Curriculum Vitae by Antonella Gervasini

Antonella Gervasini (ORCID:0001-6525-7948) is currently Full Professor for the disciplines of physical chemistry (CHIM / 02) at the Faculty of Science and Technology of the University of Milan (UNIMI) where she carries out her research activity at the Department of Chemistry.

Education and career: She obtained the "European Baccalaureate" at the "European School" of Varese, then, she continued her career at the University of Milan until obtaining a Ph.D. in Chemical Sciences (1987). She started working in the field of scientific research, heterogeneous catalysis, in the Eni group (Eniricerche, S. Donato Milanese) where she became scientific coordinator of the group "*Characterization of heterogeneous catalysts*" (1987-1992). In 1992, she joined UNIMI as a researcher and then, on 2001, she became *Associate Professor* (physics disciplines). In 2004, she was confirmed as *Associate Professor*. In 2013, she received the *National Scientific Qualification for First Level Professors* in the sector 03/A2 "*Models and Methodologies for Chemical Sciences*".

She carried out various research internships (1987, 1990 and 1993) at the Institut de Recherches sur la Catalyse of the CNRS (now IRCELYON) of Villeurbanne, France, where in 2003 he won the position of "*Invited Professor*" for six months on the project development of acidity catalyst with the final objective of developing new solid water-tolerant acids. She was invited for a month at the University of Lille- 1 Sciences and Technologies in 2010 to jointly start research on acid catalysts with oxidizing functions. She was invited in 2012 to Nanjing University (China) as Visiting Professor for the development of joint research on catalytic biomass valorisation.

Teaching activity (since 1990): She has taught in various courses for students of Industrial Chemistry courses (first and second level courses and Masters Courses) in UNIMI, in the disciplines of physical chemistry, catalysis, and kinetics. She has been a lecturer of more than 75 degree theses of UNIMI students and of several Ph.D. students of foreign Universities (Claude Bernard University of Lyon -I, France, Autonomous University of Madrid (Spain), and University of Lille- 1 Sciences and Technology, France). Since 2007 she participates every year in the "Summer School" of Lyon on "*Calorimetic and Thermal Methods in Catalysis and Materials Science*" where he teaches in English and French.

Research Activity Funded: She has participated in numerous Italian research programs financed by funds from the Ministry of University and Public Research and the CNR. She received research funds from the EU for participation in the INCO-Copernicus project (1999 - 2001) with European academic and industrial partners from France, Poland, Hungary, and Romania. He has collaborated and collaborates actively with Italian industrial partners and important foreign chemical companies (Bracco, VELP, Solvay in Bruxelles). She was consultant for the catalysis of Saint Gobain (Cavaillon, France) for the development in catalysis of ceramic materials. She was responsible for an Italy-France cooperation program (Galiliée 2011-2013) on the study of new thrust oxidation catalysts for organic substances.

Scientific activity: The research activity focuses on different topics of experimental physical chemistry and heterogeneous catalysis. In the various researches, spectroscopic and spectroscopic studies of model catalysts supported by zerovalent metals, mass characterization studies and surface properties of catalysts for industrial use with thermal techniques, in particular, have been studied and developed solid acid catalysts. Particular attention is dedicated to environmental

catalysis (de-NOx, de-VOC and valorisation of biomasses of the carbohydratic type). The activity is demonstrated by **160** scientific articles published in international scientific journals, by industrial patents, and more than *220* contributions to national and international conferences and conventions. She is regularly invited to hold Conferences and as Teacher in various international schools.

She is an active member of the Italian Chemical Society (SCI), of the American Chemical Society (ACS), and has been a member of the Center of Excellence CIMAINA (Interdepartmental Center for Nanostructures and Interfaces), INCA Consortium (National Consortium for Environmental Chemistry), Consortium INSTM (National Interuniversity Consortium for Materials Science and Technology) and the National Institute of Nuclear Physics INFN) | Section of Milan.

Recent scientific publications in the field of heterogeneous catalysis:

M. Schiavoni, S. Campisi, A. Gervasini
Effect of Cu deposition method on silico aluminophosphate catalysts in NH3-SCR and NH3-SCO reactions
Applied Catalysis A, 543 (2017) 162-173.

S. Campisi, C. Castellano, A. Gervasini, Tailoring the structural and morphological properties of hydroxyapatite materials to enhance the capture efficiency towards copper(II) and lead(II) ions
New Journal of Chemistry, 42 (2018) 4250-4530

A. Aronne, M. Di Serio, R. Vitiello, N.J. Clayden, L. Minieri, C. Imparato, A.Piccolo, P. Pernice, P. Carniti, A. Gervasini, An environmentally friendly Nb-P-Si solid catalyst for acid demanding reactions
Journal of Physical Chemistry C, 121 (2017) 17378-17389.

A. Gervasini, P. Carniti, F. Bossola, V. Dal Santo, Cooperative action of Brønsted and Lewis acid sites of niobium phosphate catalysts for cellobiose conversion, Applied Catalysis B: Environmental, 193 (2016) 93–102.

M.J. Campos Molina, M. López Granados, A. Gervasini, P. Carniti, Exploitment of niobium oxide effective acidity for xylose dehydration to furfural, Catalysis Today, 254 (2015) 90–98.

P. Carniti, A. Gervasini, C. Tiozzo M. Guidotti, Niobium-containing hydroxyapatites as amphoteric catalysts: synthesis, properties, and activity, ACS Catalysis, 4 (2014) 469−479.

L. Silvester, J.-F. Lamonier, R.-N. Vannier, M. Capron, A.-S. Mamede, C. Lamonier, F. Pourpoint, A. Gervasini, F. Dumeignil, Structural, textural and acid-base properties of carbonates-containing hydroxyapatites, Journal of Materials Chemistry A, 2 (2014) 11073-11090.

N. Scotti, M. Dangate, A. Gervasini, C. Evangelisti, N. Ravasio, F. Zaccheria , Unraveling the role of low coordination sites in a Cu metal nanoparticle: a step toward the selective synthesis of second generation biofuels, ACS Catalysis, 4 (2014) 2818-2826.