Curriculum Vitae Dr. Marco Milanesio,
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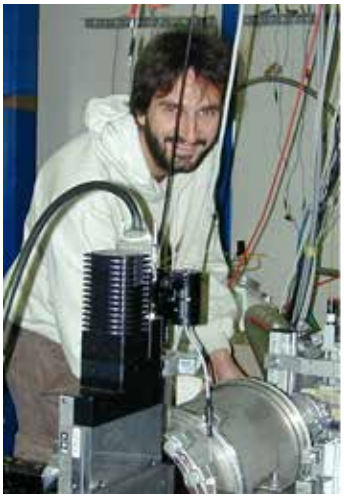

Detailed *Curriculum vitae* - English

Marco Milanesio was born in Savigliano (CN, Italy) on November 25th, 1971. He obtained the degree in Chemistry (full marks 110/110) by the University of Turin in 1996 and the Ph.D. in Chemistry by the same University in 2001 under the supervision of prof. Davide Viterbo. He spent a three month stage (August-November 2000) by the Emory University (Atlanta, GA, USA). In 2001 he obtained a fellowship by the "G. Donegani" Foundation to carry out researches on the characterization of microporous catalytic materials by the University of Eastern Piedmont. Since October 2001 he is researcher in Physical Chemistry (permanent researcher from 01-10-2004) by in the Department of Advanced Science and Technology (DISTA, renamed DiSIT in 2012), where he developed the teaching activity (in the physical chemistry field) and the research activity (in the field of structural chemistry by diffractometric and computational methods), detailed here below. He attended several crystallographic and computational chemistry schools. Recipient of the "Young Italian Crystallographer" award in 2003. Since 2003 member of the teaching staff of the "Italian Synchrotron Light" and of the "Polycrystalline Material Diffraction" schools, lecturing on "Fundamentals of X-ray diffraction". Chair of international school of the AIC association ed. 2011. Leader of a research project PRIN ed. 2007 and of a long term project at the ESRF (Grenoble, France) to develop a new instrumental setup to carry out simultaneous X-ray Diffraction and Raman experiments at non-ambient conditions (2006-2009). Member of the scientific committee for the evaluation of the proposals if the field of "hard condensed matter" at the ELETTRA synchrotron facility (Trieste, Italy). Chair of microsymposia in several international and national congresses (XXXVIII AIC in 2009, XII EPDIC conference in 2010 and XXII IUCr meeting in 2011).

Since 2003 he is member of the teaching staff of the "Italian Synchrotron Light" and of the "Polycrystalline Material Diffraction" (also member of the organizing committee) schools, lecturing on "Fundamentals of X-ray diffraction". He has also been member of the organizing committee of several national and international schools and congresses in the field of crystallography, among which the XX Congress of the International Union of Crystallography in 2005 in Florence.

Author of 74 original publications on international journals (H-index=18 from Web of science, March 2012), of 42 communications to international and national congresses as main author and of more than 100 congress communications not as main author and coauthor of three books:

-) M. Milanesio, "DIFFRAZIONE DA MATERIALI POLICRISTALLINI I: PRINCIPI E CAMPI DI APPLICAZIONE" nel libro in italiano "Analisi di Materiali Policristallini mediante Tecniche di Diffrazione", edited by N. Masciocchi and A. Guagliardi, first edition : 2006, ISBN 88-901915-8-9 and second edition: 2007 ISBN 978-88-95362-04-5;

-) D. Viterbo e M. Milanesio, "Solution and refinement in crystal structures" in "Fundamentals of Crystallography" C. Giacovazzo, H.L. Monaco, G. Artioli, D. Viterbo, M. Milanesio, G. Gilli, P. Gilli, G. Zanotti, G. Ferraris, M. Catti Third Edition 2011, edited by Carmelo Giacovazzo, Oxford University Press; ISBN: 978-0-19-957366-0 (Paperback) and 978-0-19-957365-3 (Hardback).

-) W. van Beek, A. Urakawa, M. Milanesio, "XRD–Raman and Modulation Excitation Spectroscopy", in "In Situ Characterization of Heterogeneous Catalysts", edited by J.A. Rodriguez, J. C. Hanson, P. J. Chupas, Wiley, 2013, ISBN: 978-1-118-00016-8.

SCIENTIFIC ACTIVITY

RESEARCH FIELDS AND METHODOLOGIES - Marco Milanesio is involved in the crystal and molecular structure analysis and in the characterization of the physical-chemical properties of different materials, using both experimental and computational tools. Besides he investigated also low order materials by Small Angle X-ray Scattering. The research activity is carried out in the field of the structural analysis of molecular systems and crystalline matter of interest of materials science and biopharmacology. Single-crystal and Powder X-ray Diffraction (XRPD), using both conventional and synchrotron radiation sources, also combined with Raman spectroscopy, are the preferred experimental techniques, depending on the investigated system. Recently he is involved in developing novel characterization techniques to analyse the reactivity in solid materials by simultaneous X-ray Diffraction and Raman experiments at non-ambient conditions. Together with these experimental methods, theoretical tools such as classical molecular mechanics and dynamics and/or ab initio quantum-mechanical methods are also used, employing computing and molecular graphic techniques to model also complex systems (Gaussian, Jaguar, Crystal, Macromodel, Moldraw softwares).

APPLICATION FIELDS
The investigated systems are in the field of both Materials Chemistry (zeolites, organometallic compounds, molecular complexes, biomaterials of both synthetic and natural origin) with applications in catalysis and optoelectronics (LED and photovoltaic) and of bioactive molecules (compounds related to the anti-tumour drugs Paclitaxel and CisPt, to cholesterol and vitamin D derivatives and organic-inorganic nanomposites designed with the aim of improving stability and release properties). Since 1999 he participated to the design, execution and data analysis of experiments carried out by X-ray diffraction and diffusion using synchrotron radiation facilities at ESRF (Grenoble, France) and ELETTRA (Trieste, Italy). Since 2003 his research interest was focalized on the investigation of solid state transformation, also involving amorphous, gel and liquid phases, induced by the variation of temperature and/or pressure and/or UV light.

INTERACTION WITH THE SCIENTIFIC COMMUNITY - The research activities have been carried out in collaboration with national and international institutions and enterprises detailed here below: G. Artioli (Università Padova), A. Gualtieri (Università Modena), B. Civalleri, C. Lamberti, R. Gobetto, P. Ugliengo (Università Torino), E. Garrone, B. Onida (Politecnico Torino) R. Aiello e F. Testa (Università Calabria), G. Bavestrello (Università Ancona), U. Benfatti e M. Giovine (Università Genova), V. Ambrogi e L. Perioli (Università Perugia), A. Fitch, M Brunelli (Beamline ID31, ESRF, Grenoble, Francia), W. van Beek, H. Emerich and D. Chernishov (Swiss-Norwegian beamline, ESRF, Grenoble, Francia), H. Amenitsch (Institute of Biophysics and X-Ray Structure Research, Austrian Academy of Sciences, Graz, Austria), A. Urakawa (ICQ, Tarragona, Spain), H.E. Pastore (University of Campinas, Brasile), P.J. De Clercq (University of Ghent, Belgio), G.L. Marra, L. Meda (Istituto di Ricerca “G. Donegani”, ENI, Novara, Italy), G. Borionetti (MEMC s.p.a., Novara, Italy), F. Canonico, D. Gastaldi (BuzziUnicem, Casale Monferrato, Italy), R. Caliandro (IC, Bari).
He is member of the following scientific associations: Società Chimica Italiana, American Chemical Society, Associazione Italiana di Cristallografia, European Crystallographic Association, International Union of Crystallography Società Italiana di Luce di Sincrotrone, Associazione Italiana Zeoliti.

TEACHING ACTIVITY

Marco Milanesio has lectured different courses to graduate students in Chemistry (East Piedmont University, Alessandria, Italy), Materials Science and Biotechnology (East Piedmont University, Novara, Italy). In these courses most typical topics of physical chemistry were treated (both with lectures and laboratory and computer experiences); besides he introduced in the courses computer-aided exercices on the analysis of data of chemical interest (database mining, molecular graphics, computational methods for the prediction of chemical properties and interpretation of X-ray patterns for the characterization of crystalline solids). He was supervisor of graduate and Ph.D. theses in the field of crystallography and computational chemistry. Finally he is involved in the organization, development and maintenance of the Chemical laboratories and Computer rooms, used in various graduate courses.

Alessandria, 4 luglio 2016

Dr. Marco Milanesio