Prof. Dr. Marco Daturi

Born on the 1st of November 1964 in Genoa (Italy). Married, three children

Education and diplomas

– 1991: Master in Nuclear and Chemical Physics (University of Genoa)
– 1996: PhD in Chemistry at the University of Genoa, Department of Chemistry for Engineering, dissertation title: *Study of mixed oxides for technological applications* (director Pr. G. Busca)
– 2001: Habilitation at the University of Caen, dissertation title: *Metal oxides: properties engendered by structural and surface defects* (tutor Dr. J.-C. Lavalley)

Working experience

1997–1998: post-doctoral fellowship at the LCS (Caen) in the frame of the EU project CEZIRENAT, supervisor Dr. J.-C. Lavalley.
1998–2002: Lecturer at the University of Caen
2002–present: Full Professor at the University of Caen-Normandy. Research activity at the Laboratory of Catalysis and Spectrochemistry.

Teaching

Professor of Physical Chemistry at the University of Caen-Normandy. Main topics: Thermodynamics, Spectroscopic techniques, CO_2 capture and catalysis applied to environmental problems.
Invited professor in Poland, Brazil, Italy, Bulgaria, Spain, and Japan.

Scientific activity

Leader of the “SPECTROCAT” team at LCS and responsible for several research thematic in the domains of *Energy and Sustainable Development, Physical Chemistry of Interfaces, Methodology Developments*.
Methodological approach mainly consisting into applying *in situ* and *operando* spectroscopic techniques (notably infrared) to monitor material surfaces, process and reaction mechanisms.
Main topics:
– **Reduction of polluting emissions** (notably deNOx and VOC)
– **H_2 catalytic production** (WGS, reforming, OWS, ...)
– **CO_2 capture and hydrogenation**
– **Design of new materials** for catalysis, adsorption, and separation, mainly using porous systems (zeolites and MOFs).
– **Methodological development** for spectroscopic studies (conception of new *in situ* and *operando* reactor-cells, next generation spectrometer, spectrokinetic tools, ...)

Main responsibilities

– **Director of the Research** at the ENSICAEN School of engineering (in charge of 8 laboratories, ~700 people: professors, researchers, engineers, PhD students and post-docs) from 2014 to 2022.

- Evaluator for the **ERC StG** program (member of the Panel 4 in 2012, **Panel Chair** for 2014, 2016 and 2018), and for different Canadian, French, Swiss, Croatian, and Italian founding agencies.
- Member of the **Operando International Advisory Board**.
- Member of **CNU** national committee, section 31, from 2015 to 2019.

Publications

- More than **250 papers** in peer reviewed journals and 6 book chapters.
- Co-author of more than 100 oral presentations and ~100 posters in national and international conferences; 47 invited conferences, among them 13 plenary lectures.

Patents and technology transfer

Co-author of **12 patents** (9 having a worldwide extension, 1 licenced).

Co-founder of the *Squair Tech* start-up for the industrialisation and application of MOF materials into air quality (https://www.squair.tech/).