

Giorgio Gatti is Associate Professor since 2019 in the Sector 03/A2- MODELS AND METHODOLOGIES FOR CHEMICAL SCIENCES, Scientific Disciplinary Area CHIM/02 - PHYSICAL CHEMISTRY, at the Department for Sustainable Development and Ecological Transition (DiSSTE). Degree in Chemistry (2001) from the University of Eastern Piedmont. Doctorate in Materials Science and Technology (2004) from the University of Turin. Co-author of 75 publications in international journals, 3 contributions in Volumes, 6 International Patents. He has presented 45 orals and 56 posters at National and International Congresses. He has tutored 48 Bachelor's, Master's and PhD theses. G. Gatti is a member of the Centro Universitario per lo Studio sugli Amianti (CUSA), responsible for SEM/EDX, FTIR and XRPD analysis techniques.

He was a Visiting Professor at the Carbon Capture Group of the School of Engineering, University of Edinburgh in Scotland.

The main areas of research are:

i) The synthesis and study of porous polymers for gas storage

The research is focused on the development of new Porous Aromatic Polymers with high surface areas (PAFs, HCPs, PIMs) that can be used in the storage and separation of gases (CH₄, CO₂, He and H₂) at both high and low pressures.

ii) Optimisation of porous materials for water decontamination concerning the preparation and functionalisation of material surfaces to optimise solids capable of capturing and thus removing pollutants (sulphonamides or hydrocarbons) from water. Particular interest was paid to the interaction phenomena generated on the surfaces of solids between adsorbents and adsorbates.

iii) Development of new materials for energy production by means of low environmental impact processes, in particular the preparation of materials with different structure and chemical composition for the optimisation of devices for energy production with low environmental impact (photovoltaic cells, fuel cells)

(iv) Development of methodologies for the optimisation of industrial processes

This line of research is focused on the characterisation and optimisation of materials and processes of industrial interest in order to develop new approaches for production on an industrial scale.

v) Study of biopolymers obtained from renewable natural sources and development of new approaches for their utilisation and modification of properties

G. Gatti has taken part in numerous research projects (Regional Projects: MICROCELL, NANOMAT; Ministerial Projects: FISR, METISOL and for Internationalisation; CRAI Projects; European Projects: INNOVASOL and GLOBASOL; POR-FESR Asse I projects: FLEXMAT; Bando Compagnia S. Paolo: MASTERLIGHT; PRIN 2010-2011; Industrial Research Projects: OMB-Saleri S.p.A. and SOL Group). NATO research project "Nanostructured Materials for the Catalytic Decontamination of Chemical Warfare Agents";

Hydrogen research projects under the PNRR - M2C2 investment line 3.5: Research project "Eco-sustainable development of ultra porous polymers and carbons for hydrogen storage and delivery" ECOSTORE-H2; OR2 manager "Development of ultra porous hyper-crosslinked polymers (HCP) from recycled polystyrene and carbon derivatives".

Scientific project manager and funding holder:

Industrial research and experimental development project with SOL Group "Development of adsorbent materials for gas storage" (160K €);

Regional Call for Proposals P.O.R. FESR 2014/2020 - Axis I - Action I.1b.1.2 - Innovation Poles Line A, project entitled CIMATESA "Development of innovative thermoplastic matrix composites with applications in the automotive sector" (65K €);

Regional Announcement P.O.R. FESR 2014/2020 - Axis I - Action I.1b.1.2 - Poles of Innovation Line B, project entitled TEMACO "Smart fabrics for the realisation of thermoplastic composites aimed at the prototyping of lightened structural components for exterior/interior cars" (81K €);

Research contract with Environment Park S.p.A. within the framework of the POR CAMPANIA FESR 2014/2020 Project (50.5 K €);

Research contract with 3P s.r.l. for the "Development of an analytical methodology using IR technique for the measurement of coating thicknesses" (25K €);

Scientific Responsible for the consulting activity for Ebrille s.r.l. for the "Development of a protection against humid environmental working conditions that may deteriorate the copper surface" (16.5K €);

Scientific Responsible for the consulting activity for the Global Wafer Solution "Development of a method to evaluate defects in 4H-SiC wafers through Micro-Raman Spectroscopy" (GWS, Taiwan) (68K €).

Scientific Responsible for consultancy activity for Uvex Cagi s.r.l. "Development of quality control of raw materials and finished products" (6K €);

Eurostars Call 3 - Call 2 Project id 1714 - Italian coordinator of the project "An innovative way to use Chitin: from Organic Waste to functional fabrics" (AIWTUC) (51.5K €)

Call for proposals PRIN 2022 - ERC Sector PE11 - Project code 2022SFM89K - National coordinator of the project "Polymer-nanofiller Compatibilization in Mixed Matrix Membranes for advanced gas separation" (COM3) - Total Project Cost: 217.6K € (UPO unit funding 73.2K €)

Bibliometric parameters (updated 30/11/23)

orcid: 0000-0002-6275-5674

Academic age: 21 years

h-index: 25

Total articles with IF: 75

Total number of citations: 1776 (Scopus)