Level: master

Course title: Inorganic synthesis and methods of characterization

Status: elective

ECTS: 7

Requirements: none

Learning objectives

Acquiring knowledge about modern synthesis of the inorganic complex compounds and the application of various physical methods for their characterization.

Learning outcomes

Students should be able to:

1. use the specific laboratory equipment for inorganic synthesis;
2. demonstrate extended theoretical knowledge about reactions to obtain various classes of simple and complex inorganic compounds;
3. demonstrate practical knowledge and skills in the synthesis and characterization of the corresponding simple and complex inorganic compounds.

Syllabus

Theoretical instruction

Equipment in inorganic synthesis. Methods of obtaining, purification and characterization of elements and alloys, various classes of simple compounds, double salts, chelates, clathrates and organo-metallic compounds.

Practical instruction

Obtaining elements, oxides, peroxides, and sulphide, acids, bases, normal, acidic and basic salts. Dehydration of crystallohydrates. Synthesis of double and complex salts.

Weekly teaching load				Other:
Lectures: 2	Exercises: 4	Other forms of teaching:	Student research:	