

Simelys Hernández got the degree in Chemical Engineering, with highest honors (Lode) at both Politecnico di Torino (Polito, Turin, Italy) and at Universidad Central de Venezuela (Caracas, Venezuela) in 2004 and completed her PhD in Chemical Engineering at Polito in November 2009. Since June 2016, she is Assistant Professor of the courses of Catalysis for the Energy and the Environment, Introduction to Sustainability, Processes of the Food Industry and Gas and Oil Production at the DISAT department (Polito). She is responsible of the research team: *CO₂ reduction for a low-carbon economy (CREST group)*. She is collaborator at the CSFT of the Italian Institute of Technology (IIT@Polito), member of the RSC, MRS and ISE. She has worked in the coordination and scientific teams of FP7 and H2020 EU projects (SOLHYDROMICS, MCWAP, ArtipHyction, ECO₂CO₂, TERRA and OCEAN) and is currently vice-coordinator of the EU H2020 projects CELBICON (<http://celbicon.org/>) and RECODE (<https://www.recodeh2020.eu/>) aimed to capture and convert CO₂ from atmosphere and a cement industry to high-added value chemicals, fuels, biopolymers and cement additives. She was in the team that develop the first pilot scale (1.6 m²) photo-electrochemical reactor for H₂ production (the Artiphyction project prototype). Currently, her main interest are in the development of innovative and sustainable systems for the capture and conversion of the CO₂ based on electrochemical and photocatalytic technologies. She is Associate Editor of the Journal Frontier in Chemistry (section Catalysis and Photocatalysis). She is currently co-author of more than 50 papers in international peer-reviewed journals and her H-index is 21. She is reviewer of high-level international scientific journals such as Nature Catalysis, Appl. Cat. B: Environm., Adv. Energy Mat., ChemSusChem and Green Chemistry, among others.