



## Pavlo Solokha

Associate Professor

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### Education and training

2008

#### PhD in Chemistry

Interaction of the components in Tb-(Fe Ni Cu)-(Zn Mg) ternary systems and related to them (phase equilibria crystal structure and physical properties of compounds) - 5/5

Ivan Franko National University of Lviv - UA

2003

#### Master degree in Chimica

Isothermal section of the Tb-(Cu Ni)-Zn ternary systems - 5/5

Università Ivan Franko di Lviv - Leopoli - UA

### Academic experience

2019 - ONGOING

#### Associate Professor (CHIM03)

University of Genoa - Genoa - IT

Research activities in the field of intermetallic systems. Teaching activity for the bachelor and master courses; member of the doctorate teaching board.

2016 - 2019

#### Researcher of B-type

University of Genoa - Genoa - IT

Crystallography of intermetallic compounds; Study of their crystallochemical relationships and electronic structure calculations aimed at studying the chemical bonding of intermetallics

2012 - 2016

#### Researcher of A-type

University of Genoa - Genoa - IT

2005 - 2008

#### Research fellows

University of Genoa - Genoa - IT

Research activities on ternary intermetallic systems and Mg-containing light alloys.

## Language skills

**Ukrainian**

Native

**Italiano**

Advanced

**English**

Expert

**French**

Good

## Teaching activities

- Course of "General and Inorganic Chemistry with Laboratory" (9CFU) for the bachelors in Geological Sciences starting from A.Y. 2015/2016 to A.Y. 2022/2023. From the A.Y. 2022/2023, this teaching is carried out jointly for the bachelors in Geological Sciences and Biotechnology.
- B-type course "Single crystal diffraction at work" (2 CFU) for doctorates in Chemistry and Materials Science and Technology from A.Y. 2022/2023
- 2.5 CFU for the course Complements of Inorganic Chemistry (laboratory assistance) from A.Y. 2021/2022

## Research interests

- Study of new ternary and multicomponent alloys
- Experimental determination of phase equilibria of binary and multicomponent metal systems
- Crystallographic characterization of intermetallic phases, in particular:
  - Study of the ordering phenomenon of vacancies for binary and ternary germanides and structural problems related to
  - Modulated structures; twins of intermetallic crystals, etc.
- Chemical bonding studies in intermetallics, especially polar intermetallics

## Assignments abroad

Dr. Solokha has spent several research periods abroad, during which he has investigated aspects related to his research topics, in the context of national and international collaborations:

- June 2018, at the Institute of Experimental Physics, Technische Universität Bergakademie Freiberg, Germany. Object of the research activity: 'Application of the high entropy method for the resolution of complex crystalline structures and construction of electronic density maps. Collaboration with dr. Tilmann Leisegang.
- August-September 2012 at the Max Planck Institute for Chemical Physics of Solids, Dresden, Germany. Object of the research activity: 'Analysis of the chemical bond in the intermetallic compounds through the ELI-D function'. Collaboration with Prof. Yu. Grin, the dr. F. Wagner and dr. A. Baranov.
- December 2009 at the Institute of Inorganic Chemistry at RWTH Aachen University, Germany. Object of the research activity: 'Calculations of electronic structure with the LMTO-ASA program'. Collaboration with Prof. R. Dronskowski.
- 2005-2008 (for a total period of 18 months) at the Institut Charles Gerhardt, Montpellier, France (under the supervision of Prof. JC Tedenac), Object of the research activity: studies on some aspects related to the crystal-chemistry of alloys ternaries of rare earths (rare earth alloys - {Zn, Cu, Ni} -Mg) within the Research Doctorate.