

**Faculty of Chemical Engineering and Technology, Cracow University of Technology
announces a competition for employment for the position of post-doc in the project:
OPUS (NCN) entitled: "High-performance bioceramic materials processed by additive manufacturing
for advanced dental implantology"
No. UMO-2025/57/B/ST11/03249**

Job Title: Post-doc

Number of beds: 1

Necessary Eligibility Requirements:

- a) **education:** a doctoral degree in chemical sciences, technical sciences (in particular materials engineering, chemical engineering, biotechnology) or related
- b) **seniority:** minimum 4 years of experience in laboratory work related to functional materials, including polymer or composite materials
- c) **professional experience:** experience in the implementation of research projects as a contractor or manager, in particular in the field of materials for biomedical or related applications
- d) **knowledge of foreign languages:** very good knowledge of English (min. B2 level), enabling the preparation of scientific publications and project documentation
- e) **the necessary professional skills or qualifications:**
 - knowledge of issues related to polymer and composite materials and 3D printing technologies
 - experience in testing the physicochemical and biological properties of materials, including spectroscopic techniques (UV-Vis, FT-IR, fluorescence) and electrochemical methods
 - experience in conducting in vitro studies, including cytotoxicity, genotoxicity and microbiological analyses
 - ability to independently plan, conduct and analyze experimental research
 - experience in developing test procedures and optimizing parameters
 - processes (e.g. photocuring, 3D printing, sintering)
 - knowledge of issues related to the characterization and modification of composite materials (organic matrices, photoinitiators, fillers, functional additives)
 - Scientific achievements documented by publications in peer-reviewed scientific journals and participation in conferences (preferably international) Participation in the implementation of research projects funded in the competition mode (national or international) or experience in the preparation of project proposals

Additional Eligibility Requirements:

- a) communicativeness, ability to work in a team
- b) regularity, accuracy in action and good organization of work
- c) the ability to act independently, reliably and responsibly in order to perform the entrusted scope of duties

Required documents:

1. Candidate's CV
2. List of scientific achievements (including language certificates, activity in scientific circles, participation in training, conferences, publications, distinctions, awards, internships, scholarships and awards)
3. A cover letter (containing a brief description of the candidate's scientific interests, the candidate's main strengths and achievements, and motivation to work in the project);
4. Copy of doctoral diploma
5. Candidate's statement of consent to the processing of personal data in accordance with the Act of 29.08.1997 on the protection of personal data (consolidated text: Journal of Laws of 2015, item 2135) and in accordance with Regulation (EU) 2016/679 of the European Parliament and of the Council of

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27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (GDPR).

Form of submission of bids:

Offers should be sent by e-mail (in pdf format) to: monika.topa-skwarczynska@pk.edu.pl
In the subject line of the e-mail, please write "**Post-DOC OPUS - 29**".

The application should include: "I consent to the processing of my personal data for the purpose of recruitment in accordance with Article 6(1)(a) of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)"

Description of tasks:

The employee will participate in the implementation of the research project "High-performance bioceramic materials processed by additive manufacturing for advanced dental implantology" No. **UMO-2025/57/B/ST11/03249** funded by the National Science Centre under the OPUS call

The duties of a post-doc will include:

- WP1 - Design of resin composition, their synthesis and investigation of the influence of components on photocuring efficiency and photorheological properties
- WP2 - 3D Printing Optimization - Selection of Printing Conditions, Printer Selection
- WP3 - Optimization of post-treatment - removal of organic binder, selection of sintering conditions, assessment of the impact of heat treatment on the microstructure and physicochemical properties of prints
- WP4 - Cytotoxicity and osseointegration studies of the developed materials
- WP5 - Explanation of the mechanism of initiation and interaction between resin components (monomer, photoinitiator, inorganic filler doped with another phase, dispersant, surfactant)

NCN call type: OPUS – POST-DOC

Deadline for submission of bids: 10 April 2026 (until 15:00)

Form of submission of bids: by e-mail (monika.topa-skwarczynska@pk.edu.pl)

Conditions of employment:

Type of contract: employment contract

Estimated (indicative) start date: 01.05.2026

Period of employment: for a period of 6 months

Monthly salary: PLN 8,600.00 basic (depending on the length of service)

The remuneration including components will not exceed PLN 11,500.00 per month

Additional information:

1. Applications will be evaluated by the project manager, and the final stage of recruitment will include an interview with the candidate.
2. The interview will take place on the date specified in advance
3. The competition will be decided within 3 working days after the interview
4. The condition for employment in the project is that there is no employment under an employment contract / civil-law contract in NCN projects,
5. Candidates can obtain additional information regarding the subject matter of the project directly from the principal investigator (Monika Topa-Skwarczyńska, PhD, Eng., e-mail: monika.topa-skwarczynska@pk.edu.pl).

The documentation submitted by the candidates will be assessed by a committee chaired by the project manager. Selected candidates may be invited for an interview. It is possible to have an online interview.

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The final decision of the committee will be presented to the candidates by e-mail no later than 14 days after the conclusion of the competition.

In the event that the selected candidate resigns from signing the contract, the committee reserves the right to select the next candidate from the reserve list. The competition may be repeated once again until a candidate who meets all the requirements is found.

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