

Saeedeh Khadivi-Derakhshan, Ph.D.

📍 Birjand University, Birjand, Iran

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🌐 LinkedIn | 📖 Google Scholar | 🏠 ResearchGate

EDUCATION

Sept 2018 – Aug 2024	Ph.D. in Chemistry, Inorganic Chemistry, Tabriz University, Tabriz, Iran Thesis subject: Synthesis of some transition metal complexes of cysteine and investigation of their effectiveness as an antioxidant: An experimental and computational study (Thesis score: 19.5/ 20)
Sept 2016 – Sept 2018	M.Sc. in Chemistry, Inorganic Chemistry, Tabriz University, Tabriz, Iran Thesis: Preparation and characterization of nano γ-alumina from one of the mineral materials in the Azerbaijan region and magnetite-alumina composite and investigation of their activity in the removal of pollutants (Thesis score: 19/ 20).
Feb 2013 – Sept 2016	B.Sc. in Applied Chemistry, Maragheh University, Maragheh, Iran Thesis: Synthesis and characterization of histidine-functionalized Fe_3O_4 magnetic nanoparticles (Thesis score: 20/ 20).

RESEARCH INTERESTS

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| • Electrochemical sensing of pharmaceuticals | • Amino Acid Complexes |
| • Nanomaterials for bioimaging | • Antioxidant Activity |
| • Biochemistry | • Removal of pollutants |

TEACHING EXPERIENCE

Feb 2026 – Present	Assistant Professor, Department of Chemistry, Faculty of Science, Birjand University, Birjand, Iran Courses taught: Inorganic chemistry, General chemistry laboratory
Sept 2024 – Sept 2026	Adjunct Lecturer, Department of Chemistry, Faculty of Science, Maragheh University, Maragheh, Iran Courses taught: General chemistry, Principles of chemistry, General chemistry laboratory, Inorganic chemistry laboratory, Organometallic chemistry
Sept 2022 – Jan 2024	Adjunct Lecturer, Department of Inorganic Chemistry, Tabriz University, Tabriz, Iran Courses taught: General chemistry, General chemistry laboratory
Sept 2020 – Jan 2024	Teaching Assistant, Department of Inorganic Chemistry, Tabriz University, Tabriz, Iran Course taught: Inorganic chemistry
Sept 2018 – Jan 2019	Lecturer, Tabriz University, Tabriz, Iran Courses taught: Organometallic chemistry, Kinetics/ Thermodynamics/ and Mechanism of inorganic reactions, Advanced inorganic chemistry

PROFESSIONAL EXPERIENCE

June 2024 – July 2024	Internship at Nobel Company, Tabriz, Iran
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July 2023 – Sept 2024	Research Assistant, Tabriz University of Medical Sciences, Pharmaceutical Analysis Research Center, Tabriz, Iran - Determination of amlodipine in real samples using Pt/Chitosan/Mn functionalized electrode - Synthesis of Mn(TPDCA)₂, Prepared of Pt/Chitosan/Mn(TPDCA)₂ modified electrode, Determination of amlodipine - Determining the concentration of apixaban in real samples by an electrochemical method using a glassy carbon electrode modified with silicate-based nanomaterials. - Preparation of modified electrode, Determination of apixaban - Research on bioimaging, cell culture, and colorimetric.
Sept 2022 – Aug 2024	Mentoring Master Students, Department of Inorganic Chemistry, Tabriz University, Tabriz, Iran - Supervised M.Sc. students working on synthesizing and characterizing transition metal complexes and nanoparticles with antioxidant activity. - Guided students in topic selection, experimental and research design, laboratory work, data analysis, and manuscript preparation. - Two peer-reviewed journal articles were published as outcomes of these projects.
Jan 2023 – July 2023	Visiting Researcher, Tabriz University of Medical Sciences, Pharmaceutical Analysis Research Center, Tabriz, Iran Research on electrochemical biosensors, biosensing techniques, and colorimetric.
Feb 2022 – May 2022	TGA Operator, Tabriz University, Tabriz, Iran

PUBLICATIONS

Journal Articles

Khadivi-Derakhshan, S., Pirouzmand, M., Esrafil, M.D. and Soleymani, J., 2024. Biocompatible citrate-cysteine complexes of manganese as effective antioxidants: Experimental and computational studies. *Journal of Molecular Structure*, 1306, p.137950.

Khadivi-Derakhshan, S., Pirouzmand, M., Soleymani, J. and Esrafil, M.D., 2025. Mn and Cu complexes of a novel malic acid–cysteine ligand with remarkable ROS scavenging activity. *RSC advances*, 15(27), pp.22006-22017.

Khadivi-Derakhshan, S., Abbasi, M., Akbarzadeh, A., Pirouzmand, M. and Soleymani, J., 2024. Chitosan/platinum nanocubes/Mn(TPDCA)₂-modified glassy carbon electrodes for the electrochemical quantification of amlodipine in unprocessed plasma samples. *BMC Chemistry*, 18(1), p.245.

Khatamian, M., **Khadivi-Derakhshan, S.**, Nami, S.H. and Fazli-Shokouhi, S., 2024. Nitrate removal study of synthesized nano γ -alumina and magnetite-alumina nanocomposite adsorbents prepared by various methods and precursors. *Scientific Reports*, 14(1), p.7673.

Behboudi, E., **Khadivi-Derakhshan, S.**, Pirouzmand, M., Jouyban, A. and Soleymani, J., 2025. Spectrophotometric and smartphone-based colorimetric methods utilizing polyvinylpyrrolidone-capped silver nanoparticles for determining doxorubicin in human plasma samples. *Scientific Reports*, 15(1), p.14745.

Gheybalizadeh, H., **Khadivi-Derakhshan, S.**, Gazizadeh, M., Ershadi, M., Soleymani, J. and Mokhtarzadeh, A.A., 2025. Synthesis of terbium and silica modified graphene quantum dots for targeted bioimaging of breast cancer cells using folate receptors. *Scientific Reports*.

Pirouzmand, M., Najibi, N.M., **Khadivi-Derakhshan, S.**, Mahmoudi Gharehbab, A. and Soleymani, J., 2026. Biocompatible manganese-tannic acid- β -cyclodextrin compounds as catalytic antioxidants. *Research on Chemical Intermediates*, 52(2), pp.1289-1307.

Pirouzmand, M., Nikzad-Kojanag, B., Hosseini-Yazdi, S.A. and **Khadivi-Derakhshan, S.**, 2024. Synthesis, characterization, and antioxidant efficiency of CoCu/(β CDHis) complex. *Inorganic Chemistry Communications*, 162, p.112298.

Gheybalizadeh, H., Jouyban, A., Hasanzadeh, M., Dolatabadi, J.E.N., Shahbazi-Derakhshi, P., Golsanamlu, Z., Soleymani, J.

and **Khadivi-Derakhshan, S.**, 2024. Functionalizing of magnetic nanoparticles as nano-architecture towards bioimaging and colorimetric recognition of MCF-7 cells: dual opto-sensing and fluorescence monitoring for early-stage diagnosis of breast cancer. *Microchimica Acta*, 191(12), p.752.

Pirouzmand, M., Abdollahi, F., **Khadivi-Derakhshan, S.**, Amini, M., Surface-engineered Co and Cu oxides with β CD-histidine for enhanced Catalase and SOD mimicry. *Research on Chemical Intermediates*. Under review.

Conference Proceedings

S. Khadivi-Derakhshan, M. Pirouzmand. 2022. Synthesis of Mn-citric acid modified cysteine complexes and investigation of their antioxidant activity. *21th ICS International Chemistry Congress, Azarbaijan Shahid Madani University*. Tabriz, Iran.

S. Khadivi-Derakhshan, M. Khatamian. 2022. Preparation and characterization of nano γ -alumina from $\text{Al}(\text{OH})_3$ and magnetite-alumina composites. *21th ICs International Chemistry Congress, Azarbaijan Shahid Madani University*. Tabriz, Iran.

S. Khadivi-Derakhshan, N. Kamrani, B. Divband, M. Khatamian, H. Kakili. 2018. Synthesis of γ -alumina from Nepheline syenite ore. *5th Iran International Zeolite Conference*. Tabriz, Iran.

N. Kamrani, **S. Khadivi-Derakhshan**, B. Divband, M. Khatamian, H. Kakili. 2018. Preparation and characterization of nano Mn_3O_4 and $\text{Mn}_3\text{O}_4/4\text{A}$ zeolite composite. *5th Iran International Zeolite Conference*. Tabriz, Iran.

H. Kakili, N. Kamrani, B. Divband, M. Khatamian, **S. Khadivi-Derakhshan**. 2018. Preparation and characterization of graphene oxide / Mn_3O_4 nanocomposite and study of its photocatalytic properties. *5th Iran International Zeolite Conference*. Tabriz, Iran.

SKILLS & LANGUAGES

Managerial Skills

- Good managerial skills gained through my experience as a lecturer and teaching assistant at Tabriz and Maragheh Universities.

Communication Skills

- Good communication skills gained through my experience as a lecturer

Job-related Skills

- Good proposal writing skills, Technical and non-technical, Good research abilities

Languages

- Persian (Native), Azerbaijani (Native), English (Proficient), German (Elementary)

Laboratory Skills

- Synthesis, Characterization, Electrochemical Technique, Bioimaging, MTT assay

Software

- Gaussian 2021, X'Pert, MestReNova, Mendeley, Microsoft Office, Origin Lab 2020, GraphPad Prism

HONORS & CERTIFICATES

Full Scholarship for Ph.D., M.Sc., and B.Sc. degrees by the Ministry of Science, Research and Technology of Iran.

Gas Chromatography, 25 December 2024, *Hesgar Mavad Saba Laboratory*, Teheran, Iran.

Electrochemical Impedance Spectroscopy, 26-28 July 2022, *Azarbaijan Shahid Madani University*. Tabriz, Iran.

Brunauer-Emmett-Teller (BET) surface area analysis, 26-27 August 2018, *Azar Kimia Khatam Co*. Tabriz, Iran.