

Maurizio Ferretti

Full professor

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Education and training

1981

Master in Physics

Academic experience

2016 - ONGOING

Full Professo of Physical Chemistry

University of Genoa - Genoa - IT

Language skills

Italian

Mother tongue

English

Independent

French

Independent

Research interests

For over thirty years he carries out research in the field of advanced materials through the study of the thermal, structural and functional properties of compounds with applications in the energy field as a) intermetallic hydrides for hydrogen storage applications, b) magnetic oxides of rare earths and transition metals for application in CMR devices, c) oxides conductors for applications in fuel cells, d) high T_c superconducting oxides (HTSC). He also conducted studies on mechanisms of reaction between the transition metals and high-pressure nitrogen using the technique of the self sustaining high temperature synthesis (SHS). This experience was later moved to the development of a novel technique for the inertization of asbestos containing waste. In 2009 started on a research for the development of synthesis techniques, sol-gel and hydrothermal, in order to synthesize nanostructured oxides for magnetic and photocatalysis applications in the environment and health.

Since 2014 he is Member of UNICT 029 "Nanotechnologies" of the Italian Organization for Standardization and ISO/TC 229 "Nanotechnologies" of the International Organization for Standardization.

Since 2013 to 2016 he is Executive Project Manager of Project LIFE FIBERS "Fibers innovative burning and reuse by SHS."

In 2013 he promoted and participated in the establishment of a university spin off through the incorporation of the Company GREEN MODELLING ITALY - GMI for the development, use and marketing of the Patent "Method and apparatus for asbestos fibers inertization".

From 2012 to 2015 he participated in the FIRB project "Nanostructured Oxides: Multi-functionality and Applications" as Scientific Coordinator for the Unity of the CNR sub-topic "Nanostructured oxides for energy, environment and sensors".

From 2012 to 2014 was Scientific Director of the project "Evaluation of the photocatalytic titanium dioxide for the removal of organic pollutants and biological" - European Social Fund Liguria Region.

From 2010 to 2012 he was Member of "Magnetism Commission of The European Spallation Source Project".

From 2009 to 2010 he was a Associate Research of the "Time of Flight and High Resolution Group" at the Institut Laue-Langevin in Grenoble, France, for research on systems with strong electronic correlations using neutron diffraction during a period of leave for study.

From 2004 to 2010 he was Scientific Director of the Project "Magnetic materials from bulk nanostructured systems" within the project "Functional Magnetic Materials" in the Department of Materials and Devices of CNR.

From 2002 to 2012 was Proposer or co-proposer of 31 approved projects at International Large Scale Facilities CCLRC in Daresbury (UK), HASYLAB in Hamburg (D), ILL and ESRF in Grenoble (F).

From 2002 to 2010 he was Member of the Executive Committee of Lamia - Innovative Materials and Artificial Laboratory of the National Institute for the Physics of Matter - INFN with the role of Project Leader of Materials Processing Activity.

From 2002 to 2004 he was Head of Unit PRIN "Functional materials based on bulk nanostructured systems: intermetallic compounds for hydrogen storage and colossal magnetoresistance in manganites".

From 2000 to 2002 he was Head of Unit of the PRIN "Reactions self-propagating high-temperature synthesis: study of nitriding of metals by SHS high pressure"

From 1999 to 2001 he was Research Fellow at the Laboratoire CRISMAT Institut des Sciences de la Matière et du Rayonnement Caen (F).

From 1989 to 2004 he was Associate Research of the National Institute for the Physics of Matter INFN and scientific coordinator of the project "Crystal chemistry and thermodynamic properties of superconducting materials".

He was Auditor of International Projects (FP7 NMP Work Programme 2011) and National Project (Quality Assessment Research 2004-2010, FIRB and Research Projects of National Interest)