

PŘIHLÁŠKA K SDZ / APPLICATION FORM FOR SDE

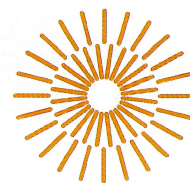
Jméno a příjmení doktoranda: Name and surname of PhD student:	Hadi Taghavian
Studijní program / Studijní obor: Study program / Study field:	Environmental Engineering - P0588D130007
Forma studia: Mode of study:	Full-time
Ústav: Institute:	Institute for nanomaterials, advanced technology and innovation, cxi
Školitel: Supervisor:	prof. Dr. Ing. Miroslav Černík, CSc
Téma písemné práce: Theme of written work for SDE:	Highly efficient membrane development for advanced wastewater treatment system

Publikační výsledek dokládající splnění podmínky pro přihlášku k SDZ (dle čl. 20 ods. (2) směrnice děkana č. 1/2020):

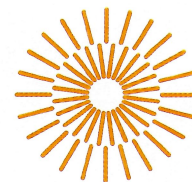
A published output according to Article No. 20 (2) of the Dean's regulation No. 1/2020:

Lists of publications:

- ✓ Highly Stable, Flexible, Anticorrosive Coating of Metalized Nonwoven Textiles for Durable EMI Shielding and Thermal Properties
MZ Khan, **H Taghavian**, X Zhang, J Militky, A Ali, J Wiener, V Tunáková, ...
ACS Omega 2025 10 (8), 8127-8139 (2025).
- ✓ UV-Activated TiO₂-Coated Carbon Felt for Photocatalytic Dye Degradation and Antibacterial Applications
Y Wang, J Omsinsombon, N Prateepmaneerak, S Li, G Zhu, MZ Khan, **H Taghavian**, M Venkataraman, J Militký, A Chaiyasat.
Surfaces and Interfaces, 106018 (2025).
- ✓ Green superhydrophobic surface engineering of PET fabric for advanced water-solvent separation
H Taghavian, MZ Khan, J Wiener, J Militky, B Tomkova, M Venkataraman, ...
Progress in Organic Coatings 197, 108842 (2024).
- ✓ Green in-situ immobilization of ZnO nanoparticles for functionalization of polyester fabrics
MZ Khan, **H Taghavian**, J Wiener, J Militky, Y Wang, B Tomkova, M Cernik, ...
Surfaces and Interfaces 55, 105336 (2024).



- ✓ A Novel Organic-Inorganic-Nanocomposite-Based Reduced Graphene Oxide as an Efficient Nanosensor for NO₂ Detection
M Khaleghiabbasabadi, **H Taghavian**, P Gholami, S Khodabakhshi, ...
Nanomaterials 14 (24), 1983 (2024).
- ✓ "A risk-based soft sensor for failure rate monitoring in water distribution network via adaptive neuro-fuzzy interference systems"
Mohammad Gheibi, Reza Moezzi, **Hadi Taghavian**, Stanisław Waclawek, Nima Emrani, Mohsen Mohtasham, Masoud Khaleghiabbasabadi, Jan Koci, Cheryl S. Y. Yeap & Jindrich Cyrus
Scientific Reports 13, 12200 (2023).
- ✓ "Advanced (bio) fouling resistant surface modification of PTFE hollow-fiber membranes for water treatment"
H Taghavian, M ČERNÍK, L DVOŘÁK
Scientific Reports 13, 11871 (2023).
- ✓ "Effect of microwave power on bactericidal and UV protection properties of the ZnO nanorods grown cotton fabrics"
MZ Khan, **H Taghavian**, M Fijalkowski, J Militky, B Tomkova, ...
Colloids and Surfaces A: Physicochemical and Engineering Aspects 664, 131135 (2023).
- ✓ "Exterior surface characterization of the novel surface modified PES HF membrane applicable in bioreactor"
H Taghavian, M ČERNÍK, L DVOŘÁK
Proceedings 15th International Conference on Nanomaterials - Research & Application, (2023).
- ✓ "A Smart Bioreactor-based Production and Distribution System for Spirulina Algae in Developed Countries"
M Gheibi, R Moezzi, M Khaleghiabbasabadi, **H Taghavian**, TM Vu
International Journal of Innovative Technology and Interdisciplinary Sciences (2023).
- ✓ "Intelligent Estimation of Total Suspended Solids (TSS) in Wastewater Treatment Plants Utilizing Non-Linear Regression Analysis"
M Gheibi, R Moezzi, M Khaleghiabbasabadi, **H Taghavian**, K Dhoska
Journal of Transactions in Systems Engineering 1 (1), 50-55 (2023).
- ✓ "The operation of urban water treatment plants: a review of smart dashboard frameworks"
A Kiyan, M Gheibi, M Akrami, R Moezzi, K Behzadian, **H Taghavian**
Environmental Industry Letters 1 (1), (2023).
- ✓ "Design of a Decision Support System to Operate a NO₂ Gas Sensor Using Machine Learning, Sensitive Analysis and Conceptual Control Process Modelling"
M Gheibi, **H Taghavian**, R Moezzi, S Waclawek, J Cyrus, ...
Chemosensors 11 (2), 126 (2023).
- ✓ "Superhydrophilic surface modification of PTFE hollow-fiber membrane with advanced biofouling properties for water purification"
H Taghavian, M ČERNÍK, L DVOŘÁK
Proceedings 14th International Conference on Nanomaterials - Research & Application, 91-96 (2022).



Podpis doktoranda:

Signature of PhD student:

Datum: 7.3.2025

Date:

Vyjádření školitele: **DOPORUČUJI / NEDOPORUČUJI** studenta k vykonání SDZ.
Supervisor's opinion:

Podpis školitele:

Signature of supervisor:

Datum:

Date:

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)