

CURRICULUM VITAE MARTA MIOLA

Personal information: Name: Marta Miola; Date and place of Birth: 15th July 1978, ██████
Citizenship: Italian; Work address: Cso Duca degli Abruzzi 24, 10129, Turin, Italy; e-mail:
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Education:

- May 2008: PhD Biomedical Engineering, Politecnico di Torino, Turin, Italy
- December 2004: Master degree in Materials Engineering, Politecnico di Torino, Turin, Italy
- July 1998: High school leaving qualification in scientific studies, Liceo C. Darwin, Rivoli (TO), Italy

Research experience:

- From 01/07/2018 Assistant Professor at the Department of Applied Science and Technology (DISAT), Politecnico di Torino, Italy. Research activity: development of (i) bioactive glasses and glass-ceramic with therapeutic effect, (ii) multifunctional bone cements, (iii) magnetic and plasmonic nanoparticles for cancer treatment.
- 01/09/2016 – 30/06/2018: Post-doc research fellow at DISAT, Politecnico di Torino, Italy. Research activity: development of magnetic/multifunctional nanoparticles for tumor treatment and multifunctional glasses/glass-ceramics (antibacterial, bioactive, ferrimagnetic...).
- 01/07/2013-31/08/2016: Post-doc research fellow at the Department of Health Science, Università del Piemonte Orientale, Novara, Italy. Research activity: study and synthesis of magnetic and core-shell nanoparticles for tumor treatment.
- 01/07/2010 – 30/06/2013: Post-doc research fellows at DISAT, Politecnico di Torino and collaborator of Spin-off Bionica Tech, Italy. Research activity: development of bioactive and antibacterial glasses/glass-ceramics and composite bone cement, antibacterial thin films, ferrimagnetic glass-ceramics.
- 15/01/2008 – 30/06/2009 collaboration contracts at Materials Science and Chemical Engineering Dep., Politecnico di Torino, Italy. Research activity: design and characterization of bioactive glasses/glass-ceramics doped/functionalized with antibacterial ions or drugs.

Technical competencies: Design and synthesis of biocompatible/bioactive glasses and glass-ceramics (bulk, micro-nano powders, microporous scaffold, coatings); their doping with metallic elements or drugs and their functionalization with biomolecules to impart antibacterial, angiogenic or anticancer properties. Development of ferrimagnetic glass-ceramics for hyperthermia and their surface modification with antineoplastic drugs. Synthesis of composites bone cement containing multifunctional glasses and glass-ceramics (bioactive, antibacterial, magnetic). Design of magnetite-based nanoparticles, magnetite-Au, magnetite-Ag nanostructures and their surface modification/functionalization for tumor therapy. Development of thin films containing metallic clusters with antibacterial properties. Relevant experience in materials characterization from thermal (DTA, DSC, hot microscopy), structural (XRD), morphological (SEM, FESEM, TEM, optical microscopy), compositional (EDS, FTIR, UV-Vis, XPS), surface charge (zeta potential), mechanical (compression and bending test, tape test) and microbiological (Kirby Bauer test, McFarland index and CFU count) point of view. Study of the materials biocompatibility through in vitro test in simulated physiological solution, evaluation of ions and drugs release.

Relevant information: Participation in 13 national and international projects. Expert referee for several international journals (e.g. Acta Biomaterialia, Materials Science and Engineering C, Materials Letters...). Invited speaker at: edition 2017 of “Giovedì Letterari” – Update in Orthopedics and Traumatology, Torino, Italy; workshop “Micro- and Nano-Technologies for Health”, June 2017, Torino, Italy; workshop “Research and Nanomedicine”, June 2018, Pavia, Italy. April 2016: achievement of National Academic Qualification as Associate Professor.

Publications: more than 90 papers on international journals and book chapters, about 50 conference proceedings, 5 patents. H-index=16 (Scopus); Total citations= 959 (Scopus).