

MSc in Physics (University of Cantabria, Spain, 1994). Ph.D. in Physics (University of Cantabria, Spain, 1999). Habilitation à Diriger des Recherches (University Paul Sabatier, Toulouse, France, 2007). Ramón y Cajal research fellow 2009 (RYC-2009-05358, Chemical Technology). Senior researcher at IMDEA Energy Institute since 2009 and Head of the High Temperature Processes R&D Unit (HTPU) of IMDEA Energy since 2019. Maître assistant associé at the Ecole nationale supérieure des Mines de Paris (2006 - 2009). Research engineer at the Center of Energy and Processes, ARMINES/MINES ParisTech, France (2000 - 2006). Postdoctoral position in ARMINES/MINES ParisTech (France) within the EU RTN Nanocomp (Large scale synthesis of carbon nanotubes and their composite materials, HPRN-CT-2000-00037) (2000-2004). I3 Certification for outstanding scientific research quality (2013). Visiting researcher at Swiss Federal Institute of Technology (ETH) in Zurich (2017) (ref. PRX16/00195 funded by the Spanish Ministry of Education, Culture and Sports).

His current main research interests are concentrating solar system and technologies, solar thermochemistry, and thermal engineering. He has been involved in at least 32 national and international public funded projects (EU HORIZON SUN-To-LIQUID-II, ASTERIX-CAESar, SHARP-sCO₂, RISEnergy, H2020 PROMETEO, SFERA-III, HEASERS, Next-CSP, CSP2...) and 15 contracts with companies (standing out the successful industrial collaboration with the Swiss company Synhelion on high-temperature solar thermal processes between 2020 and 2023). Coordinator of scientific and technical activities in the regional projects on concentrating solar energy technologies SOLGEMAC, ALCCONES and ACES2030-CM (S2018/EMT-4319) and co-IP in ACES4NET0-CM with an overall funding of 4 Meuros. Only ACES2030-CM returned 63 scientific publications, 93 communication in conferences, 4 outreach publications, 15 doctoral theses and numerous dissemination and communications actions.

Author/co-author in 140 publications in Scopus indexed journals (h-index, 31; number of citations, 3,724 (Scopus, October 28, 2024)) and 160 contributions in conferences, and co-inventor in 8 patents. Supervisor of 6 PhD thesis (additional 2 are on-going). Associated Editor of Solar Energy Journal of Elsevier since 2015. Guest Editor of Solar Energy Journal for the Special Issues SWC2013 (Solar Energy, 121, 1-180, November 2015), Advances in Solar Thermochemistry (Solar Energy, 156, 1-168, November 2017). Theme Chair in the ISES Solar World Congresses 2013 (Cancún, México) and 2015 (Daegu, South Korea) and Theme co-chair in the ISES Solar World Conference 2023 (New Dehli, India). Co-theme chair on Solar Heat for Industrial Processes in the ISES Eurosun conference 2020, Virtual Conference. Co-chair of the Scientific Committee in the ISES Eurosun conference 2016, Palma de Mallorca, Spain. Member of the Scientific Committee in the SolarPACES 2014-2019 conferences and Hypothesis 2015.

Member of the Board of Directors of the International Solar Energy Society (ISES) (2020-2024). Member of the American Society of Mechanical Engineering (since 2010), ISES (since 2018), and Spanish Royal Society of Physics (since 2014). Secretary of the Spanish Association on Solar Energy (2012-2020). Director of Spanish Section of ISES (2020-2022). Participation as evaluator in international and national R&D programs.