

Dean
of Faculty of Mechanical Engineering
VSB – Technical University of Ostrava
announces a selection procedure for a post of
Postdoctoral researcher (R2) in
Particle Engineering Center

Position: Developing of new particulate engineering material systems using AI

The position is suitable for both women and men.

About the PEC Centre

Join the Particle Engineering Centre (PEC), led by Prof. Aleš Slíva, where innovation meets real-world impact. PEC is dedicated to exploring and advancing complex particle systems across diverse industrial applications. Our mission is to integrate cutting-edge research in particle design, characterization, and optimization with tangible industry needs. By fostering interdisciplinary collaboration among chemists, materials scientists, and nanotechnology experts, PEC strives to deliver practical solutions that transform industries. With world-class facilities and a robust research infrastructure, we aim to establish ourselves as a global leader in particle engineering.

Position Overview

The Postdoctoral researcher will:

- Drive forward advanced research initiatives at the Particle Engineering Center
- Lead innovative, interdisciplinary studies on particle design, formulation, and characterization
- Disseminate impactful findings through high-quality publications in peer-reviewed journals and presentations at major scientific conferences
- Provide mentorship to graduate and undergraduate researchers, fostering their growth and academic success
- Actively contribute to securing research funding by aiding in the preparation of grant proposals and comprehensive project reports

Research Focus

- **Artificial intelligence in particle materials:** integration of artificial intelligence (AI) into particle engineering processes and proposal of new material modelling. Integrating artificial intelligence through an algorithm for optimizing material design and assisting in selecting the best geometric structure.
- **Innovating, designing, and characterizing advanced particle systems:** applications spanning pharmaceuticals, materials science, and nanotechnology.
- **Pioneering new strategies for controlled drug delivery:** enhancing material performance, and enabling sustainable production methods. Strong emphasis will be placed on interdisciplinary approaches that integrate cutting-edge experimentation, advanced modeling, and comprehensive data analysis.

Candidate Profile

Essential Qualifications:

- A Ph.D. in Mechanical Engineering, Chemical Engineering, Environmental Engineering or a related discipline.
- Strong research experience in research areas with a proven track record in experimental work and advanced modelling.
- Proven track record of high-quality publications in relevant scientific journals.

Desirable Skills:

- Experience with experimental setups and analytical techniques.
- Knowledge of advanced simulation tools.
- Excellent communication and team collaboration skills in an international research environment.

Full time equivalent:	both part and full-time employment possible
Type of job contract:	fixed-term employment contract with the possibility of extension
Anticipated commencement:	1 st May 2026 onward
Number of positions:	1

What We Offer

- access to modern research facilities,
- collaboration with a dynamic, international research team,
- opportunities to publish impactful research in high-ranking journals and participate in international conferences,
- supportive environment for skill development and professional growth,
- work in a promising organization,
- salary evaluation according to the candidate's experience,
- modern laboratory facilities,
- opportunity to participate in excellent research,
- flexible working hours,
- university kindergarten,
- 6 weeks of holidays,
- free parking for employees on the university campus,
- company catering in the canteen,
- MultiSport card,
- other employee benefits according to the employer's offer.

The PEC is committed to fostering diversity and inclusion. We encourage applications from candidates of all backgrounds and experiences. The working language is English.

Your personal data will be processed only to the extent necessary for the execution of the selection procedure in accordance with EU Regulation 2016/679: [Informace-pro-uchazece-o-zamestnani-AJ.pdf \(vsb.cz\)](#).

For inquiries or to submit your CV and introductory letter, please reach out to Prof. Ales Sliva at ales.sliva@vsb.cz **till 30. 6. 2025**.

Candidate selection for this position will be based on a comprehensive evaluation of their academic credentials, research achievements, potential for future contribution to the field, alignment with the department's strategic goals, and demonstrated ability to collaborate effectively with peers and students.