



DAY 1 - 30th September (Aula Magna Rettorato, Plesso Centrale)

09:00 - 09:30 Opening and welcome addresses

SESSION 1: Next generation Perovskite solar cells

09:30 - 10:00 **Introductory talk:** Maria Antonietta Loi - University of Groningen, The Netherlands (*Sn-based perovskites challenges and opportunities*)

10:00 - 10:20 Michele Saba – University of Cagliari, Cagliari, Italy (*A new photophysics for 2D and 3D lead halide perovskites: Polaron plasma in equilibrium with bright excitons*)

10:20 - 10:40 Silvia Colella – University of Salento, Lecce, Italy (*Chemical insights into perovskite ink stability*)

10:40 - 11:00 Giulio Cerullo – Politecnico di Milano, Milano, Italy (*Ultrafast spectroscopy of natural and artificial light-harvesting*)

11:00 - 11:20 Antonio Agresti – University of Rome Tor Vergata, Rome, Italy (*Progresses and challenges in perovskite technology development: the role of 2D materials*)

11:20 - 11:40 Break

SESSION 2: Photo(electro)catalytic advanced solutions for solar to chemical energy conversion

11:40 - 12:10 **Introductory talk:** José Ramón Galán-Mascarós – Institute of Chemical Research of Catalonia, Spain (*Photo(electro)catalytic advanced solutions for solar to chemical energy conversion*)

12:10 - 12:30 Stefano Agnoli – University of Padova, Padova, Italy (*A direct look at the hydrogen evolution reaction with EC-STM: visualisation of active sites and evaluation of catalytic activity with atomic scale precision*)

12:30 - 12:50 Elena Selli – Politecnico di Torino, Torino, Italy (*Ternary oxide semiconductor-based materials for solar energy conversion*)

12:50 - 14:30 Lunch

SESSION 3: Emerging technologies for green hydrogen and derivatives (e-ammonia and e-methanol)

14:30 - 15:00 **Introductory talk:** Maximilian Fleischer – Siemens Energy, Munich, Germany (*The need for chemical storage materials in the energy system of the future*)

15:00 - 15:20 Salvatore Scirè – University of Catania, Catania, Italy (*Laser-treated titania and ceria photocatalysts for green hydrogen production*)

15:20 - 15:50 Federico Bella – Politecnico di Torino, Torino, Italy (*Lithium-mediated approaches for sun-powered ammonia electrosynthesis*)

15:50 - 16:10 Break

SESSION 4: Innovative solutions for a renewable energy value chain

16:10 - 16:30 Carina Faber – Engie Laborelec, Linkebeek, Belgium (*Alternative fuels and chemicals – with materials science from renewable electricity, CO₂ and water up to the final product*)

16:30 - 17:00 Pedro Gómez Romero - Catalan Institute of Nanoscience and Nanotechnology, Barcelona, Spain (*To flow or not to flow. Great challenges for large-scale energy storage*)

17:00 - 17:30 Silvia Bodoardo - Politecnico di Torino, Torino, Italy (*Advanced materials for European Li-ion batteries*)



DAY 2 - 1st October (Aula Magna Vittorio Ricevuto, Polo Papardo)

SESSION 5: Solar Photovoltaics: where are we heading?

09:30 -10:00 Introductory talk: Cosimo Gerardi – Enel Green Power, Catania, Italy
(*Innovative photovoltaic technologies to reduce electricity costs*)

10:00 -10:20 Francesco Matteucci – European Innovation Council, Bruxelles, Belgium (*EIC portfolio and hands on approach to facilitate the materials for energy innovation journey*)

10:20 -10:40 Jean Rousset – Institut PV d'Ile de France, Paris, France (*Fabrication of large scale perovskite device by the slot-die coating method*)

10:40 -11:00 Samuel Stranks – University of Cambridge, Cambridge, United Kingdom
(*Halide perovskites for next-generation photovoltaics: challenges on the atomic to the module level*)

11:00 -11:20 Break

RoundTable session: Catalysing the energies to accelerate the energy transition

11:20 -11:30 Brief introduction of the arguments of the roundtable discussion

11:30 -13:00 Panel discussion

All participants (academics, business leaders, stakeholders) will discuss together to collaboratively answer the question: how do you capitalize on knowledge and know-how to deliver a sustainable energy transition?

1. Renewable Energy Roadmap and perspectives of the energy transition in the PNRR recovery plan

Introduced by Francesco Basile – University of Bologna, Bologna, Italy

2. Issues and challenges of innovative materials in energy transition

Introduced by Aldo di Carlo – CNR-ISM/University of Rome Tor Vergata, Rome, Italy

3. New alliances and improved cooperation for a competitive country-level energy transition succession

Introduced by Antonino Salvatore Aricò – CNR ITAE, Messina, Italy

4. Cooperation vs competition in a European Context

Introduced by Francesco Matteucci – European Innovation Council, Bruxelles, Belgium.

5. The role of regional level

Introduced by Antonio Martini – Assessorato Regionale dell'Energia, Palermo, Italy

13:00 -13:20 Wrap-up of round-table indications by organizers

13:20 -14:40 Lunch