilia** – Modena

City: Modena

Ph.D. in Civil, Environmental and Materials Engineering - Curriculum: Materials Engineering

[01/11/2024 – Current]

- Biomaterials;
- Bioactive glasses, zirconia, and dental materials;
- Synthesis of materials and characterization using advanced instrumentation (XRD, Raman, ICP-MS, ESEM, SEM-FEG).

🏢 **Università degli studi di Modena e Reggio Emilia** – Modena, Italy

City: Modena | Country: Italy

Research Fellowship

[01/03/2024 – 31/10/2024]

- Study and development of bioactive glasses (BGs);
- Production of BGs by melt-quench and sol-gel techniques;
- Fabrication of 3D BG scaffolds.

🏢 **Università degli studi di Modena e Reggio Emilia** – Modena, Italy

City: Modena | Country: Italy

Internship in the Electroanalysis Research Group

[01/04/2022 – 20/10/2022]

The internship in preparation for the Master's thesis was again carried out at the Electroanalysis Laboratory of the Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia, under the supervision of Prof. Laura Pigani. The work focused on a preliminary literature review followed by experimental tests aimed at developing an amperometric electrochemical sensor for the determination of the amino acid L-Phenylalanine. After studying the behavior and related challenges using a three-electrode electrochemical cell, additional tests were conducted with portable electrochemical sensors (SPEs).

 **Università degli studi di Modena e Reggio Emilia** – Modena, Italy

City: Modena | Country: Italy

Internship in the Electroanalysis Research Group

[01/03/2020 – 18/09/2020]

The internship in preparation for the thesis was carried out at the Electroanalysis Laboratory of the Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia, under the supervision of Prof. Chiara Zanardi. The experimental work focused on the development and optimization of an amperometric electrochemical sensor for the analysis of real and artificial saliva, adopting an analytical approach to address the challenges associated with the analysis of this biological fluid.

EDUCATION AND TRAINING

Master's Degree

Università degli studi di Modena e Reggio Emilia [18/10/2020 – 20/10/2022]

City: Modena | Country: Italy | Website: <https://www.dscg.unimore.it>

Bachelor's Degree

Università degli studi di Modena e Reggio Emilia [15/09/2017 – 18/09/2020]

City: Modena | Country: Italy | Website: <https://www.dscg.unimore.it/it>

High School Diploma

Liceo Scientifico A. Sordani [15/09/2012 – 05/07/2017]

City: Pavullo Nel Frignano, Modena | Country: Italy | Website: <https://istitutocavazzi.edu.it>

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

XRD / Software di acquisizione ed elaborazione spettri XRD, FTIR, EDS (X'Pert Highscore Plus, OPUS, INCA) / Buona conoscenza di software per analisi di spettri XRD (Jade, X'Pert) / Software di acquisizione ed elaborazione XRD, FTIR, EDS (X'Pert Highscore Plus, OPUS, INCA) / Acquisizione ed elaborazione spettri XRD, FTIR, EDS con X'Pert Highscore Plus, OPUS e INCA / Microscopia Elettronica / ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry) / Analisi dei dati HNMR, FTIR/ATR, Raman, XPS, SEC, TGA, TG-IR, SEM, FE-SEM / Spettroscopia Raman

DRIVING LICENCE

Driving Licence: B

PROJECTS

[01/03/2024 – 31/10/2024]

Multi-Functional 3D printed Bio-Scaffolds - MULTIFUN3D

PUBLICATIONS

[2025]

The Assessment of Bioactivity and Biological Responsiveness in Bioactive Glasses and Ceramics: A Review of Available Techniques

The publication provides a critical and comprehensive review of the methodologies currently available for assessing the bioactivity and biological response of bioactive glasses and bioceramics, such as β -tricalcium phosphate (β -TCP), hydroxyapatite (HAp), and apatite-wollastonite (A-W). The article examines the advantages and limitations of the main techniques, highlighting the gap between in vitro and in vivo studies and the potential occurrence of false positives and false negatives. Immersion tests in simulated physiological solutions (SBF, TRIS, PBS, and SWF) and standardized biological assays (MTT, BrdU, EdU, XTT) are discussed, along with advanced methods such as qPCR and immunocytochemistry, employed to study cell proliferation, adhesion, and differentiation. Colorimetric assays (crystal violet, neutral red, alizarin red) and the impact of using static or dynamic approaches on experimental outcomes are also analyzed.

Authors: De Micco Simone, Bellucci Devis, Cannillo Valeria | **Volume, Issue and Pages:** vol. 18, num. 18, pagg. 4393-4436

De Micco, S.; Bellucci, D.; Cannillo, V. The Assessment of Bioactivity and Biological Responsiveness in Bioactive Glasses and Ceramics: A Review of Available Techniques. Materials 2025, 18, 4393.

CONFERENCES AND SEMINARS

[15/10/2025] Webinar online

Seminar: Additive Manufacturing Advantage: Healthcare 2025 Participation in a seminar on the applications of Additive Manufacturing in the biomedical sector, focusing on emerging innovations. The event explored the opportunities offered by 3D printing for the production of customized medical devices, implants, and advanced biomaterials, highlighting the technological challenges for their integration into clinical practice.

[17/07/2025] Webinar online

Seminar: Bioceramics, Biomaterials, and Additive Manufacturing for Healthcare Attendance at an international seminar on the latest developments in bioactive materials for bone regeneration, featuring lectures by renowned experts, including Prof. Francesco Baino (Politecnico di Torino), Prof. Aldo R. Boccaccini (University of Erlangen-Nuremberg), Prof. Susmita Bose (Washington State University), and Prof. Julian Jones (Imperial College London). Topics covered included 3D printing of ceramics and composites, additive manufacturing of bioactive glasses, and the use of bioactive ions and biomimetic scaffolds for applications in bone tissue engineering.

[08/04/2025] Dipartimento di Scienze Chimiche e Geologiche - Università degli studi di Modena e Reggio Emilia

Seminar: Design of Third generation Bioactive Glasses: challenges and open questions. Participation in a seminar focused on the design of third-generation bioactive glasses, with particular emphasis on the scientific and technological challenges related to their composition, processability, and biological response. The seminar was held by Prof. Ashutosh Goel, who presented the main innovative approaches in the structural and functional design of bioactive glasses for tissue regeneration applications.

CERTIFICATIONS

[CisitA Parma Scarl, 16/01/2024]

Course on Data Analysis e Visualization Tools

Mode of learning: Online

[Il Sestante Romagna, 13/10/2023]

Intermediate/Advanced Excel Course

Mode of learning: Online

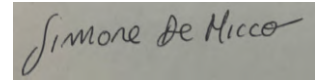
[Il Sestante Romagna, 24/07/2023]

Intermediate Excel Course

Mode of learning: Online

I authorize the processing of my personal data included in this CV in accordance with Article 13 of Legislative Decree No. 196 of 30 June 2003 – “Personal Data Protection Code” – and Article 13 of the GDPR 2016/679 – “European Regulation on the Protection of Personal Data.”

Modena, Italy

A rectangular box containing a handwritten signature in black ink. The signature is written in a cursive style and reads "Simone De Micco".

Simone De Micco