



Riccardo Freccero

Fixed-term assistant professor

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Education and training

2019

Ph.D. in Chemical Sciences and Technologies

Study of New Polar Intermetallic Compounds: Synthesis, Structural Relations and Real Space Chemical Bonding Analysis – approved with distinction

University of Genoa – Genoa – IT

2015

Master of Science in Chemical Sciences

Synthesis, Structural Characterization and Real Space Chemical Bonding Analysis for R_2PdGe_6 and La_2MgGe_6 (R : Rare-earth Metal) – 110/110 cum laude

University of Genoa – Genoa – IT

2012

Bachelor of Science in Chemistry and Chemical Technologies

Synthesis and Structural Characterization of Ternary Intermetallic Compounds – 110/110 e lode

University of Genoa – Genoa – IT

Academic experience

2021 – ONGOING

Fixed-term assistant professor (type A)

University of Genoa – Genoa – IT

2020 – 2021

Postdoctoral researcher

University of Genoa – Genoa – IT

2019 – 2020

Postdoctoral researcher

Max-Planck Institut für Chemische Physik fester Stoffe – Dresden – DE

Language skills

Italian

Native

English

Independent

French

Independent
(DEL F B2)

German

Basic



Research interests

The research activity is focused on the chemistry of intermetallic compounds, particularly those containing both rare earth metals and *p*-block elements. Since this research requires both an experimental and theoretical approach, particular attention is paid to three aspects:

- a) synthesis and development of new preparation routes;
- b) structural, microstructural, compositional and thermal characterization;
- c) chemical bonding and electronic structure analysis, based on DFT calculations;

Recently, such fundamental studies were complemented by testing intermetallics as heterogeneous catalysts, disclosing their reactivity and enriching the information on their peculiar chemical properties.

Teaching activity

2021 – ONGOING

Inorganic Chemistry 1 with Laboratory

Laboratory module – Bachelor of Science in Chemistry and Chemical Technologies (2nd year)

Grants

2022 – ONGOING

COMET - CO₂ METHanation through interMETallics

Curiosity Driven – University of Genoa, funded by European Union, NextGenerationEU

Principal Investigator