

BSc and MSc in Chemistry (1985) and Doctor in Industrial Chemistry with Extraordinary Awaes (1990) from the Complutense University of Madrid. Visiting Researcher at the California Institute of Technology (CALTECH, USA, 1991) and at the University of California in Santa Barbara (UCSB, USA, 2006). He has been Associate Professor at the Complutense University of Madrid (1990-1999) and is Full Professor of Chemical Engineering at the Rey Juan Carlos University, where he has held different academic positions: Coordinator of the Environmental Sciences Area, Academic Director of Research and Vice-Rector for Research and Technological Innovation, as well as co-founder of the Chemical and Environmental Engineering Group. Since its creation in 2007, he is Director of the IMDEA Energy Institute, where he is also Scientific Director of the María de Maeztu Program of Centers of Excellence, awarded to IMDEA Energy by the Ministry of Science and Innovation.

His teaching activity has focused on typical subjects of Chemical Engineering, Environmental Engineering and Energy Engineering in different undergraduate, master's and doctoral degrees. He has participated in approximately 90 research projects/contracts financed by public and private entities, covering a wide variety of topics, including the chemical recycling of plastic waste, the clean production of hydrogen, the production of advanced biofuels and the development of zeolitic and mesostructured catalysts. He has been Coordinator of the European project CASCATBEL (2013-2017) with the participation of a total of 17 partners. Recently, he has received a prestigious Advanced Grant from the European Research Council (ERC) for the development of the TODENZE project (2021-2026). He is the author of 280 scientific publications (h=72 and >15,000 citations, Scopus, h=81 and >19,000 citations, October-2024) and of approximately 400 communications at scientific conferences and meetings, 5 patents and 4 books. To date he has supervised 30 doctoral theses.

He has been member of the Executive Committee of the ACENET network (ERANET for Research on Applied Catalysis), of the Circle of Innovation on Environmental Technologies (CITME), of the Advisory Committee of the German Biomass Research Center (Leipzig, Germany), of the Board of Government of the Spanish Catalysis Society (SECAT) and the Steering Committee of the Federation of European Zeolite Associations and has held the presidency of the Spanish Zeolite Group. He is a member of the Scientific Council of CIESOL (Almería, Spain) and of the Advisory Committee of Singular Infrastructures of the Ministry of Science and Innovation. He has been chairman/co-chairman of different scientific events: VI edition of the International Symposium on Feedstock Recycling of Plastics (ISFR2011, 2011, Toledo, Spain), HYdrogen POver Theoretical and Engineering Solutions International Symposium 2015 (Hypothesis XI, 2015, Toledo, Spain), 20th International Zeolite Conference (2022, Valencia, Spain) and Czech-Italian-Spanish Catalysis Congress (CIS-9, 2023, Toledo, Spain).

Recently, he has received the Miguel Catalán 2023 Award from "Comunidad de Madrid" to the scientific career and has been appointed member of the Royal Academy of Exact, Physical and Natural Sciences of Spain (2024). In all editions of the ranking prepared annually by Stanford University, he appears among the 2% of the most influential researchers worldwide.