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Education

Degree	Graduated in	Major	University
BSc	2015	Biology	University of Tabriz
MSc	2017	Biochemistry	University of Tabriz
Ph.D	2021	Biochemistry	University of Tabriz
Post Doctoral	2024	Biochemistry	Postdoctoral Researcher at the University of Tabriz under the Shahid Chamran Award Program of the National Elites Foundation
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Papers in Conferences

1. Samaneh Rashtbari , Gholamreza Dehghan , Roya Moharami , Mohammad Pazhang ,Spectroscopic and molecular docking study of the interaction of piroctone olamine with human serum albumin ,6th conference on proteins and peptides science & technology ,2025, تهران.
2. Melika Moniriraad , Gholamreza Dehghan , Samaneh Rashtbari ,Efficient removal of malachite green dye colorant by a stable and functional bacterial laccase enzyme ,6th conference on proteins and peptides science & technology ,2025, تهران.
3. Samaneh Rashtbari ,& Gholamreza Dehghan ,Peroxidase-Like Organometallic MO36 as a Dual Anticancer and Antibacterial Candidate: A Functional and Bioactivity Assessment ,6th International and 27th National Congress of Physiology and Pharmacology of Iran ,2025, مشهد.
4. Samaneh Rashtbari ,& Gholamreza Dehghan ,Synthesis and characterization of tungsten trioxide albumin nanocomposite as peroxidase-mimic ,17th National and 8th International Congress of Biochemistry and Molecular Biology ,2022, تهران.
5. Maryam Khodakarami , Gholamreza Dehghan , Samaneh Rashtbari ,Synthesis and characterization of a peroxidase-like two-dimensional anionic nano-clay and its application for catalytic removal of malachite green from aqueous solutions ,17th National and 8th International Congress of Biochemistry

and Molecular Biology, 2022, تهران.

6. Sanaz Majidi , Gholamreza Dehghan , Samaneh Rashtbari ,The biocatalytic activity of an OV-serpin metal complex: Synthesis, characterization and kinetics study ,17th National and 8th International Congress of Biochemistry and Molecular Biology ,2022, تهران.
7. Samaneh Rashtbari ,& Gholamreza Dehghan ,Enzyme-mimic nanoparticles-based photonic methods for the detection of biological molecules ,International conference of biophotonics and biomedical optics (ICBBO) ,2021, تبریز.
8. Samaneh Rashtbari ,& Gholamreza Dehghan ,Spectroscopic and molecular docking studies on the interaction of a natural prenylated coumarin with calf thymus DNA ,16th National Congress of Biochemistry & 7th International Congress of Biochemistry & Molecular Biology ,2020, تهران.
9. Samaneh Rashtbari , Reza Yekta , Gholamreza Dehghan ,A spectroscopic and molecular docking approach to investigate the interaction of thioridazine with ct-DNA ,20th National and 8th International Congress on Biology ,2018, مراغه.
10. Samaneh Rashtbari , Reza Yekta , Gholamreza Dehghan ,Effects of farnesiferol A on structure and activity of bovine liver catalase: Experimental and simulation methods ,20th National and 8th International Congress on Biology ,2018, مراغه.
11. Reza Yekta , Samaneh Rashtbari , Gholamreza Dehghan ,Binding interaction of perphenazine with calf thymus DNA: a spectroscopic and molecular docking study ,20th National and 8th International Congress on Biology ,2018, مراغه.
12. Simin Khataee , Gholamreza Dehghan , Samaneh Rashtbari ,Investigation of the binding mechanism and inhibitory effect of 2-hydroxy-1,4-naphthoquinone on catalase activity and structure: Multi-spectroscopic and computational study ,20th National and 8th International Congress on Biology ,2018, مراغه.
13. Gholamreza Dehghan , Reza Yekta , Samaneh Rashtbari ,Role of β -diketonate group of curcumin on bilateral actions of it in presence different concentrations of catalase ,20th National and 8th International Congress on Biology ,2018, مراغه.
14. Samaneh Rashtbari , Gholamreza Dehghan , Reza Yekta ,Effects of 3, 5, 4-trihydroxy-stilbene on the structure and catalytic activity of catalase ,6th National Congress on Medicinal Plants ,2017, تهران.

Papers in Journals

1. سیمین خطایی , غلامرضا دهقان , سمانه رشتبری , مهرداد ایرانشاهی, بررسی تاثیر مشتقات ۲-هیدروکسی او۴- نفتوکوئینون بر روی ساختار و عملکرد آنزیم کاتالاز, پژوهش‌های سلولی و مولکولی (مجله زیست شناسی ایران), ۱۴۰۰.
2. معصومه شقاقی , سمانه رشتبری , غلامرضا دهقان , سیده هانیه سید مهدوی اقدم, اندازه گیری ساده, حساس و مستقیم داروی بتا-بلوکر کارودیلول در مقادیرهای بسیار کم در نمونه های زیستی با استفاده از میله سنجش نانوحسگر لومینسنت تریبوم-فنانترولین-نانوذرات نقره, نشریه شیمی و مهندسی شیمی ایران, ۱۳۹۹.
3. Simin Khataee, Alireza Khataee, Gholamreza Dehghan, Samaneh Rashtbari, Samira Arefi, & Oskoui, Nurbolat Kudaibergenov, Kairzhan Shalmagambetov, Enzymatic regulation of CoFe LDH through samarium doping for rapid ROS-induced membrane disruption and inactivation of pathogenic bacteria, Chemical Engineering Journal, 2026.
4. Samaneh Rashtbari, Gholamreza Dehghan, Simin Khataee, Alireza Khataee, Detection and degradation of phenolic pollutants using a highly effective and stable biomimetic laccase-mimicking Cys-Cu/NH₂-ZIF-8 nanozyme: Toxicity assessment and artificial neural network modeling, Journal of Environmental Chemical Engineering, 2025.
5. Simin Khataee, Alireza Khataee, Samaneh Rashtbari, Samira Arefi, & Oskoui, Nurbolat Kudaibergenov, Alua Alikeyeva, Gholamreza Dehghan, Synthesis and multifaceted characterization of bioactive Co-Y-Fe layered double hydroxide: bridging peroxidase-mimic function with antibacterial and anticancer efficacy in a unified strategy, Applied Clay Science, 2025.
6. Fatemeh Nikfarjam, Gholamreza Dehghan, Simin Khataee, Samaneh Rashtbari, Mojtaba Amini, A dual-mode Co-doped Cu-MOF sensor for simultaneous colorimetric and electrochemical detection of

acetaminophen and tramadol, *Microchemical Journal*, 2025.

7. Sanaz Majidi, Samaneh Rashtbari, Sina Jamei, Golamreza Dehghan, Biologically inspired laccase-mimicking OVA-Cu complex for degradation of organic dye pollutant: Artificial neural network modeling and optimization, *Bioimpacts*, 2025.
8. Samaneh Rashtbari, Gholamreza Dehghan, Alireza Khataee, Simin Khataee, Samira Arefi, & Oskoui, Nurbolat Kudaibergenov, Alua Alikeyeva, Triple-cation CoPrFe-layered double hydroxide: Harnessing peroxidase-mimicking activity, antibacterial, and anticancer potentials in a single system, *Journal of Environmental Chemical Engineering*, 2025.
9. Samaneh Rashtbari, Gholamreza Dehghan, Alireza Khataee, Simin Khataee, Yasin Orooji, A sensitive and selective amperometric determination of perfluorooctanesulfonic acid on Mo₂Ti₂AlC₃ MXene precursor-modified electrode, *Chemosphere*, 2025.
10. Sina Jamei, Gholamreza Dehghan, Hamed Farzi, Khajeh, Mohammad Yaghoubzad, Maleki, Samaneh Rashtbari, Purification of lysozyme from chicken egg white using triazine dye affinity method: Performance evaluation and computational analysis, *International Journal of Biological Macromolecules*, 2025.
11. Simin Khataee, Gholamreza Dehghan, Samaneh Rashtbari, Arezu Marefat, Sina Jamei, Hamed Farzi, & Khajeh, Optimized extraction and kinetic study of cholesterol oxidase from a newly isolated *Escherichia fergusonii* strain from local whey samples: insights through a combined experimental study and artificial neural network modeling, *BMC Microbiology*, 2025.
12. Samaneh Rashtbari, Gholamreza Dehghan, Yasin Orooji, Simin Khataee, Arezu Marefat, Leonid G Voskressensky, Alireza Khataee, Dual fluorescence-colorimetric sensing platform based on the peroxidase-mimetic performance of the Fe₂AlB₂ MAX phase for the quantification of acetamiprid and imidacloprid pesticides, *Journal of Photochemistry and Photobiology A: Chemistry*, 2025.
13. Bioinspired construction of ATP/Co-Al-Zn LDH nanozyme with enhanced peroxidase-mimic performance for efficient bactericidal activity through membrane disruption, *International Journal of Biological Macromolecules*, 2024.
14. Bahar Dehghan et al., Insights on the interaction mechanism of sesquiterpene coumarin (7-geranyloxycoumarin) to double-strand DNA by multispectral techniques and molecular docking, *Journal of Molecular Structure*, 2024.
15. Spectroscopic and computational studies on the binding interaction of biologically active thioridazine and perphenazine with human Matrix metalloproteinases 9, *Journal of Molecular Structure*, 2024.
16. Samaneh Rashtbari, Zahra Hassanpour Aydinlou, Leila Sadeghi, The effects of Fe₂O₃ nanoparticles on catalytic function of human acetylcholinesterase: size and concentration role, *Bioimpacts*, 2024.
17. Maryam Khodakarami, Gholamreza Dehghan, Samaneh Rashtbari, Mojtaba Amini, Catalytic removal of malachite green from aqueous solution by a peroxidase-mimicking Cu-Al layered double hydroxide nanoparticle: synthesis, characterization, and application, *Applied Catalysis A: General*, 2024.
18. Proficient sonophotocatalytic degradation of organic pollutants using Co₃O₄/TiO₂ nanocomposite immobilized on zeolite: Optimization, and artificial neural network modeling, *Ultrasonics Sonochemistry*, 2024.
19. Samaneh Rashtbari et al., Plasma modified Co₃O₄ nanoparticles for catalytic degradation process through enhanced peroxidase-like activity, *Journal of Industrial and Engineering Chemistry*, 2023.
20. Nesa Hamidian et al., Degradation of Tetracycline Using a Magnetic Gadolinium-Decorated Nanoplatfrom: A Peroxidase Biomimetic System with Fenton-Like Catalysis, *Water*, 2023.
21. Binding mechanism of perphenazine/thioridazine with acetylcholinesterase: Spectroscopic surface plasmon resonance and molecular docking based analysis, *Journal of Molecular Liquids*, 2023.
22. Enzyme-based and enzyme-free metal-based glucose biosensors: Classification and recent advances, *Microchemical Journal*, 2023.
23. Molecular interactions of danofloxacin with bovine serum albumin: An experimental and theoretical

investigation, Iranian Journal of Analytical Chemistry, 2022.

24. Amirreza Gholami , Gholamreza Dehghan , Samaneh Rashtbari , Abolghasem Jouyban, Probing the interactions of lamotrigine and phenobarbital with tau protein: experimental and molecular modeling studies, Iranian Journal of Pharmaceutical Research: IJPR, 2022.
25. Amirreza Gholami , Gholamreza Dehghan , Samaneh Rashtbari , Abolghasem Jouyban, Exploring the interaction of clonazepam and diazepam with tau protein: Multispectral and molecular docking studies, Journal of Molecular Structure, 2022.
26. Samaneh Rashtbari et al., Interaction of bovine serum albumin with ellagic acid and urolithins A and B: Insights from surface plasmon resonance, fluorescence, and molecular docking techniques, Food and Chemical Toxicology, 2022.
27. A sensitive colorimetric/fluorimetric nanoprobe for detection of polyphenols using peroxidase-mimic plasma-modified MoO₃ nanoparticles, Chemosphere, 2022.
28. Dual enzymes-mimic activity of nanolayered manganese-calcium oxide for fluorometric determination of metformin, Chemosphere, 2022.
29. Simin Khataee et al., The protective effect of natural phenolic compound on the functional and structural responses of inhibited catalase by a common azo food dye, Food and Chemical Toxicology, 2022.
30. Hamideh Bakhshayeshan et al., Artificial Enzymes That Imitate Herbal Medicine: A Novel Approach in COVID-19 Remedy, Genetic Engineering and Biosafety Journal, 2021.
31. Mina Hanifeh Ahagh et al., DNA binding ability and cytotoxicity, cell cycle arrest and apoptosis inducing properties of a benzochromene derivative against K562 human leukemia cells, Nucleosides, Nucleotides & Nucleic Acids, 2021.
32. Samaneh Rashtbari , & Gholamreza Dehghan, Biodegradation of malachite green by a novel laccase-mimicking multicopper BSA-Cu complex: Performance optimization, intermediates identification and artificial neural network modeling, Journal of Hazardous Materials, 2021.
33. Reza Yekta et al., A new optical method to analyze ligand-protein interaction: affinity-based screening system, Microchemical Journal, 2020.
34. Noncompetitive Inhibition of Bovine Liver Catalase by Lawsone: Kinetics, Binding Mechanism and in silico Modeling Approaches, Iranian Journal of Pharmaceutical Research, 2020.
35. Samaneh Rashtbari et al., Experimental investigation and molecular dynamics simulation of the binding of ellagic acid to bovine liver catalase: Activation study and interaction mechanism, International Journal of Biological Macromolecules, 2020.
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37. Samaneh Rashtbari , Gholamreza Dehghan , Mojtaba Amini, An ultrasensitive label-free colorimetric biosensor for the detection of glucose based on glucose oxidase-like activity of nanolayered manganese-calcium oxide, Analytica Chimica Acta, 2020.
38. Masoomeh Shaghaghi et al., Exploring the interactions of a Tb(III)-quercetin complex with serum albumins (HSA and BSA): spectroscopic and molecular docking studies, Luminescence, 2020.
39. A Sensitive, simple and direct determination of pantoprazole based on a "turn off-on" fluorescence nanosensor by using terbium-1, 10-phenanthroline-silver nanoparticles, Analytical Sciences, 2020.
40. Yunes Panahi et al., Aspirin in retrieving the inactivated catalase to active form: Displacement of one inhibitor with a protective agent, International Journal of Biological Macromolecules, 2019.
41. Multispectral and computational probing of the interactions between sitagliptin and serum albumin, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2019.
42. Yunes Panahi et al., Activation of catalase via co-administration of aspirin and pioglitazone: Experimental and MLSD simulation approaches, Biochimie, 2019.
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44. Synergistic inhibition of catalase activity by food colorants sunset yellow and curcumin: An experimental and MLSD simulation approach,Chemico-Biological Interactions,2019.

45. Reza Yekta et al.,The inhibitory effect of farnesiferol C against catalase; Kinetics, interaction mechanism and molecular docking simulation,International Journal of Biological Macromolecules,2018.

46. Activation of catalase by pioglitazone: Multiple spectroscopic methods combined with molecular docking studies,Journal of Molecular Recognition,2017.

47. Effects of Resveratrol on the Structure and Catalytic Function of Bovine Liver catalase (BLC): Spectroscopic and Theoretical Studies,Advanced Pharmaceutical Bulletin,2017.

48. Samaneh Rashtbari, Gholamreza Dehghan, Reza Yekta, Abolghasem Jouyban,Investigation of the binding mechanism and inhibition of bovine liver catalase by quercetin: Multi-spectroscopic and computational study,BiolImpacts,2017.