



16th International Conference on Surfaces,
Coatings and Nanostructured Materials
www.nanosmat.org/special.html

SHORT BIO:

Eugenio Meloni graduated on 29/03/2001 in Chemical Engineering at the University of Salerno, discussing an experimental thesis entitled “Self-regenerating catalytic ceramic foams for the reduction of carbonaceous particulate matter”. In the years following his graduation, he worked as a scientific collaborator at the Department of Chemical and Food Engineering of the University of Salerno, under the guidance of Prof. Paolo Ciambelli and Prof. Vincenzo Palma in the development of a laboratory system for the study of the filtration and regeneration phases of Wall Flow Filters in Silicon Carbide used for the reduction of carbonaceous particulate matter emitted by Diesel engines.

Since 2010, as a research fellow and research scholarship holder, he has been working at the Department of Industrial Engineering of the University of Salerno.

In 2023 he obtained the title of Ph.D. in Industrial Engineering, Chemical Engineering curriculum, at the Department of Industrial Engineering (DIIN) of the University of Salerno, with a thesis entitled "INNOVATIVE STRUCTURED CATALYSTS SUSCEPTIBLE TO MICROWAVES FOR THE INTENSIFICATION OF CHEMICAL PROCESSES".

Eugenio Meloni has the National Scientific qualification as Associate Professor in the Italian higher education system, in the call 2021/2023 (Ministerial Decree n. 553/2021 and 589/2021) for the disciplinary field of 09/D3 - Chemical plants and technologies. (Academic Recruitment Field 09/D - Chemical and materials engineering, according to the national classification) – valid from 07/10/2022 to 07/10/2033

Since 2024 he has been assistant professor at the Department of Industrial Engineering of the University of Salerno.

The activities carried out concern the following research lines

Air pollution control:

- Catalytic “Wall Flow” monoliths for microwave-assisted DPF regeneration
- Soot abatement from pellet stoves
- N₂O abatement by microwave-sensitive structured catalysts

Process intensification:

- High thermal conductivity microwave-sensitive structured catalysts for hydrogen production
- Hydrogen production by innovative electrified catalytic reactors
- Use of Non-Thermal plasma in methanation reactions and low-temperature ammonia synthesis

- Innovative catalysts with high selectivity and stability for the dehydrogenation of propane to propylene
- Process intensification of microwave-assisted regeneration of 13X zeolites after CO₂ capture

PATENTS

Eugenio Meloni is holder of the patent for industrial invention application No. 102019000004881, relating to a device for the reduction of carbonaceous particulates in the exhaust of pellet stoves issued on 02/17/2021

RESEARCH PROJECTS

Eugenio Meloni has been an active part in various national and international research projects:

- European Project - H2020-MSCA-RISE "PROMECA" "PROcess intensification through the development of innovative MEmbranes and CAtalysts" Grant agreement no: 734561
- European H2020 Project "MACBETH" "Membrane And Catalysts Beyond the Economic and Technological Hurdles" N_869896
- European FP7 Project "CoMETHy" "Compact Multifuel To-Energy Hydrogen converter" Grant agreement no: 279075
- European FP7 Project "FluidCell - Advanced m-CHP fuel CELL system based on a novel bio-ethanol Fluidized bed membrane reformer" Grant agreement no: 62119
- European FP7 Project "CARENA" "Catalytic Reactors membranes based on New Materials for C1-C4 valorization" Grant agreement no:263007
- Italian Project PON 01_02545 "Development of systems for the distributed production of hydrogen and syngas based on auto thermal catalytic multifuel reforming".
- Italian government Projects of Relevant National Interest (PRIN) "Process for Low-carbon blue & green hydrogen Generation via Intensified electrified reforming of Natural gas/biogas" (PLUG-IN) – Call 2020 - Prot. 2020N38E75
- Italian government Projects of Relevant National Interest (PRIN) "Liquid hydrogen carriers as sustainable fuels for innovative energy systems configurations in the maritime sector" (LYRICA) - Call 2022 Prot. 2022M7BHN7
- Italian government Projects of Relevant National Interest (PRIN) "AMmonia-Based electrified processes inTegrated with fuel cells for power generation" - (AmBition) - 2022 PNRR call - Prot. P2022BEWCZ

EDITORIAL ACTIVITIES

Eugenio Meloni is a reviewer and member of editorial boards for numerous international scientific journals:

International Research Conference (IRC) Scientific and Technical Committee & Editorial Review Board on Chemical and Materials Engineering –

Topic Board Editor of the international scientific journal **Catalysts** -

https://www.mdpi.com/journal/catalysts/topic_editors

Editorial Board Member of the international scientific journal **Energies** -

<https://www.mdpi.com/journal/energies/editors>

Topics Board Editor of the international scientific journal **Nanomanufacturing** –

https://www.mdpi.com/journal/nanomanufacturing/topic_editors

Reviewer Board Member of the journal **Nanomaterials** -

https://www.mdpi.com/journal/nanomaterials/submission_reviewers

Czech Science Foundation Scientific projects reviewer

National Science Center of Poland Scientific projects reviewer

Guest editor of the Special Issue "*New Catalysts and Catalytic Technologies for Diesel Soot Emission Reduction*" published on the international scientific journal **Catalysts**

Guest editor of the Special Issue "*Heterogeneous Nanostructured Catalysts for Energy and Environmental Applications*" on the international scientific journal **Nanomaterials**

Guest editor of the Special Issue "*Solid-Gas Heterogeneous Chemical Processes*" on the international scientific journal **Frontiers in Chemical Engineering**

Guest editor of the Special Issue "*Electrification of Catalytic Process for Hydrogen Production*" on the international scientific journal *Frontiers in Chemical Engineering*

Guest Editor of the Special Issue "*Review Papers in Energy and Environment*" on the international scientific journal **Energies**

Reviewer for the following scientific journals:

- Applied catalysis B: Environmental (I.F : 22.1)
- Chemical Engineering Journal (I.F.: 13.3)
- Applied Energy (I.F.: 11.2)
- Materials and Design (I.F.: 8.4)
- Powder Technology (I.F.: 5.2)
- Applied Thermal Engineering (I.F.: 6.4)
- Industrial & Engineering Chemistry Research (I.F.: 4.2)
- Fuel Processing (I.F.: 7.2)
- Renewable energy (I.F.: 8.7)
- International Journal of Hydrogen Energy (I.F.: 5.8)
- Catalysts (I.F.: 3.9)
- Nanomaterials (I.F.: 5.3)
- Energy&Fuels (I.F.: 5.3)
- Materials Research Bulletin (I.F.: 5.4)
- Catalysis today (I.F : 5.3)

At the date of 23/01/2025 Eugenio Meloni published 88 documents indexed in Scopus database with 1971 citations and a H-index of 29.



Meloni, Eugenio

Università degli Studi di Salerno, Italy

Rank: 175562

- **Main Field:** Enabling & Strategic Technologies
- **Sub Field:** Energy
- **Rank in the SubField:** 4656 Out of 287766 authors
- **H-index:** 11, **Hm-index:** 4.77

Top 2% Listed Year(S): 2023



The data is verified and sourced from **ELSEVIER** and **Stanford University's** Top 2% Scientists list.



www.TopResearchersList.com