

CV of Dr. Gloria Berlier

Degrees: Master Degree in Chemistry, at Turin University July 1997 with 110/110 cum laude.

PhD in Chemical Science in 2001.

Experiences: Four years Post doc fellowships granted by Torino University, one year as Post-Doc Research Assistant at the DRFL - Royal Institution of GB in London, UK (2002-2003).



Positions: Associate Professor in Physical Chemistry at the Department of Chemistry, Torino University. 2012-2018: Faculty researcher. 2007-2012: Faculty researcher at the Faculty of Pharmacy.

Teaching: *Physical Chemistry* - Degree¹ in Chemistry and Pharmaceutical Technology (7 CFU², since 2006); *Structural and Surface Investigation* - MSc Degree in Environmental Chemistry (2 CFU, since 2013). *Physical Chemistry III*, BSc Degree in Chemistry and Chemical Technologies (6 CFU, from 2019). Courses for the Doctoral School of Sciences and Innovative Technologies (2013 & 2015 4 CFU, 2019 3 CFU).

Research area: The research activity is set in the field of nanostructured materials (Catalysis, Material and Surface Chemistry), with specific focus on their electronic and surface properties and on the determination of the structure and reactivity of surface sites in adsorption phenomena and catalytic processes. This is based on experimental studies on high surface area materials (silica based ordered micro- and mesoporous materials, microporous aluminophosphates, nanostructured oxides and supported nanoparticles) showing redox, Brønsted and Lewis surface sites for applications as heterogeneous catalysts. A parallel activity is about the interaction and interphase between high surface area oxides (silica etc.) and organic molecules/moieties/macromolecules in the field of hybrid materials for applications in nanomedicine.

Dr. Berlier has specialized in the use of advanced characterization techniques related to surface and solid state sciences (UV-Vis-NIR, FTIR with probe molecules, Luminescence and Raman spectroscopies *in situ and operando conditions*, synchrotron based techniques such as XAS and SAXS, XRD, Gas-volumetric and Microgravimetric analysis, SEM/TEM, EPR, SS-NMR). She has experience in the functionalization of surfaces, and in the know-how related to operando techniques (FTIR and UV-Vis-NIR). Current international collaborations: Univ. of Chalmers, Umicore, Universidad Nacional Autónoma de México, University of Oslo).

Supervision of students and PhD students/post docs. She has been/is supervisor of Master students in Chemistry and Chemistry and Pharmaceutical Technology, 6 PhD students and 12 post-docs, co-supervisors of 3 PhD students.

Recent grants and projects

H2020–MSCA-ITN-2020 “CHASS - Cu-CHA zeolite-based catalysts for the selective catalytic reduction of NO_x in exhaust diesel gas: addressing the issue of Sulfur Stability”. Coordinator (start 01/06/21).

2012-2016 COST European COST Action MP1202 “Rational design of hybrid organic inorganic interfaces: the next step towards advanced functional materials”. Participant.

2012-2015 Progetti di Ricerca di Ateneo-Compagnia di San Paolo-2011- Linea B, progetto ORTO114XNH “Development of oxidic and polymeric materials for stimuli responsive applications”. Principal Investigator.

2011-2013 PRIN 2009 - prot. 2009BLNJC5 - Ottimizzazione del processo fototermocatalitico zolfo-ammonio per la produzione di idrogeno. Local coordinator and national coordinator from 2012.

2012-2014 Poli di innovazione MESAP - Misura I.1.3 - terzo programma 2011 – OPTADI. Local coordinator.

2012-2014 Poli di innovazione MESAP - Misura I.1.3 - terzo programma 2011 – MAC. Local coordinator.

Editorial/referee activity Dr Berlier is referee for National and European H2020 research proposals and for International Journals in the fields of Catalysis, Physical Chemistry, Material Science and Pharmaceutics (25-30 revised papers each year).

WoS (Scopus) journal publications: 124 (127); Citations: 3494 (3674); H. Index: 32 (31).

¹ Combined Bachelor and Master (5 years, 300 ECTS)

² University Educational Credits. 1 CFU = 1 ECTS (European Credit Transfer and Accumulation System).