

**CURRICULUM VITAE**

<b>PERSONAL INFORMATION</b>	
<i>Name</i>	<b>MICHELE MASCIA</b>
<i>Date of birth</i>	
<i>Nationality</i>	ITALIAN
<i>Address</i>	
<i>Telephone</i>	
<i>E-mail</i>	
<i>Position</i>	FULL PROFESSOR
<b>PROFILE</b>	
<i>Brief description</i>	Michele Mascia (male, Professor). Chemical Engineer, PhD, Full Professor of Chemical Plant design from 2019, at the Dept of Mechanical Chemical and Materials Engineering of the University of Cagliari. Teacher of Unit Operations and Chemical Plant Design for bachelor and master programs in Chemical Engineering; Past or actual member of governing and technical bodies (Senato Accademico, Comitato Unico di Garanzia) at UniCa. My research activities focus on electrochemical engineering applied to processes for energy and environment. In particular, water electrolysis, microbial fuel cells, bioelectrochemical reactors and photoelectrochemical splitting of water. The studies cover design, characterisation and modelling of reactors, electrocatalysis and reaction mechanisms.
<b>SKILLS</b>	
	Modelling of electrochemical systems, Process plant simulation and design Planning and conduction of an experimental campaign Analysis of experimental data Soft skills <ul style="list-style-type: none"> <li>• Project management</li> <li>• Teamwork and leadership</li> <li>• Communication abilities</li> </ul>
<b>ACADEMIC ACTIVITY</b>	<i>Conferences, Workshops and Seminars (last 5 years)</i>
June 26-29, 2023 Toulouse	Invited keynote speaker at the conference 13th European Symposium on Electrochemical Engineering (13thESEE2023) with the presentation entitled Model-based design of soil microbial fuel cell for simultaneous soil remediation and bioelectricity generation.
September 18-21 2023 Berlin	Speaker at the conference 4th European Congress of Chemical Engineering and 7th European Congress of Applied Biotechnology with the presentation entitled Modelling the electricity generation in a microbial fuel cell with a Pt-free cathodic catalyst and a slip-casted ceramic separator
September 13-15, 2022 Orvieto	Invited keynote speaker at the conference 4th edition of the E3 Mediterranean

	Symposium: Electrochemistry for Environment and Energy (E3MS) with the presentation entitled Bio-electrochemical systems for the removal of pollutants from soil and water: a model-based study
August 15-19, 2022 Prague	Invited keynote speaker at the conference 69th Regional Meeting of the International Society of Electrochemistry with the presentation entitled Modelling bio-electrochemical systems for the removal of pollutants from soil and water
September 13-15, 2021 online	Invited Speaker at the EU-ISMET 5th Meeting of the International Society for Microbial Electrochemistry and Technology with the presentation entitled Modelling bioelectrochemical reactors for electrobioremediation processes development optimization
June 14-17, 2021 online	Speaker at the 12th European Symposium on Electrochemical Engineering (ESEE 2021) with the presentation entitled Modelling of a Single Chamber Bio-Electrochemical Cell for Wastewater Treatment and Clean Energy Production,
December 15-17, 2021 online	Invited Speaker at the EFC21 - European Fuel Cells and Hydrogen Conference " with the presentation entitled Modelling Miniature Microbial Fuel Cells with Three-dimensional Anodes
November 11-12, 2019 Padua	Invited Speaker at the conference Giornate dell'Elettrochimica Italiana with the presentation entitled Modelling of TiO <sub>2</sub> nanotubes behaviour under solar light irradiation
	<i>Ongoing projects</i>
From 2023	Local coordinator PRIN 2023 Marine Biorefinery for the Integrated Generation of High Value Compounds and Hydrogen (MARBELOUS) 40 k€
From 2023	Local coordinator PNRR – PON H2 Messa a punto di un processo elettrochimico per il trattamento dei reflui organici della gasificazione delle biomasse con produzione di idrogeno 60 k€
From - 2020	Principal Investigator of the project RAS LR7; FeDe Progetto di ricerca & sviluppo per innovazione di prodotto nei settori dei fertilizzanti e dei disinfettanti ecologici; 1000 k€
From - 2019	Local coordinator of the project H2020-NMBP-BIO-CN-2018 GREENER InteGRated systems for Effective ENvironmEntal Remediation; 5511 k€, (200 k€ UniCa)
<b>PUBLICATIONS</b>	<i>Journals indexed in WOS/Scopus databases (last 5 years, full list at <a href="https://iris.unica.it/browse?type=author&amp;order=ASC&amp;rpp=20&amp;authority=rp02427">https://iris.unica.it/browse?type=author&amp;order=ASC&amp;rpp=20&amp;authority=rp02427</a>)</i>
1	Dziegielowski J., Mascia M., Metcalfe B., Di Lorenzo M. Voltage evolution and electrochemical behaviour of Soil microbial fuel cells operated in different quality soils, 2023, Sustainable Energy Technologies and Assessments, 56, 103071
2	Palmas S., Rodriguez J., Mais L., Mascia M., Herrando M.C., Vacca A. Anion exchange membrane: A valuable perspective in emerging technologies of low temperature water electrolysis, 2023, Current Opinion in Electrochemistry, 37, 101178
3	Aaron E. et al DarkSide-20k Collaboration, 2023, Measurement of isotopic separation of argon with the prototype of the cryogenic distillation plant Aria for dark matter searches, European Physical Journal C, 83, 453.
4	Mais L., Palmas S., Mascia M., Vacca A., 2021, Effect of potential and chlorides on photoelectrochemical removal of diethyl phthalate from water, Catalysts, 11, 882
5	Palmas S., Mais L., Mascia M., Vacca A., 2021, Trend in using TiO <sub>2</sub> nanotubes as photoelectrodes in PEC processes for wastewater treatment, Current Opinion in Electrochemistry, 28, 100699
6	Rodríguez J., Mais L., Campana R., Piroddi L., Mascia M., Gurauskis J., Vacca A., Palmas S., 2021, Comprehensive characterization of a cost-effective microbial fuel cell with Pt-free catalyst cathode and slip-casted ceramic membrane, International Journal of Hydrogen Energy, 46, 26205

7	Vacca A., Mais L., Mascia M., Usai E.M., Rodriguez J., Palmas S., 2021, Mechanistic insights into 2,4-D photoelectrocatalytic removal from water with TiO <sub>2</sub> nanotubes under dark and solar light irradiation, <i>Journal of Hazardous Materials</i> , 412, 125202
8	Agnes P. et al DarkSide-20k Collaboration, 2021, Separating <sup>39</sup> Ar from <sup>40</sup> Ar by cryogenic distillation with Aria for dark-matter searches, <i>European Physical Journal C</i> , 81, 359
9	Casula E., Molognoni D., Borràs E., Mascia M., 2021, 3D modelling of bioelectrochemical systems with brush anodes under fed-batch and flow conditions, <i>Journal of Power Sources</i> , 487, 229432
10	Aalseth C.E., et al, The DarkSide-20k collaboration, 2021, SiPM-matrix readout of two-phase argon detectors using electroluminescence in the visible and near infrared range, <i>European Physical Journal C</i> , 81, 153
11	Casula E., Kim B., Chesson H., Di Lorenzo M., Mascia M., 2021, Modelling the influence of soil properties on performance and bioremediation ability of a pile of soil microbial fuel cells, <i>Electrochimica Acta</i> , 368, 137568
12	Mais L., Mascia M., Casula E., Palmas S., Vacca A., Rodriguez J., 2021, Electrochemical synthesis of polyaniline/metal-based anodes and their use in microbial fuel cell, <i>Chemical Engineering Transactions</i> , 84, 193
13	Mais L., Vacca A., Mascia M., Usai E.M., Tronci S., Palmas S., Experimental study on the optimisation of azo-dyes removal by photo-electrochemical oxidation with TiO <sub>2</sub> nanotubes, 2020, <i>Chemosphere</i> , 248, 125938.
14	Mais L., Vacca A., Mascia M., Usai E.M., Tronci S., Palmas S., Experimental study on the optimisation of azo-dyes removal by photo-electrochemical oxidation with TiO <sub>2</sub> nanotubes, 2020, <i>Chemosphere</i> 248, 125938.
15	Vacca A., Mais L., Mascia M., Usai E.M., Palmas S., Design of experiment for the optimization of pesticide removal from wastewater by photo-electrochemical oxidation with tio <sub>2</sub> nanotubes, 2020, <i>Catalysts</i> , 10(5), 512
16	Calì G., Deiana P., Bassano C., Meloni S., Maggio E., Mascia M., Pettinau A., Syngas production, clean-up and wastewater management in a demo-scale fixed-bed updraft biomass gasification unit, 2020, <i>Energies</i> , 13(10), 2594.
17	Mais L., Mascia M., Palmas S., Vacca A., Modelling of photo-electrocatalytic behaviour of TiO <sub>2</sub> nanotubes under solar light irradiation, 2020, <i>Chemical Engineering Journal</i> , 383, 123136.
18	Aalseth C.E., et al, Design and construction of a new detector to measure ultra-low radioactive-isotope contamination of argon, 2020, <i>Journal of Instrumentation</i> , 15(2), P02024.
19	Mateo, S., Mascia, M., Fernandez-Morales, F.J., Rodrigo, M.A., Di Lorenzo, M. (2019) Assessing the impact of design factors on the performance of two miniature microbial fuel cells, <i>Electrochimica Acta</i> , 297, pp. 297-306.
20	Mais, L., Mascia, M., Palmas, S., Vacca, A. (2019), Photoelectrochemical oxidation of phenol with nanostructured TiO <sub>2</sub> -PANI electrodes under solar light irradiation, <i>Separation and Purification Technology</i> , 208, pp. 153-159.
21	Mais L., Palmas S., Mascia M., Sechi E., Casula M.F., Rodriguez J., Vacca A. (2019) Porous Ni photocathodes obtained by selective corrosion of Ni-Cu films: Synthesis and photoelectrochemical characterization, <i>Catalysts</i> , 9, 453
22	Matarrese R., Mascia M., Vacca A., Mais L., Usai E., Ghidelli M., Mascaretti L., Bricchi B., Russo V., Casari C., Libassi A., Nova I., Palmas S. (2019) Integrated Au/TiO <sub>2</sub> nanostructured photoanodes for photoelectrochemical organics degradation, <i>Catalysts</i> , 9, 340
23	Calì G., Deiana P., Maggio E., Marotto D., Mascia M., Vacca A. (2019) Management and treatment of the clean-up water from the scrubber of a coal and biomass gasification plant: An industrial case study, <i>Chemical Engineering Transactions</i> , 74, 337-342
24	Mais L., Palmas S., Vacca A., Mascia M., Ferrara F., Pettinau A. (2019) Catalytic activity of Cu and Cu/Sn electrodes during CO <sub>2</sub> reduction from aqueous media, <i>Chemical Engineering Transactions</i> , 73, 97-102
According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV	