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: Full Professor in Physical Chemistry at the Department of Chemistry, Torino University. 2021-2018: Associate Professor. 2012-2018: Faculty researcher. 2007-2012: Faculty researcher at the Faculty of Pharmacy.

Teaching: *Physical Chemistry* - Chemistry and Pharmaceutical Technology[1] (7 ECTS[2], since 2006); *Structural and Surface Investigation* - MSc in Environmental Chemistry (2 ECTS, 2013- 2020). *Physical Chemistry III*, BSc in Chemistry and Chemical Technologies (6 ECTS, since 2019). *Chemical Physical metholodogies of clinical and forensic investigation* – MSc in Clinical Forensic and Sport Chemistry (3 ECTS, since 2020). Spectroscopy of Biomolecules – MSc in Molecular Bitechnology (2 ECTS since 2021), *Advanced Spectroscopy and Nanotechnology* - MSc in Biotechnological and Chemical Sciences in Diagnostics (4 ECTS, since 2023). Courses for the Doctoral School of Sciences and Innovative Technologies (2013 & 2015 4 ECTS, 2019 3 ECTS).

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, zeolites, nanostructured oxides) showing redox, Brønsted and Lewis surface sites for applications as heterogeneous catalysts or in the biomedical field.

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*, synchrothron based techniques (XAS), XRD, Gas-volumetric and Microgravimetric analysis, SEM/TEM. 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: Chalmers Technical University, Umicore, Universidad Nacional Autónoma de México.

Supervision of students and PhD students/post docs. She has been/is supervisor of Master students in Chemistry and Chemistry and Pharmaceutical Technology, 10 PhD students and 15 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 NOx in exhaust diesel gas: addressing the issue of Sulfur Stability”. Coordinator (start 01/06/21).

Research contract with Umicore Denmark (2020-2023; 2018-2019) Spectroscopic characterization of VOx/TiO2 based SCR catalysts”. Responsible

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 coodinator.

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 journal publications: 143; Citations: 5403 ; H. Index: 42.

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

[2] European Credit Transfer and Accumulation System