

**RESEARCH TOPICS IN THE DISCIPLINE OF CHEMICAL SCIENCES
IN THE ACADEMIC YEAR 2023/2024**

Lp.	PhD Supervisor	ORCID	Contact	Research topics
1	Anna Adach	0000-0001-9438-054X	Anna.Adach@ujk.edu.pl	Synthesis, structural and spectroscopic characterization of new coordination compounds of potential anti-cancer properties, isolated in redox reactions, using zerovalent metals as substrates.
2	Barbara Gawdzik	0000-0002-4355-7381	Barbara.Gawdzik@ujk.edu.pl	1. Synthesis of organic ligands containing S, N and O donor atoms. 2. Synthesis, structural and spectroscopic characterization of new coordination compounds of catalytic properties. 3. Olefin oligomerization process catalyzed by coordination complexes of transition metals ions.
3	Joanna Masternak	0000-0002-8785-3879	joanna.masternak@ujk.edu.pl	New coordination complexes of selected metal ions in the light of model studies on biological activity of compounds
4	Paweł Rodziewicz	0000-0003-4397-5054	pawel.rodziewicz@ujk.edu.pl	1. Theoretical studies of intermolecular interactions in water solution of chemical warfare agents from first principles. 2. Theoretical studies of intermolecular interactions between the surface of metal nanoparticles and organic compounds from first principles
5	Przemysław Rybiński	0000-0001-5131-0699	przemyslaw.rybinski@ujk.edu.pl	Anticorrosive properties of metallic coatings obtained by the cold gas method
6	Mieczysław Scendo	0000-0002-4860-0553	scendo@ujk.edu.pl	Polymeric composites and nanocomposites. Composite materials for special applications. Pro-ecological composite materials. Material tests in terms of their

				thermal stability, fire hazard, smoke emission, toxicometric indicators.
7	Piotr Słomkiewicz	000-0002-2521-1838	piotr.slomkiewicz@ujk.edu.pl	<ol style="list-style-type: none"> 1. Immobilization of toxic chemicals on mineral-carbonized adsorptive materials from the gas and liquid phases. 2. Determinationl psychoactive compounds on mineral-carbonized adsorption materials from the liquid phases.
8	Alicja Wzorek	0000-0001-9041-7034	awzorek@ujk.edu.pl	<ol style="list-style-type: none"> 1. Synthesis of the new nucleotide analogues containing difluorophosphate or phosphoramidate group (CF₂-ProTide analogues) and evaluation of their biological activities. 2. Evaluation of the methods for enantiomeric enrichment of the chiral compounds.
9	Walentyna Zubkowa	0000-0002-7039-2535	walentyna.zubkowa@ujk.edu.pl	A study on the influence of pre-treatment and organic and inorganic additives on thermal processing of agricultural biomass wastes along with structural-chemical parameters of the formed solid, liquid, and gas products