

FABIO CARNIATO

Fabio Carniato was born in Italy (Alessandria) on 13.09.1980. He graduated in applied chemistry with top mark (110/110 with laude) at the University of Eastern Piedmont in Alessandria (2004) and he has the PhD degree in Chemistry in 2008 under supervision of Dr. Enrico Boccaleri and Dr. Marco Milanese. Since 2008, F. Carniato is a Post-doc at the Faculty of Science MFN of the "University of Eastern Piedmont". From 2009, he has a teaching of Catalysis and of laboratory of physics and chemistry of materials for the energy (Master in Materiali per energia e ambiente) at the University of Eastern Piedmont. Since 2004, F. Carniato has focused his studies on the synthesis of molecular organosilica compounds (POSS), layered materials with controlled chemical composition and ordered mesoporous silica (SBA-15 and MCM-41) and on their morphological, structural, spectroscopic and thermogravimetric characterization. Large attention has been also devoted to the functionalization of materials surface with organic molecules by chemical anchoring and ionic exchange reactions in order to obtain multifunctional materials of interest for several applications in the frame of heterogeneous catalysis and of the polymeric nanocomposites.

Since 2005, Fabio Carniato is involved in the implementation of a new experimental set-up (Raman-XRPD), for the study of the complementarities of two techniques in collaboration with the Swiss Norwegian Beamline in the European Synchrotron Radiation Facility (ESRF) (Grenoble, FR).

Recently, F. Carniato is involved in a research activity on the preparation of innovative hybrid materials chemically functionalized by luminescent and paramagnetic Gd(III) chelates probes with potential application in the biomedical and nanotechnology applications.

The acquired experience in the synthesis and characterization of the hybrid organic/inorganic solids was important for the development of several research projects, where F. Carniato was involved.

His research activity was concerned the following national and international projects:

- Innovasol European Project FP7 (title: Innovative Materials for Future Generation Excitonic Solar Cells; coordinated by Prof. L. Marchese).
- CIPE 2006 (title: "Novel Nanostructured Materials for Light Emitting Devices and Application to Automotive Displays).
- STREP of the VI European FP (title: "Environmentally friendly multifunctional fire retardant polymer hybrids and nanocomposite"; European leader Prof. G. Camino)
- Project "Nanotechnology for Electromechanical, Information Technologies and Biomedical industries" which involves 11 national and international partners (academic and research groups).
- PRIN 2006 "Progettazione e sintesi di Silsesquiossani Poliedrici Multifunzionali per Compositi Polimerici Innovativi Termicamente Stabili".
- long-term project 2007 on "The implementation of a simultaneous Raman/high-resolution X-ray diffraction or absorption approach for the in situ investigation of solid-state transformations", to develop a novel experimental setup (proposal Nos. CH-2234 and 01-01-742).

He is author of 20 original publications on international scientific journals, some of these published on high impact factor journals, including, *Angew. Chem.*, *Chem. Commun.*, *Chem. Phys. Phys. Chem.*, *Chem. Eur. J.*, *J. Mater. Chem.* and *Green Chem* and of numerous poster and oral communications.