

Short Bio

- Eliodoro Chiavazzo is an expert in computational modelling of materials and processes for energy applications, with special focus on energy storage technologies, solar fuel generation and solar driven desalination technologies.
- Eliodoro Chiavazzo is Associate Professor (with Italian national qualification to full professorship) at Politecnico di Torino (Italy), where he is the Director of the SMaLL laboratory (www.polito.it/small). He is the lecturer in charge of the following courses (master level): i) *Energy Storage*; ii) *Energy Application of Materials*; iii) *Advanced Engineering Thermodynamics*. He belongs to the Energetics PhD board and is Deputy Coordinator of the Degree Programme in Mechanical Engineering
- Eliodoro Chiavazzo is currently Principal Investigator (and Steering Committee Member) in projects both at European and national level: i) a FETopen project entitled "SOFIA - Soap Film based Artificial Photosynthesis" aiming at introducing a radically new technology for solar fuel generation. ii) "NANOINFORMATIX - Development and Implementation of a Sustainable Modelling Platform for NanoInformatics" aiming at developing comprehensive computational models for evaluating the (eco)-toxicological impact and sustainability of nanostructured materials including those for energy applications iii) "BIG-MAP - Battery Interface Genome - Materials Acceleration Platform" where an AI-aided platform for discovery of sustainable battery chemistries and technologies is to be developed; iv) Heat Transfer and Thermal Energy Storage Enhancement by Foams and Nanoparticles (PRIN-MIUR).
- Eliodoro Chiavazzo serves as Reviewer for scientific prestigious programs such as: i) Office of Science Early Career Research Program (<http://science.energy.gov/early-career/>) at the USA Department of Energy – DOE; the Deutsche Forschungsgemeinschaft - German Research Foundation; Fulbright program; Programma per Giovani Ricercatori "Rita Levi Montalcini". He serves as Editorial Board Member of two international Journals: Scientific Reports (Springer-Nature) and Entropy (MDPI).



Selected publications (in the last three years):

1. Alberghini *et al.* (2020). *Multistage and passive cooling process driven by salinity difference*. **Science Adv.** (in press);
2. Chiavazzo *at al.* (2018). *Passive solar high-yield seawater desalination by modular and low-cost distillation*. **Nature Sustain.**, vol. 1, p. 763-772;
3. Falciani *et al.* (2020). *A multi-scale perspective of gas transport through soap-film membranes*. **Molecular Systems Design & Engineering** (in press);
4. Morciano *et al.* (2020). *Sustainable freshwater production using passive membrane distillation and waste heat recovery from portable generator sets*. **App. Energy**, VOL. 258, p. 114086;
5. Alberghini *et al.* (2019). *Coffee-based colloids for direct solar absorption*. **Scientific Reports**, vol. 9;
6. Fasano *et al.* (2019). *Atomistic modelling of water transport and adsorption mechanisms in silicoaluminophosphate for thermal energy storage*. **App. Thermal Engineering**, vol. 160 p. 114075;
7. Chiavazzo *et al.* (2017) *Intrinsic map dynamics exploration for uncharted effective free-energy landscapes*. **PNAS**, vol. 114 p. E5494-E5503;
8. Morciano *et al.* (2017). *Efficient steam generation by inexpensive narrow gap evaporation device for solar applications*. **Scientific Reports**, vol. 7;