

CURRICULUM VITAE

PERSONAL INFORMATION



Dr. Fabio Matera, PhD

Home Catania, Sicily, Italy
Nationality Italian
Phone Office (+39) 095 5968 289
E-Mail fabio.matera@cnr.it
Date of birth 18/03/1968

WORK EXPERIENCE

2023 - today

Researcher

Institute of Microelectronics and Microsystems (IMM)
National Research Council of Italy (CNR)
Address: VIII strada n.5, Zona Industriale, 95121 Catania (Italy)

Expertise

Electrochemical Energy Storage Systems (Flow-Battery)
Electrochemical Hydrogen Compression and Purification
Polymer Electrolyte Fuel Cells
Hydrogen Storage
Photovoltaic testing
Sustainable water production from Renewable Energy Sources

2018 - today

Founder

Hydron Engineering srl

Expertise

Integrated system design and custom integration
PEM Fuel Cell systems for custom application
Advanced Energy storage systems
Powerplant automation systems
Indoor gas monitoring systems
Development of innovative solutions for ship and port protection

2001 - 2022

Researcher

Institute of Advanced Energy Technologies "Nicola Giordano"
National Research Council of Italy (CNR)
Address: salita S. Lucia sopra Contesse, 5 – 90121 MESSINA (Italy)

Expertise

Polymer Electrolyte Fuel Cells, Hydrogen Storage, Electrochemical Hydrogen Compression and Purification, Photovoltaic testing

- 1999 - 2001 **Technical Manager**
Ponte di Archimede nello Stretto di Messina S.p.A.
Messina – Italy
- Expertise**
Pilot plant design and construction for Polymer Electrolyte Electrode manufacturing
- 1999 **Production Manager**
Industrial Sealing Manufacturing and on-site assistance
VED Engineering srl
Siracusa – Italy
- Expertise**
Oil & Gas sealing manufacturing, installation and on-site maintenance
- 1998 – 1999 **Contract Researcher**
Grant Award
FIAT Research Centre (CRF)
- Expertise**
Automotive Fuel Cell systems

BOARDS AND FELLOWSHIPS

- 2024 **PNNR Samothrace Managing cascade call RUP (local managing authority)**
Institute of Microelectronics and Microsystems (IMM)
National Research Council of Italy (CNR)
- 2015-2022 **Operating Agent**
Annex 35 – Fuel Cells for Portable Applications
Technology Collaboration Programme on Advanced Fuel Cells
International Energy Agency
- Expertise**
Portable Fuel Cell systems
- 1999 - today **Forensic Expert**
Tribunal of Catania

EDUCATION AND TRAINING

- 2007 - 2010 **PhD. in Electronic Engineering, Automation and Complex System Control**
Dept. of Electrical, Electronics and Systems Engineering (DIEES)
University of Catania (Italy)
- Expertise**
Planar passive direct alcohol fuel cell system for portable applications
Single-step high-pressure hydrogen production from renewable power sources

1997 **Master's degree in Mechanical Engineering**
Faculty of Mechanical Engineering, University of Catania – Italy

Expertise

Resilient automation systems for high-risk areas in oil & gas industry

LANGUAGE

Mother tongue Italian

Other language(s) English (C1)

PUBLICATIONS

Discover all the publications related to my research activity by exploring the official list at: <https://publications.cnr.it/authors/fabio.matera>

Baglio, V; Stassi, A; Matera, FV; Di Blasi, A; Antonucci, V; Aricò, AS;
Optimization of properties and operating parameters of a passive DMFC mini-stack at ambient temperature
Journal of Power Sources

Sapienza, C; Andaloro, L; Matera, FV; Dispenza, G; Creti, P; Ferraro, M; Antonucci, V;
Batteries analysis for FC-hybrid powertrain optimization
International Journal of Hydrogen Energy

Matera, Fabio V; Gatto, Irene; Patti, Assunta; Passalacqua, Enza;
Fuel cell performance assessment for closed-loop renewable energy systems
Journal of Energy Chemistry

Pedicini, R; Matera, F; Giacoppo, G; Gatto, I; Passalacqua, E;
Performance assessment of an integrated PEFC and a hydrogen storage device based on innovative material
international journal of Hydrogen Energy

Dassisti, Michele; Mastroilli, Piero; Rizzuti, Antonino; Cozzolino, G; Chimienti, M; Olabi, Abdul Ghani;
Matera, F; Carbone, A; Ramadan, Mohamad;
Vanadium: A transition metal for sustainable energy storing in redox flow batteries
Encyclopedia of Smart Materials

Rico-Zavala, A; Gurrola, MP; Arriaga, LG; Bañuelos, Jennifer A; Álvarez-Contreras, L; Carbone, A; Saccà, A;
Matera, Fabio V; Pedicini, R; Álvarez, A;
Synthesis and characterization of composite membranes modified with Halloysite nanotubes and phosphotungstic acid for electrochemical hydrogen pumps
Renewable Energy

Caponetto, Riccardo; Guarnera, Nicola; Matera, Fabio; Privitera, Emanuela; Xibilia, Maria Grazia;
Application of Electrochemical Impedance Spectroscopy for prediction of Fuel Cell degradation by LSTM neural networks
2021 29th Mediterranean Conference on Control and Automation (MED)

ADDITIONAL INFORMATION

Hobbies **Sailing**

Atlantic crossing from Canary to Grenada Island, January 2023;
Gibiltair to Lanzarote, 2020;
Greece to Sicily, 2016;
frequent 3-5 days ship transfers in winter also in extreme weather conditions)