Mohaddeseh Shahabi Nejad, Ph.D.

1. PERSONAL DATA

Email address: upolmosh@savba.sk
Google Scholar: https://scholar.google.com/citations?user=At_7L_cAAAAJ&hl=en

2. ABOUT ME

I am an organic chemist with a decade of research experience in nanostructured materials synthesis and functionalization. Recently, my focus has shifted to biomaterials, particularly smart and biocompatible hydrogels. I am currently working on supramolecular and photopolymerizable hydrogel systems incorporating stimuli-responsive and bio-orthogonal chemistries, aimed at applications in tissue engineering and drug delivery.

3. EDUCATION

- **Ph.D. in Organic Chemistry Shahid Bahonar University of Kerman** [2014 - 2018]
  Website: https://uk.ac.ir/
  Thesis: Nanocatalysts and their applications in organic reactions.

- **M.Sc. in Organic Chemistry, Isfahan University of Technology** [2010 - 2013]
  Website: https://english.iut.ac.ir/
  Dissertation: Synthesis and characterization of gold nanocatalysts.

- **B.Sc. in Chemistry, Shahid Bahonar University of Kerman** [2005 - 2009]
  Website: https://uk.ac.ir/

4. PROFESSIONAL EXPERIENCE

- **Postdoctoral Researcher** [2024 - Current]
  Polymer Institute of Slovak Academy of Science
  Website: https://polymer.sav.sk/home/
  Research on: Hydrogels with stimuli-responsive and bio-orthogonal chemistries

- **R&D Researcher** [2021 - 2024]
  Research and Processing Center of IBKO Company
  Website: https://ibkogroup.com/?lang=en
  Research on: Pilot-scale synthesis of organic extractants for mineral processing

- **Postdoctoral Researcher** [2019-2021]
  Shahid Bahonar University of Kerman
  Website: https://uk.ac.ir/
  Research on: Multi-functional materials for environmental remediation

5. TEACHING AND SUPERVISION ACTIVITIES

- **Co- Supervisor at Shahid Bahonar University of Kerman** [2019 - 2024]
  Co-Supervisor of six Master's dissertations on multi-functional materials
- **Lecturer at Shahid Bahonar University of Kerman** [2016 - 2023]
  Courses Taught: Isolation and purification of organic compounds, Biochemistry lab
- **Lecturer of Pre-University program at Applied Sciences University of Kerman** [2014 - 2023]
  Pre-University Courses: General chemistry, Environmental chemistry.

6. OTHER PROFESSIONAL ACTIVITIES

- Editorial Board Member of 11th Edition of International Conference on Sensing Technology [2023]
- Editorial Board Member of International Conferences of Infectious Diseases [2021]
- Reviewer for Journals: Water, Catalyst, Polymers, etc. [2020 - Current]
- Membership in the Iranian Chemical Society [2020 - Current]

7. SKILLS AND TRAINING

- **Synthesis & Functionalization:**
  Carbohydrate, Graphene & Graphene Oxide, Quantum Dots, Graphitic Carbon Nitride, Biochar, Metal & Metal Oxide Nanoparticles,
- **Characterization**
  ^{1}H & ^{13}C NMR, FTIR, SEM, XRD, TEM, UV-Vis
- **Operation of Devices**
  Atomic Absorption Spectroscopy, Inductively Coupled Plasma Spectrometry, X-Ray Fluorescence. Mechanical and Tensile, Rheology
- **Workshops**
  Guidelines for Keeping a Laboratory Record, Principles and Applications of NMR Spectroscopy, Higher Education Training, Project Management, Organization Using the 5S Methodology.

8. FELLOWSHIPS AND GRANTS

- **National Scholarship Programme of the Slovak Republic,** Injectable Hydrogel for Cartilage Tissue Engineering, 2024.
- **Postdoc Fellow Iran National Science Foundation**, Multi-Functional Materials for Environmental Remediation, 2020.

9. SCIENTIFIC PRODUCTION

Total number of peer-reviewed publications (JCR):	23 (20 Q1& Q2)
Number of peer-reviewed publications as first, corresponding author:	15
Number of patents:	1
Number of conference participations:	13 (3 Oral, 10 Poster)
H-index:	12

Full list available on: https://scholar.google.com/citations?user=At_7L_cAAAAJ&hl=en

APPENDIX

Patent

1. **Shahabi Nejad M.**, Toobak H., Sheibani H., Fabrication of manganese dioxide/carbon nitride hybrid enriched with zinc and cobalt as oxidative adsorbents in the desulfurization of various liquid fuels, **IR 140350140003002903,** 2024.

Publications

2025

1. **Shahabi Nejad M.**, Vakily Z., Mostafavi A., Sheibani H., *Graphitic carbon nitride nanotubes decorated with ruthenium: New efficient visible-light-driven photocatalyst,* Environmental Nanotechnology Monitoring & Management, 2025, 101034.
https://doi.org/10.1016/j.enmm.2024.101034

2024

1. Barani H., **Shahabi Nejad M.**, Esmailzadeh M., Sheibani G., Sheibani H., *Synergistic carbon quantum dots and silver nanoparticles for self-cleaning and antibacterial cotton fibers,* Cellulose, 2024, 1-3.
https://doi.org/10.1007/s10570-024-05996-5

2. Mohammadzadeh I., Eskandarizadeh A., Yazdanpanah M., Sheibani G., Mahmoodi M., Nekouei A. H., Alizadeh M. J., **Shahabi Nejad M.**, Manochehrifar H., Sheibani H., *Effect of modified nanocellulose on improving mechanical properties of flowable dental composite resin,* Inorganic Chemistry Communications, 2024; 161:112124.
https://doi.org/10.1016/j.inoche.2024.1121242022

2023

1. Miroliaei M. R., Dadfarma A., **Shahabi Nejad M.**, Jalali E., Sheibani H., *Biochar/g-C_3N_4 nano hetero-structure decorated with pt nanoparticles for diazinon photodegradation and E. coli photodeactivation under visible light,* Brazilian Journal of Chemical Engineering, 2023; 1-2.
https://doi.org/10.1007/s43153-023-00374-3

2. Nekooei A., Miroliaei M. R., **Shahabi Nejad** M., Sheibani G., Sheibani H., *Cellulose-wrapped graphene oxide as efficient adsorbents for pharmaceutical contaminants,* Inorganic Chemistry Communications, 2023; 154:110997.
https://doi.org/10.1016/j.inoche.2023.110997

2022

1. Nekooei A., Miroliaei M. R., **Shahabi Nejad** M., Sheibani H., *Enhanced visible-light photocatalytic activity of ZnS/S-graphene quantum dots reinforced with Ag_2S nanoparticles,* Materials Science and Engineering: B, 2022; 284:115884.
https://doi.org/10.1016/j.mseb.2022.115884

2. Alimohammadi P., **Shahabi Nejad** M., Miroliaei M.R., Sheibani H., *Oriented growth of copper & nickel-impregnated δ-MnO_2 nanofilaments anchored onto sulfur-doped biochar template as hybrid adsorbents for removing phenolic compounds by adsorption-oxidation process,* Chemical Engineering and Processing-Process Intensification, 2022; 176:108971.
https://doi.org/10.1016/j.cep.2022.108971

3. **Shahabi Nejad** M., Sheibani H., *Super-efficient removal of arsenic and mercury ions from wastewater by nanoporous biochar-supported poly 2-aminothiophenol,* Journal of Environmental Chemical Engineering, 2022;10(3): 107363.
https://doi.org/10.1016/j.jece.2022.107363

4. **Shahabi Nejad** M., Sheibani H., *Architecture of chitosan chains with sulfur-doped carbon dots along with decorating CeO_2 nanoparticles for the photocatalytic application,* Journal of Applied Polymer Science, 2022; 139(16): 51983.
https://doi.org/10.1002/app.51983

2021

1. Aminzadeh H., **Shahabi Nejad** M., Mohammadzadeh I., Sheibani H., *Assembly of CuO nanorods onto poly (glycidylmethacrylate)@ polyaniline core–shell microspheres: Photocatalytic degradation of paracetamol,* Applied Organometallic Chemistry, 2021; 35(12):e6423.
https://doi.org/10.1002/aoc.6423

2. **Shahabi Nejad M.,** Soltani Nejad H., Arabnejad S., Sheibani H., *Enhanced adsorption of perfluorooctanoic acid using functionalized imidazolium iodide ionic liquid-based poly (glycidyl methacrylate),* Journal of Applied Polymer Science, 2021; 138(38):50962.
https://doi.org/10.1002/app.50962

3. Zarei M., Seyedi N., Maghsoudi S., **Shahabi Nejad M.**, Sheibani H., *Green synthesis of Ag nanoparticles on the modified graphene oxide using Capparis spinosa fruit extract for catalytic reduction of organic dyes,* Inorganic Chemistry Communications, 2021; 123:108327.
https://doi.org/10.1016/j.inoche.2020.108327

2020

1. Saremi F., Miroliaei M. R., **Shahabi Nejad** M., Sheibani H., *Adsorption of tetracycline antibiotic from aqueous solutions onto vitamin B6-upgraded biochar derived from date palm leaves,* Journal of Molecular Liquids, 2020; 318:114126.
https://doi.org/10.1016/j.molliq.2020.114126

2. Zarei M., Seyedi N., Maghsoudi S., **Shahabi Nejad M.**, Sheibani H., *Synthesis of star-shaped CuO nanoparticles supported on magnetic functionalized graphene: Catalytic and antibacterial activity,* Journal of the Chinese Chemical Society, 2020; 67(11):1992-2003.
https://doi.org/10.1002/jccs.202000097

3. **Shahabi Nejad M.,** Soltani Nejad H., Sheibani H., Heydari A., *Fabrication of poly (β-Cyclodextrin-Epichlorohydrin-Thiourea) to efficient removal of heavy metal ions from wastewater*, Journal of Polymers and the Environment, 2020; 28:1626-36.
https://doi.org/10.1007/s10924-020-01701-2,

4. Seyedi N., **Shahabi Nejad M.**, Saidi K., Sheibani H., *Evaluation of functionalized reduced graphene oxide upgraded with gold nanoparticles as a hybrid nanocatalyst for the solvent-free oxidation of cyclohexene by molecular oxygen,* Comptes Rendus Chimie, 2020; 23(1):63-75.
https://comptes-rendus.academie-sciences.fr/chimie/articles/10.5802/crchim.10

5. Seyedi N., **Shahabi Nejad M.**, Saidi K., Sheibani H., *Fabrication of nitrogen-enriched graphene oxide/Cu NPs as a highly efficient and recyclable heterogeneous nanocatalyst for the Chan–Lam cross-coupling reaction,* Applied Organometallic Chemistry, 2020; 34(1):e5307,
https://doi.org/10.1002/aoc.5307

2019

1. **Shahabi Nejad M.,** Seyedi N., Sheibani H., *Fabrication of functionalized two dimensional graphene oxide and promoted with phosphotungstic acid for reduction of organic dyes in water,* Materials Chemistry and Physics, 2019; 238:121849. https://doi.org/10.1016/j.matchemphys.2019.121849

2. **Shahabi Nejad M.**, Behzadi S., Sheibani H., *Fabrication of ultra-small ruthenium nanoparticles on porous modified reduced graphene oxide and its application in solvent-free oxidation of cyclohexene with molecular oxygen,* Applied Organometallic Chemistry, 2019; 33(4):e4804. https://doi.org/10.1002/aoc.4804

3. **Shahabi Nejad M.,** Behzadi S., Sheibani H., *Multilayer-Functionalized Reduced Graphene Oxide Decorated with Gold Nanoparticles as a Designed Nanonanocatalyst for the Selective Oxidation of Cyclohexene by Molecular Oxygen in a Solvent-Free System,* Applied Organometallic Chemistry, 2019; 33(10):e5166. https://doi.org/10.1002/aoc.5166

4. **Shahabi Nejad M.,** Seyedi N., Sheibani H., Behzadi S., *Synthesis and characterization of Ni (II) complex functionalized silica-based magnetic nanocatalyst and its application in C–N and C–C cross-coupling reactions,* Molecular Diversity, 2019; 23:527-39. https://doi.org/10.1007/s11030-018-9888-2

2018

1. **Shahabi Nejad M.,** Sheibani H., *Multi-layer functionalized poly (2-vinylpyridinium) ionic liquid immobilized on magnetic nanoparticles: highly recoverable and magnetically separable Brønsted acid catalyst,* Catalysis Letters, 2018; 148:125-33. https://doi.org/10.1007/s10562-017-2219-x

2015

1. **Shahabi Nejad M.,** Ghasemi G., Martínez-Huerta M. V., Ghiaci M., *Synthesis and characterization of Au nanocatalyst on modifed bentonite and silica and their applications for solvent free oxidation of cyclohexene with molecular oxygen,* Journal of Molecular Catalysis A: Chemical, 2015; 406:118-26. https://doi.org/10.1016/j.molcata.2015.05.026,

Participation in Conferences

1. Toobak H., **Shahabi Nejad M.**, Sheibani H., *Preparation of a new nanocomposite based on Manganese dioxide with a hybrid structure and its application in the desulfurization of liquid fuel,* 2024, 1st National Conference of Industrial Adsorbents and Catalysts, Zahedan-Iran, Oral.
2. *Hajizadeh P., **Shahabi Nejad M.**, Sheibani H., Fabrication of environmentally friendly Biochar composite and investigation of its application in adsorption of Cephalexin antibiotic from wastewater,* 2023, 12th International Conference on Advanced Materials and Engineering Materials, London - England, Poster.

3. Soltani Nejad H., **Shahabi Nejad M.**, Sheibani H., *Preparation of poly(glycidyl methacrylate) and its application as a good absorbent for removal of Ethyl-violet,* 27th Iranian Seminar on Organic Chemistry, Urmia University-Iran, 2019, Poster.

4. Soltani Nejad H., **Shahabi Nejad M.**, Sheibani H., *Preparation of water insoluble β-cyclodextrin-co-thiourea polymer and its application as a new absorbent for removal Lead (II) ions from wastewater*, 2019, 27th Iranian Seminar on Organic Chemistry Urmia University-Iran, Poster.

5. **Shahabi Nejad** M., *Fabrication of ultra-small Ruthenium nanoparticles on porous modified reduced graphene oxide and its application in solvent-free oxidation of cyclohexene with molecular oxygen*, 2019, 26th Iranian Seminar on Organic Chemistry, Urmia University Zabol University-Iran, Oral.

6. **Shahabi Nejad M.**, Sheibani H., *Synthesis of three-dimensional porous poly Sulphide as a good absorbent for removal of mercury (II) and lead (II) ions from aqueous solution,* 2018, The 1st applied chemical science and technology conferences, Kerman Graduate University of Technology-Iran, Poster.

7. **Shahabi Nejad M.**, Sheibani H., *Fabrication of porous Graphene sheets promoted with Phosphotungstic acid anchored to Nitrogen-doped organic framework for the catalytic reduction of organic dyes,* 2018, The 1st applied chemical science and technology conferences, Kerman Graduate University of Technology-Iran, Oral.

8. **Shahabi Nejad M.**, Seyedi N., Sheibani H., *Ru complex immobilized on reduced graphene oxide as active catalyst for the synthesis of carboxylic acids from alcohol dehydrogenation*, 2018, 20th Iranian Chemistry Congress Ferdowsi University of Mashhad- Iran, Poster.

9. Seyedi N., **Shahabi Nejad M.**, Sheibani H., *Synthesized of palladium nanoparticles supported on functionalized 2D-geraphene oxide and their application in reduction of organic dyes,* 2018, 20th Iranian Chemistry Congress, Ferdowsi University of Mashhad-Iran, Poster.

10. Seyedi N., **Shahabi Nejad M.**, Sheibani H., *Biosynthesis and application of magnetically recyclable nanocatalys of Fe_3O_4@SiO_2–Ag by leaf extract of Origanum vulgare plant in the reduction of organic dyes in water,* 2018, 20th Iranian Chemistry Congress, Ferdowsi University of Mashhad-Iran, Poster.

11. **Shahabi Nejad M.**, Seyedi N., Sheibani H., *Two-dimensional functionalized graphene oxide anchored TPA: $H_3PW_{12}O_{40}$ and their application for reduction of organic dyes,* 2018, 20th Iranian Chemistry Congress, Ferdowsi University of Mashhad-Iran, Poster.

12. **Shahabi Nejad M.**, Sheibani H., *Multi-Layer Functionalized Poly 2-vinylpiridine Ionic Liquid Immobilized on Magnetic Nanoparticles: Highly Recoverable and Magnetically Separable Brønsted Acid Catalyst*, 2017, 19th Iranian Chemistry Congress, Shiraz University- Iran, Poster.

13. **Shahabi Nejad M.**, Seyedi N., Mohammadi P., Sheibani H., *Removal of cadmium (II) and lead(II) ions from aqueous solution using modified bentonite as a low-cost adsorbent: A kinetic and equilibrium study*, 2017, The 1st Conference on the Development of Science and Chemical Industry, University of Jiroft, Jiroft-Kerman, Poster.