



## **Cristina Carbone**

Associate professor

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### ***Education and training***

**2008**

#### **PhD**

Crystallochemical and minerogenesis of iron rich oxides and idroxides related to Acid Mine Drainage processes at Libiola mine (Sestri Levante Italy)

Università di Genova - Genova - IT

### ***Academic experience***

**2018 - ONGOING**

#### **Associate Professor in Mineralogy**

Università di Genova - Genova - IT

2018 Responsible of Tutoring Activity in degree of Geological Science From 2013 to 2018 Responsible of teaching laboratories from the degree in Geological Sciences. From 2016 to 2019 member of the management board of the Italian Society of Mineralogy and Petrology (SIMP). Since 2010 Scientific manager of the X-ray diffractometry laboratory (XRD) of DISTAV

### ***Language skills***

#### **English**

Independent

### ***Teaching activity***

Teaching courses in Geological and Natural Sciences and Restoration

Methodologies for cultural heritage:

Mineralogy

Applied Mineralogy

Gemology

Crystallography and Crystallography

Laboratory of Mineralogy and Petrography

Supervisor of thesis and master's theses for the degree course in Geological and Natural Sciences of the University of Genoa.

Co-tutor of thesis and master's thesis for the degree course in Geological Sciences of the University of Bologna and Environmental Science of Ravenna

## *Postgraduate research and teaching activity*

### **Supervision of PhD students, residents and post-doctoral fellows**

Teaching course 'Advanced mineralogical techniques' (2CFU) for the PhD course in Earth Sciences of the STAT doctoral school of the University of Genoa.

Supervisor of two doctoral theses of the University of Genoa and co-author of a doctoral thesis in collaboration with the Department of Geosciences at the University of Padova.

### *Research interests*

The topics can be grouped into four main areas of research:

- 1) mineralogy of 'extreme' environments, in particular Acid Mine Drainage processes;
- 2) mineralogy of karst environments;
- 3) systematic mineralogy of new or rare phases;
- 4) mineralogy applied to the materials sciences;
- 5) biosphere mineral interactions.

#### **INTERNATIONAL SCIENTIFIC EXPERIENCES**

- 2006 Applications of the Rietveld methodology to the qualitative and quantitative analysis of minerals and the refinement of crystalline structures from powder spectra. (Prof. Tonci Balic-Zunic), University of Copenhagen (Denmark).

- Participation and management of 7 projects presented and financed by the European Synchrotron Radiation Facility (ESRF) of Grenoble:

- 2005 Main proposer of experiment CH-195: “*Characterization by means of micro-diffraction and micro-fluorescence analyses of Fe-oxyhydroxides heterogeneous aggregates formed by supergenic alteration of natural Fe-Cu sulfides*”, from 18/11/2005 to 22/11/2005 at ID18F beamline.
- 2006 Co-proposer of experiment EC-156: “*Characterization by means of m-XRF and m-XANES of Fe-oxides and oxyhydroxides formed by polymetallic sulphides alteration during AMD processes*”, from 19/04/2007 to 24/04/2007 at ID21 beamline.
- 2009 Main proposer of experiment HS-3555: “*Micrometric single crystal structure analyses of Vanadium minerals with unresolved structure*”, from 25/09/2009 to 26/09/2009 at ID13 beamline.
- 2009 Co-proposer of experiment HS-3969: “*Lattice preferred orientation of omphacite in eclogite samples from the Western Alps (Voltri Massif, Italy)*” from 14/12/2009 to 15/12/2009 beamline.
- 2015 Main proposer of experiment ES-248: “*Zn speciation in colloidal precipitates and fungi related to Acid Mine Drainage processes*” from 21/07/2015 to 27/07/2015 at ID13 beamline..
- 2016 Co-proposer of experiment ES-367: “*Y and Ce chemical state and local environment in colloidal precipitates related to acid mine*

*drainage environment*" from 03/03/2016 to 07/03/2016 at BM08 beamline.

- 2016 Main proposer of experiment EV-197 "*Woodwardite structural refinement and effect of Y and Ce incorporation*" from 03/10/2017 to 05/10/2017 at BM01 beamline.