Prof. Quartarone's CV

Prof. Eliana Quartarone received her PhD in Chemical Science in 1999 (PhD Thesis: *New polymer electrolytes for Lithium Batteries*). From 2008 to 2014 she was a researcher at the Department of Chemistry of the University of Pavia. From 2015 she is an associate professor of Electrochemistry and Physical Chemistry at the same department.

The research field of Prof. Quartarone is mostly focused on the development of advanced materials (synthesis and characterization) for energetics and electrochemistry, and specifically:

Li- and post-Li ion batteries

- Electrolyte: Liquids (ionic liquids, deep eutectic solvents and concentrated electrolytes), Polymers (gel, solid systems, quasi-solid electrolytes based on MOFs and nano-porous ceramics), ceramics
- Anode: 2D materials (Black Phosphorus) and oxides (e.g. High entropy oxides, HEO)
- Cathodes for both Li and Na insertion
- New technology: Nanoarchitectures, 3D printing via Additive Manufacturing, and thin films
- Recycling and Recovery (new research activities)

PEMFCs

- Proton exchange membranes for low temperature fuel cells (Composite separators and polybenzimidazole-based polymers)

Energy Harvesting

- Advanced thermoplastic polyurethane-based composites as innovative energy harvesters for smart shoes.

Prof. Quartarone actively cooperated at many research projects of the Department, working on the preparative aspects as well as the development of several characterization techniques.

She is author and co-author of more than **123 publications** on international journals, **5 book chapters** and many communications at both national and international conferences (both oral and invited contributions). She has an **h-Index of 37** and her publications have been cited more than 4800 times (Scopus), (h-index of 42 and more than 6000 citations Google Scholar).

She was a component of various Research Units of the University of Pavia (UdR-UNIPV), CNR, INSTM, devoted to fundamental and applied research activities in the framework of both national and international Projects. All these projects were focused on Lithium Batteries, Polymer Fuel Cells, SOFCs.

She was also the Scientific Coordinator of the UdR-UNIPV of national projects funded by the Italian Ministry of Research (MIUR): i) the PRIN Project PRIN 2010: *Advanced nanocomposite membranes and innovative electrocatalysts for long-durability PEMFCs, NAMED-PEM*; ii) the PRIN Project *PRIN 2017 Towards sustainable, high-performing, all-solid-state sodium-ion batteries, TRUST*.

Prof. Quartarone is *Guest Editor* for: *Special Issue* "*Recent advances in Post-Lithium ion batteries*" in *Batteries* (MDPI, Switzerland). 2018.

She has also experiences as referee in several Journals. 1) Chemical Reviews; 2) Advanced Energy Materials; 3) Energy and Environmental Science; 4) Journal of Physical Chemistry B; 5) Fuel cells; 6) Electrochimica Acta, 7) Journal of Power Sources; 8) Journal of Membrane Science; 9) Analytical Chimica Acta; 10) International Journal of Hydrogen Energy; 11) Nature Communications; 12) Chemical Society Reviews.

Prof. Quartarone is an Evaluator Expert and Rapporteur for the evaluation of projects in HORIZON 2020 calls (FET-Proact-DG Connect, FCH-JTI, INEA-LC-Bat, NMP-GV), in Kappa-Program of Technology Agency of the Czech Republic and AGAUR (Agency for Management of University and Research Grants), Generalitat de Catalunya, Spain.

She is member of the advisory board and funding member of *GISEL* association (*Italian Group for*

Electrochemical Energy Storage).