

Sandra Rondinini, “laureata cum laude” in Chemistry in 1975, at the University of Milano (Italy), Senior Researcher in 1980, Associate Professor of Physical Chemistry in 1985, Full Chair qualification (ASN) in Physical Chemistry. Affiliation: Department of Chemistry of the same University.

Her research activity covers the wide spectrum of fundamental and applied electrochemistry, now mainly devoted to the integrated fields of rationalization of energy sources and environmental remediation and protection, as summarized here below:

- Thermodynamics of electrolytic solutions in aqueous, non-aqueous and mixed solvents
- Ion-exchange membranes: fundamentals & applications;
- Electrolytic membrane processes for recovery of chemicals, drug separation. water acid electrolysis
- Development of ion-selective electrodes and biosensors
- Metrological aspects of the standardization of pH in aqueous, non-aqueous and mixed media, both as experimental research and international normalization as IUPAC Officer.
- : 1979-2002 National Observer, 2002- Titular Member and then President of the Electroanalytical Chemistry Commission, and Member of the Working Party of pH, of which she was Co-Chair together Richard P. Buck (University of North Carolina at Chapel Hill, NC, USA), and corresponding Author of the IUPAC Recommendation "Measurement of pH. Definition, Standards, And Procedures Pure Appl. Chem., 74 (2002) 2169 –2200. At present, she is Titular Member of the Analytical Chemistry Division for the biennia 2016-17 and 2018-19.
- Electrochemical methodologies for the synthesis and the degradation of organic compounds: development of electroreductive processes for the detoxification of wastes and recovery of value added substances, through the development of silver-based electrocatalytic materials for organic halides electroreductions, for which she is an internationally recognised authority
- Materials electrochemistry: rationalisation of energy sources and the development of electrochemical devices. (i) chemically modified electrodes for sensors and electronics, (ii) nanostructured mixed oxide composite materials for energy conversion (e.g. reversible water electrolysis/fuel cell systems), and (iii) photoelectrocatalytic materials for photoelectrochemical water splitting (PECWS). Her most recent research activity includes the combined electrochemical and X-ray absorption spectroscopy methodology for the in-situ and in-operando elucidation of electron and charge transfers in homogeneous and heterogeneous systems.
- Life Cycle Assessment studies and methodologies. Since 2016, she is LCA Expert and cooperate with the International EPD® System to develop the General Programme Instructions and the relevant Product Category Rules (PCR).

Grants: Coordinator the Marie Curie Training Site on Electrochemistry and Corrosion Science for the Environment supported by the EC, within FPV “Improving Human Potential”, 2002-2006. The Site grouped 14 Professors and Researchers of the Electrochemistry Section of the Department of Physical Chemistry and Electrochemistry of the University of Milano, and offered a wide choice of training activity in all the fields of fundamental and applied electrochemistry, from environmental aspects, to corrosion science, electrocatalysis, electroanalysis, organic electrochemistry, transport phenomena and electrochemical thermodynamics. The Site had a grant of 240,000 € (about 400,000€ today) for 96-person-months and hosted 10 Fellows in 4 years.

Coordinator of the Milano Group of the COST project on “Green Organic Electrochemistry” D29 – W0006-03, 2003-2007.

Coordinator of the “Avventura della Scienza” for the Faculty of Science of the University of Milan, granted by: Cariplo Foundation – 2010

Coordinator of the Milano Unit of the PRIN2017 Project “Novel Multilayered and Micro-Machined Electrode Nano-Architectures for Electrocatalytic Applications (Fuel Cells and Electrolyzers)”

Sandra Rondinini has a rich cooperation activity with authoritative Italian and foreign Groups. It is worthwhile to outline here: Christian Amatore (École Normale Supérieure, Paris, France), Allen J. Bard (The University of Texas at Austin, TX, USA), Juan Feliu University of Alicante), Joaquin Rodriguez-Lopez (University of Illinois at Urbana-Champaign, IL, USA), Carlos M. Sanchez-Sanchez (Sorbonne Universités, UPMC Univ Paris 06, UMR 8235, Paris, France), Dimitri E. Khoshtariya (Academy of Sciences, Tblisi, Georgia).

She has authored and co-authored about 190 publications on national and international, peer reviewed journals, 2 patents and several invited communications to national and international meetings, among which it is worthwhile to mention: 65th ISE Meeting, Lausanne 31/08-4/09/2014 “Electroreductive Dehalogenation: Crossroads for Waste Detoxification and Conversion to Valued Compounds”; SECM8, Xiamen (China) 9-12/10/2015 “CavityMicroTips (CM\_T) for the investigation of photocathode materials”

Her activity includes the participation to national and international Bodies and Organizations, as listed here below:

- 2016-2020: Titular Member of the Analytical Chemistry Division of IUPAC
- 2012-2018: Member of the Boarding Committee of FAST
- 2014-2016: Past-President of SCI Lombardia
- 2011-2013: President of SCI Lombardia
- 2008-2010: Past-President of the Electrochemical Division of SCI
- 2008-2010: Vice-President of SCI Lombardia
- 2007-to date: Member of the Working Party on Chemistry and Energy di EuCheMS (European Society on Chemical and Molecular Sciences)
- 2005-2007: President of SCI Electrochemical Division
- 2003-2007: Coordinator of the Milano Unit of the COST project on “Green Organic Electrochemistry” (University of Paigí12, Belfast, Coimbra, Kiev and Udine) D29 – W0006-03, 2003-2007
- 2002-2006: Coordinator of the Marie Curie Training Site on “Electrochemistry and Corrosion Science for the Environment”
- 1998-to-date: President of the Working Party TERSI of the Italia Association of Industrial Chemistry.
- 1983-to date: Member of the Electrochemical Society (USA)
- 1979-2002: IUPAC activity within the Electroanalytical Chemistry Commission: Member since 1979, Titular Member since 1995, Secretary 1995-1996, Chairperson 1999-2000, co-Chair of the Working Group on pH, she is now IUPAC Fellow.

She has also an intense teaching activity, which started in 1979 within the Industrial Chemistry Curriculum (Electrical Measurements and Process Control, Electrochemistry, Industrial Electrochemistry, Environmental Electrochemistry), and now covers basic courses like Physical Chemistry and advanced courses like “Energy: Sources, conversion and Storage”, together with selected topics for the Doctorate School in Industrial Chemistry.

(she was visiting researcher at the Laboratory of Physical Chemistry of Prof. Arthur K. Covington, The University of Newcastle upon Tyne, UK)