Graduated in Chemistry at the University of Pavia in 1983, he was awarded of an Alexander von Humboldt fellowship at the Max Planck Institut für Strahlenchemie and, successively he served as Assistant at the Inorganic Chemistry Institute of the University of Erlangen/Nuremberg.

In 1986 he took a permanent position as researcher in EniTecnologie S.p.A. and, in 2005, he reached the position of Manager of the Physical Chemistry Dept. He maintained the position after the incorporation of EniTecnologie in Eni S.p.A. Refining&Marketing Division in 2006.

In 2014, he took the position of Vice President of the Renewable Energy & Environmental Laboratories at the Istituto Eni Donegani in Novara, part of the Development, Operations and Technology Business Unit.

From 2016 he is leading the CO₂ Valorization & New Energy Vector Technologies Unit within the New Feedstocks and Energy Vectors Research Center of the R&D Department.

His main research interests concerned the structural and morphological characterization of heterogeneous catalysts to support the development of petrochemical and refining processes. In recent years, he has focused the attention on the development of processes for the capture and utilization of CO₂.

He is author of some 125 papers published on peer-reviewed international journals (5500+ citations, h-index = 36), 22 patents and several invited lectures to national and international congresses.

Since 2019, he is "Professore a Contratto" at the Dipartimento di Ingegneria Civile, Chimica e Ambientale (DICCA) of the University of Genova.

He has been President of the Italian Zeolite Association and is member of the Council of the International Zeolite Association (IZA) and of the Synthesis Commission of IZA.