



Barbara Bonelli, born in Turin in 1972, received the PhD degree in Chemical Science from the Università degli Studi di Torino, on March 1st 2001, after defending a thesis on the "Spectroscopic characterization and catalytic properties of controlled mesoporosity systems". In March 1997, she graduated magna cum laude in Industrial Chemistry at the same university, with a dissertation on her experimental work on the "Study of the effect of potassium on iron oxide/ZrO₂ catalysts for dehydrogenation of ethyl benzene to styrene". In May 1997, she started to work in Prof. Garrone's group SCREAM, Surface Chemistry and REActivity of Materials, on the characterization of zeolites and M41S systems, spending two months at the Instituto Superior Tecnico (Lisbon, Portugal), where she studied the catalytic activity of M41S systems. Since April 2001, she has been working in the Department of Materials Science and Chemical Engineering at the Politecnico di Torino. In July 2004, she got a permanent position as Assistant Professor at Politecnico. During her research activity she developed her expertise with the following techniques: FT-IR and UV-Vis spectroscopies; XRD; SEM microscopy; thermal techniques: TGA, TPDRO, DSC, DTA; adsorption microcalorimetry; volumetry and porosimetry. She has been working within several projects, financed by either the EC or other private and public agencies, facing the need of integration between basic and applied research. Her main scientific interests are the synthesis and characterization of micro-mesoporous materials with possible applications in catalysis and gas storage/adsorption. She studied adsorption phenomena at the surface on CO₂/zeolite; CO/zeolite and H₂/zeolite model systems with complementary techniques: FT-IR spectroscopy; adsorption microcalorimetry; volumetric techniques and *ab-initio* calculations. In June 2002, she spent a month in the laboratories of Prof. C.O. Areán (University of Balearic Islands, Spain) working on a special VT-IR cell that allows to contemporary measure the Temperature and the Pressure of the system during IR spectra recording, she is now developing the same technique at the Polytechnic of Turin, by means of a commercial cell. Recently, her scientific interests extended to: i) micro and mesoporous carbon replicas, obtained by casting of inorganic templates; ii) highly microporous carbons obtained by direct carbonization of aqueous solutions of sucrose and KOH; iii) imogolite and modified imogolite nanotubes. The last topic was developed thanks to an INSTM grant (PRISMA 2005 project) and allowed to deposit an Italian patent request, n° TO2007A000765, entitled "Chemically modified synthetic Imogolite nanotubes, and procedure for their preparation", by B. Bonelli, I. Bottero, and E. Garrone. Since 1998, she attended several national and international congresses, with either oral or poster presentations; so far, she co-authored over 50 papers on international peer reviewed journals. She is tutor of several doctorate and bachelor theses and collaborates with research groups at the Universities of Bologna, Turin, Calabria, Federico II, Milan, Balearic Islands, the Instituto Superior Tecnico of Lisbon and the ENSCM-CNRS of Montpellier. In 1999 – 2000 and 2003-2004 she worked as contract professor of Chemistry a Politecnico di Torino. She has given classes in several master courses concerning surface chemistry and spectroscopy and since 2005, she teaches Chemistry to students of the Environmental Engineering course at the First Faculty of Engineering of Politecnico.