



Professor André Bardow

«The world is not an exam with a solution manual. Go ahead, find your own solutions and help to make this world a better place.»

Energy and Process Systems Engineering

Institute of Energy and Process Engineering

How can we retain the benefits of today's technologies for energy and chemical conversion while eliminating unsustainable side-effects? In our lab, we explore technologies for sustainable energy and chemicals. We design computer models that start with molecules to predict entire processes and industrial value chains. To test these models automatically, we combine them with miniaturized experiments. As system engineers, we integrate knowledge from natural and social sciences to find optimal solutions.

Focus

- Energy and process systems optimization
- Life cycle assessment
- Computer-aided molecular design
- Renewable carbon sources and power-to-X

Tools and methods

- Conceptual process design and optimization
- Predictive thermodynamics
- Microfluidics, lab robotics and spectroscopy

Further details online:

www.epse.ethz.ch

