



PŘIHLÁŠKA K SDZ / APPLICATION FORM FOR SDE

Jméno a příjmení doktoranda: Name and surname of PhD student:	Mohammad Gheibi
Studijní program / Studijní obor: Study program / Study field:	M22000264 – FM-Environmental Engineering
Forma studia: Mode of study:	Full-time
Ústav: Institute:	NTI
Školitel: Supervisor:	doc. Ing. Stanisław Waclawek, Ph.D.
Téma písemné práce: Theme of written work for SDE:	„Adsorption-based sustainable recovery of heavy metals from water resources by secondary raw materials“

Publikační výsledek dokládající splnění podmínky pro přihlášku k SDZ (dle čl. 20 ods. (2) směrnice děkana č. 1/2020):
A published output according to Article No. 20 (2) of the Dean's regulation No. 1/2020:

- **Gheibi, M.**, Masoomi, S.R., Eftekhari, M., Akrami, M., Palušák, M., Silvestri, D., Černík, M. and Waclawek, S., 2025. Heavy metals adsorption using CDW adsorbents: A sustainable path for water purification. *Journal of Hazardous Materials Advances*, 20, p.100883.
- **Gheibi, M.**, Masoomi, S.R., Eftekhari, M., Palušák, M., Silvestri, D., Černík, M. and Stanisław, W., 2025. Smart Control of Heavy Metal Adsorption onto LDC Wastes for Industry 4.0 Applications. *Digital Chemical Engineering*, p.100286.
- **Gheibi, M.**, Hajiahmadi, Z., Jaromin-Glen, K., Eftekhari, M., Behzadian, K., Černík, M. and Waclawek, S., 2025. AI-based expert system design for optimisation of heavy metal adsorption on waste-derived adsorbents. *Chemistry-Didactics-Ecology-Metrology* 2025;30(1-2):47-65.
- **Gheibi, M.**, Hajiahmadi, Z., Palušák, M., Silvestri, D., Černík, M., Eftekhari, M. and Waclawek, S., 2026. Turning E-waste into value: Innovative metal recovery using low-density concrete: Experiments and simulations. *Results in Chemistry*, p.103170.
- **Gheibi, M.**, Palušák, M., Salava, M., Sydorenko, Y., Eftekhari, M., Silvestri, D., Černík, M. and Waclawek, S., 2026. A smart decision support system for Co²⁺ preconcentration using RSM and AI-Driven adsorptive modeling. *Engineering Science and Technology, an International Journal*, 77, p.102335.



- **Gheibi, M.**, Waclawek, S., Leo, C.P., Sadr, S. and Behzadian, K., 2024, June. Dynamic Modelling, Simulation, and Sensitive Analysis of Lead Removal in a Fixed-Bed Adsorption Column using Waste-Based Materials. In IOP Conference Series: Earth and Environmental Science (Vol. 1368, No. 1, p. 012009). IOP Publishing.
- **Gheibi, M.**, Masoomi, S.R., Magala, M.U., Fathollahi-Fard, A.M., Ghazikhani, A. and Behzadian, K., 2024. The Application of Artificial Intelligence (AI) in Adsorption Process of Heavy Metals: A Systematic Review. Environmental Industry Letters, 2(2), pp.57-78.
- Enferadi, S., Eftekhari, M., **Gheibi, M.**, Moghaddam, N.N., Waclawek, S. and Behzadian, K., 2024. Modelling and optimising the performance of graphene oxide-Cu₂SnS₃-polyaniline nanocomposite as an adsorbent for mercury ion removal. Environmental Science and Pollution Research, 31(26), pp.38196-38216.
- Makarem, A., Aldaghi, A., **Gheibi, M.**, Eftekhari, M. and Behzadian, K., 2024. One-step hydrothermal synthesis of a green NiCo-LDHs-rGO composite for the treatment of lead ion in aqueous solutions. The Canadian Journal of Chemical Engineering, 102(3), pp.1248-1261.
- Hussien, L.B., Al-Kinani, E.M., Moradi, H., **Gheibi, M.** and Eftekhari, M., 2025. Folic acid capped Cu (II) nanocluster for solid phase extraction of lead from water and food samples. Microchemical Journal, 212, p.113374.
- Enferadi, S., Moradi, M., Alkinani, A., Moradi, H., **Gheibi, M.** and Eftekhari, M., 2025. Synthesis of lanthanum phosphate-carbon nanoparticles using a hydrothermal method and their application for lead ion removal. New Journal of Chemistry, 49(12), pp.4864-4875.
- Hussien, L.B., Al-Kinani, E.M., Hamud, W.M., Eftekhari, M., Moradi, H. and **Gheibi, M.**, 2026. Cu₂S-ZnS PANI nanocomposite adsorbent for the removal of lead ion from water samples. Journal of Water Process Engineering, 83, p.109501.

Podpis doktoranda:

Signature of PhD student: **Mohammad Gheibi**

Datum:

Date: **14.04.2026**

Vyjádření školitele: **DOPORUČUJI / NEDOPORUČUJI** studenta k vykonání SDZ.

Supervisor's opinion:

Podpis školitele:

Signature of supervisor: **doc. Ing. Stanislaw Witold Waclawek**

Datum:

Date: **14.04.2026**

Datum podání přihlášky na studijní oddělení:

Date of delivery the application form to study department:

Příloha: **Teze disertační práce** – 8x v tištěné podobě + **CV** (viz čl. 19 Studijního a zkušebního řádu TUL)

Attachment: **Small thesis** – 8 copies + **CV** (acc. Article No.19 Study and Examination Regulations TUL)