**Reserach topics in the discipline of chemistry**

**In the academic year 2025/2026**

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| **Sg.** | **PhD Supervisor** | **ORCID** | **Contact**  **e-mail** | **Research topics** | **Language of the doctoral dissertation** |
|  | Anna Adach | 0000-0001-9438-054X | [Anna.Adach@ujk.edu.pl](mailto: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. | polish |
|  | Barbara Gawdzik | 0000-0002-4355-7381 | [Barbara.Gawdzik@ujk.edu.pl](mailto:Barbara.Gawdzik@ujk.edu.pl)  tel.: 413-497-011 | 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. | polish |
|  | Agnieszka Jabłońska-Wawrzycka | 0000-0003-3935-0772 | [Agnieszka.Jablonska-Wawrzycka@ujk.edu.pl](mailto:Agnieszka.Jablonska-Wawrzycka@ujk.edu.pl) | Structure, physicochemical characterisation and biological activity of ruthenium complexes in the context of their potential utilization as antibiofilm agents | polish |
|  | dr hab. Katarzyna Jedynak, prof. UJK | 0000-0002-2894-8800 | [katarzyna.jedynak@ujk.edu.pl](mailto:katarzyna.jedynak@ujk.edu.pl) | Obtaining nanoporous carbon materials from organic waste and studying their physicochemical properties. Application of obtained materials in the process of eliminating environmental pollution. | polish |
|  | Paweł Rodziewicz | 0000-0003-4397-5054 | [pawel.rodziewicz@ujk.edu.pl](mailto:pawel.rodziewicz@ujk.edu.pl) | 1. Theoretical studies of intermolecular interactions in water solution of chemical warfare agents from first principles calculations.  2. Theoretical studies of intermolecular interactions between the surface of carbon nanotubes or fullerenes and organic compounds from first principles calculations. | polish |
|  | Przemysław Rybiński | **0000-0001-5131-0699** | [przemyslaw.rybinski@ujk.edu.pl](mailto:przemyslaw.rybinski@ujk.edu.pl)  Tel. 6437 | 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. | polish |
|  | Mieczysław Scendo | 0000-0002-4860-0553 | [scendo@ujk.edu.pl](mailto:scendo@ujk.edu.pl) | Anticorrosive properties of metallic coatings obtained by the cold gas method | polish |
|  | Piotr Słomkiewicz | 000-0002-2521-1838 | [piotr.slomkiewicz@ujk.edu.pl](mailto:piotr.slomkiewicz@ujk.edu.pl) | 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. | polish |
|  | Alicja Wzorek | 0000-0001-9041-7034 | [awzorek@ujk.edu.pl](mailto:awzorek@ujk.edu.pl)  +48 41 349 7016 | 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. | polish |
|  | Walentyna Zubkowa | 0000-0002-7039-2535 | [walentyna.zubkowa@ujk.edu.pl](mailto:walentyna.zubkowa@ujk.edu.pl)  +48 41 349 70 30 | The influence of the method of biomass pre-treatment on the composition and structure of pyrolysis products. | polish |