



Cristina Artini

Fixed-term assistant professor

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Education and training

2000

Master Degree in Chemistry

Correlations between structure and superconductivity the anti-K₂NiF₄ structure

University of Genova - Genova - IT

2004

PhD in Chemical Sciences

Structure-properties correlations related to the occurrence of high temperature superconductivity in Ru-based oxides

University of Genova - Genova - IT

Academic experience

2004 - 2010

Post-doctoral fellow

University of Genova - Genova - IT

Study of structural spectroscopic and transport properties of rare earth oxides

2010 - 2011

Post-doctoral fellow

CNR-Italian National Research Council - Genova - IT

Search for new materials to be used in diamond cutting tools

2011 - 2013

Researcher

CNR-Italian National Research Council - Genova - IT

High temperature wettability of refractory materials

2013 - ONGOING

Researcher

University of Genova - Genova - IT

Structural studies at the average and local scale of rare earth-based oxides and intermetallic materials for energy applications.

Work experience

2004

Metallographer at quality control department

Ansaldo Energia - Genova - IT

Preparation and analysis of metallographic samples

Language skills

English

Proficient

German

Proficient

Grosses Deutsches

Sprachdiplom

(livello C2)

Spanish

Basic

Teaching activity

Since 2018: Physical Chemistry, Chemistry and Pharmaceutical Technologies Master degree.

2014-2018: Physical Chemistry II (theoretical part), Materials Science Bachelor's degree.

2016: Physical Chemistry III (theoretical part), Chemistry and Chemical Technologies Bachelor's degree.

Tutor and supervisor of Bachelor and Master degree students in Chemistry and Materials Science.

Postgraduate research and teaching activity

Postgraduate (PhD) teaching activity

Since 2017: "Fundamentals and applications of the Rietveld method": course for PhD students of the School of Doctorate in Sciences and Technology of Chemistry and Materials of the University of Genova.

Research interests

Master degree thesis and PhD thesis: synthesis and characterization of high temperature superconductors; synthesis and transport properties of rare earths oxides.

At CNR: high temperature wettability of ultra high temperature ceramics.

Nowadays: crystallographic and spectroscopic properties of materials for energy, such as rare earth doped ceria (to be used as electrolyte in solid oxide fuel cells) and skutterudites (to be used as thermoelectric materials).

Powder x-ray diffraction and Raman spectroscopy.

Grants

2011 - 2013

Rare earth oxycarbonates and oxides as host materials for optically active lanthanide ions for applications in optoelectronics

MIUR - IT

337529 - Participant

2004 - 2006

Study and synthesis of perovskite-based functional materials

MIUR - IT

66700 - Participant

2002 - 2004

Conductive and high temperature superconductive oxides

MIUR - IT

67200 - Participant

2002 - 2004

Synthesis and chemical-physical characterization of superconductive and magnetic perovskites

MIUR - IT

Participant

Editorial activity

Editor of the book "Alloys and Intermetallic Compounds: From Modeling to Engineering", CRC Press – Taylor and Francis, Boca Raton, FL, 2017. ISBN 9781498741439.

Editor of the Journal of Materials Engineering and Performance (I.F.: 1.331) special issue dedicated to the conference GiTe 2018.

Editor together with Prof. Paolo Mele (Shibaura Institute of Technology) and Prof. Nobuhito Imanaka (Osaka University) of the thematic collection of papers "Toward sustainable energy: The unique role of rare earth oxides", to be published in Frontiers in Chemistry (I.F.: 4.155), <https://www.frontiersin.org/research-topics/7206/toward-sustainable-energy-the-unique-role-of-rare-earth-oxides>.

Member of the advisory board of the journal ES Materials & Manufacturing [ISSN: 2578-0611 (Print); ISSN: 2578-062X (Online)].

Reviewer for the following international journals: Journal of Solid State Chemistry, Journal of Thermal Analysis and Calorimetry, Journal of Rare Earths, Materials Chemistry and Physics, Inorganic Chemistry Frontiers, ACS Applied Energy Materials, Journal of Materials Engineering and Performance, Journal of Nanoscience and Nanotechnology, Journal of Phase Equilibria and Diffusion, Advanced Engineering Materials, Chemical Papers, Crystals, Journal of Manufacturing Processes, Catalysis Science and Technology, Physica Status Solidi (a), Catalysis Today, Inorganic Chemistry, Journal of the American Ceramic Society, Journal of Advanced Ceramics, Frontiers in Chemistry, Advances in Manufacturing, ChemistrySelect.