



1. Personal data

2. Research career

Author of 338 papers in international journals and conferences (h-index 61).

The main research activity is linked to the topic of electrochemical and thermochemical systems applied to energy (fuel cells, electrolyzers, thermo-catalytic technologies), energy storage (electrochemical technologies, chemical processes like power-to-X processes), H₂ global management, CO₂ global management (carbon capture, carbon reutilization) and their integration with renewable sources:

- polygeneration systems: experimental, modelling, demo
- electrochemical systems (fuel cells, electrolyzers, closed batteries): experimental and modelling
- thermochemical systems: methanation, power-to-X processes, green fuels production: experimental and modelling
- CO₂ technologies: CO₂ recovery (membrane, absorption processes) and CO₂ reutilization (production of synthetic fuels, production of chemicals, carbon cure of cement)
- experimental activity and modelling on FCs (SOFC, PEMFC), from cells to Balance of Plant;
- experimental activity and modelling on electrolyzers (alkaline, PEM, SOEC), from cells to systems
- modelling, analysis and optimization of energy systems based on integration of RES and H₂.

Coordinator of H₂ activities for Politecnico di Torino.

Scientific Coordinator of CO₂ Circle Lab laboratory (Politecnico di Torino, Italian Institute of Technology).

Coordinator of EU Project SOFCOM (FCH JU Call 2010), DEMOSOFC (FCH2 JU Call 2014), REMOTE (FCH2 JU Call 2017).

Partner in EU projects: ELECTROLIFE, IMAGHyNE, ECOLEFINS, HYDRA, H2SHIFT, HyP3D, GreenSkills4H2, TULIPS, BEST4Hy, NewSOC, SUBLIME, Waste2Watts, COMSOS, TEACHY, ICO2CHEM, DB-SOFC, BRISK II, GRINHY, ENEFIELD, ENFICA-FC, SELECT-CD, Explore Energy, Virtual Hub, MARS-EV.

Member for Italy of ISO/TC 197 “Hydrogen Technologies” and IEC/TC 105 “Fuel Cells”.
Member for Italy of IPHE.

3. Companies

Projects running with several Companies:

SNAM, ITALGAS, ENEL, EDISON, IREN, SORGENIA, SMAT, STELLANTIS, CNH, FPT, ALSTOM, LEONARDO, ELDOR, COMAU, EPS, SOLIDPOWER, Ballard, Cummins/Hydrogenics, FCE, CONVION, Sunfire, Elcogen, Mitsubishi, Powidian, Ohmium, TronderEnergi, Inycom, Capisa

4. Educational activities

Politecnico di Torino: Polygeneration and Advanced Energy Systems; Thermodynamics and Heat Transfer

KTH Stockholm (Sweden) – UPC Barcelona (Spain): Energy Systems Analysis in an Environomical Context Part I and Part II; Energy Storage; Project of the Year

University of Lorraine (France): Energy Storage; Interconversion of Energy

Coordinator of the MSc Erasmus Mundus HySET (Hydrogen Systems and Enabling Technologies).

Local Coordinator of MSc SELECT (KIC InnoEnergy).

Coordinator of PhD in Energy at Politecnico di Torino.

Website reference

http://www.swas.polito.it/rubrica/scheda_pers.asp?matricola=003570

