

CHIARA CASTIGLIONI – Curriculum vitae

Born in Milano, August 13th 1959; 1983: Degree (laurea) in Physics (cum laude) at University of Milano; 1985: Diploma (cum laude) of Specialisation School "G. Natta" on Advances in Polymer Science (Politecnico of Milano); 1989: Ph D degree in Industrial Chemistry (University of Milano); since 1990 at Department of Chemistry, Material and Chemical Engineering of Politecnico of Milano as: Researcher (1990); Associated Professor in Material Science and Technology (2001).

November 2010: Full Professor (Professore Straordinario) in Materials Science and Technology at Politecnico di Milano.

1991-1996: Secretary of the Specialization School in Polymer Science "G. Natta" at Politecnico of Milano; since 2000: Secretary of the PhD Course on "Materials Engineering" at Politecnico of Milano

Since 2010: Coordinator of the PhD Course on Materials Engineering

Member of the Scientific board of GNSR (Gruppo Nazionale di Discussione per le Spettroscopie Raman e gli Effetti Non-Lineari)

2001-2003 Member of the organizing board of "CNES 2007" (Primo Congresso Nazionale di Electrospinning)

1995-1998 : Member of the Editorial Board of "Vibrational Spectroscopy" (Elsevier - Amsterdam);

1996-2002: Member of the Editorial Board of "Spectroscopy Letters" (Dekker - New York)

Since January 2011: Member of the Editorial Board of Journal of Raman Spectroscopy (Wiley)

Activity as referee for several International Journal: Journal of American Chemical Society, Synthetic Metals, Journal of Raman Spectroscopy, Vibrational Spectroscopy, Journal of Molecular Structure, Spectrochimica Acta

Teaching Activity:

1990-1993 Assistant to the courses: "Applied Chemistry", "Material Science", "Polymeric Materials";

Teacher of the following courses at Politecnico of Milano:

1995-2004: "Structure of Macromolecular Materials"

Since 2002: "Structure and Characterization of Polymers"

Since 2005 "Material Science" and "Material Science and Technology"

1992-1996: Lectures at Specialisation School "G. Natta" on Advances in Polymer Science (Politecnico of Milano) : "Molecular dynamics, mobility and phase transitions of polymers";

Since 2001: PhD Course on "Materials Engineering" (Politecnico of Milano) : Coordinator of the course "Methods for the characterisation of materials" and teacher of the course: "Molecular Spectroscopy".

Research Activity:

Author of 139 papers published on International Journals or books; about 200 notes presented to International or National Congresses; 15 Invited Conferences or lectures.

From ISI web of Knowledge: H-index: 26. Sum of the times cited (without self-citations): 1911

Average citation per item: 16.47.

Main research interests in the field of the:

- Science of Organic Functional Materials and Polymers (Conducting Polymers, Organic Semiconductors, Photochromic Organic Materials)

- Nanostructured carbon materials (amorphous carbons, nanostructured graphites, carbon nanotubes, polycyclic aromatic hydrocarbons (PAHs), linear carbon chains).

- Vibrational dynamics and spectroscopy of semicrystalline and amorphous polymers (phonon dispersion relations, conformational defects, chain orientation, intermolecular interactions)

- Vibrational intensities and electrooptical parameters (Charge distribution from Infrared Intensity; local Raman parameters from Raman Intensities)

Her research activity has been mainly devoted to the modeling of the spectroscopic response of the materials (Non resonant and resonant Raman scattering, Infrared absorption) for the study of the dynamical, electrical and optical (linear and non linear) properties of the materials.

Techniques of investigation: Experimental Infrared and Raman Spectroscopy; Theoretical Simulations (classical vibrational dynamics, first principles calculations).

Partecipation to Research Projects:

- European Commission, Fifth Framework Programme: "Molecular Approach to Carbon based Materials for Energy Storage" (MAC-MES project: G5RD-CT2001-005H, 2001-2004)

- PRIN 2001: “Processi multifotonici in materiali molecolari coniugati e sistemi organizzati a trasferimento di carica” Progetto N° 2001034442_007
- FIRB 2001 dal titolo: “Micro e nanostrutture di Carbonio”, Progetto N° RBNE 019NKS.
- Centro Eccellenza per l'Ingegneria di Materiali e Superfici Nanostrutturate (NEMAS) del Politecnico di Milano (Coordinatore Prof. Bottani)
- PRIN2004: “Materiali molecolari e nanostrutture per fotonica e nanofotonica” Progetto N° 2004033197_006
- FIRB 2003: “Composti molecolari e materiali ibridi nanostrutturati con proprietà ottiche risonanti e non risonanti per dispositivi fotonici” - Progetto N° RBNE033KMA_006
- CARIPO (2006): “Materiali nanostrutturati autoassemblati di rilevanza biologica”
Coordinator of the Research Unit “Chimica” in the Research Project “Individuazione di microseepage mediante tecniche di remote sensing” (Progetto Geoscienza Eni-Politecnico, 2009-2011)
Responsible of the Resarch Project “Analisi di un dataset geochimico da integrare nell'interpretazione di dati tele rilevanti MIVIS su area desertica di interesse Eni”.