

NEWSLETTER IEMAP N.1

Nano Rome, 18-22 September
2023 Innovation
Conference & Exhibition

**MATERIALS FOR ENERGY, STORAGE AND RENEWABLE ENERGY
DESIGNED BY SUPERCOMPUTING, ARTIFICIAL INTELLIGENCE TOOLS
AND BIG DATA**

SEPTEMBER 21ST 2023 H 9,00-16,00
NANOINNOVATION 2023 CONFERENCE, ROME
www.nanoinnovation2023.eu

The General Assembly of the Italian Energy Materials Acceleration Platform (IEMAP) will present the results obtained in the project's second year at Nanoinnovation2023.

IEMAP, within the Mission Innovation international cooperation initiative, intends to build an advanced digital laboratory distributed throughout the national territory that will exploit the power of supercomputing, Artificial Intelligence tools and Big Data to accelerate the design of materials for energy applications in the energy storage and renewable energy sectors.

During a three sessions symposia, ENEA, CNR, RSE and IIT will discuss the state of the art and the development of new solutions and prospects.

Session 1

[09.00-10.30: The Italian Energy Materials Acceleration Platform \(IEMAP\): Automation and high throughput research](#)

Chair: Massimo CELINO, ENEA

- The Italian energy materials acceleration platform (IEMAP). Massimo CELINO (ENEA)
- High-Throughput Automatic Workflow for Atomistic Design of Layered Cathode Materials for Na-Ion Batteries, Francesco BUONOCORE (ENEA)
- An Automated Tool for the Construction of Semiconductor Nanocrystals. Juliette ZITO (Istituto Italiano di Tecnologia)
- Atomistic modelling of quantum dots: core-shell and bismuth chalcogenide nanocrystals. Gabriele SALEH (Istituto Italiano di Tecnologia)

Session 2

[11.30-13.00: The Italian Energy Materials Acceleration Platform \(IEMAP\): Automation and high throughput research](#)

Chair: Francesco BUONOCORE, ENEA

- Synthesis of Near Infrared Emitting InAs-based Nanocrystals using Aminoarsine. Dongxu ZHU, (Istituto Italiano di Tecnologia)
- Development of perovskite films for photovoltaics via thermal evaporation and hybrid methods. Lucia MERCALDO (ENEA)
- Realization of a prototype of an experimental apparatus for photovoltaic waste recycling finalized to recovery of materials. Marco TAMMARO (ENEA)
- Silicon powder recovered from end-of-life photovoltaic panels as anode material for lithium ion batteries. Maria Lucia PROTOPAPA (ENEA)

Session 3

[14.00-15.30: The Italian Energy Materials Acceleration Platform \(IEMAP\): Automation and high throughput research](#)

Chair: Maria Lucia PROTOPAPA, ENEA

- Materials recovery from end-of-life lithium-ion batteries: results and perspectives. Federica FORTE, (ENEA)
- Synthesis and Characterization of a Composite Anion Exchange Membrane for Water Electrolyzers (AEMWE). Maria Sole DI CARLI, (ENEA)
- New materials for photovoltaic and integrated photovoltaic-storage devices. Alessandro MORDINI (CNR-ICCOM)
- PV-Storage integrated devices: perspectives, advantages and challenges in interfacing solar cells, batteries and supercapacitors. Stefano RAMPINO (CNR-IMEM)

NanoInnovation 2023 requires the MANDATORY and FREE (with deadline: September 15th) ON-LINE REGISTRATION.

[Registration form](#)