

Curriculum Vitae

Mehdi Salari, Ph.D

Assistant Professor of Environmental Health Engineering

**Contact Information**

**Work address:** Department of Environmental Health Engineering, School of Health, Sabzevar University of Medical Sciences, Sabzevar, Iran

**Tel:** +9851 44018307

**E-mail:** Msalari\_22@yahoo.com

**Education and training**

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| Ph.D | 2016-2022 | Hamadan University of Medical Sciences | Environmental Health Engineering |
| M.Sc | 2013-2016 | Tehran University of Medical Sciences | Environmental Health Engineering |
| B.Sc | 2011-2013 | Tehran University of Medical Sciences | Environmental Health Engineering |
| Associated degree | 2009-2011 | Sabzevar University of Medical Sciences | Environmental Health Engineering |

**Thesis**

**Ph.D Thesis title:** Evaluation of the performance of tri-dimensional Electro-peroxone process with carbon felt and grafite felt cathodes modifed by N-rGO in the presence of GAC doped by TiO2 in the removal of diuron herbicide from aqueous solutions

**Date of the thesis defense:** February 2022

**Thesis supervisor:** Professor Ghorban Asgari

**MSc Thesis title:** Evaluation of the formaldehyde concentration in ambient air in Tehran

**Date of the thesis defense**: February 2016

**Thesis supervisor**: Professor Mohammad Hadi Dehghani

**Books**

* Air pollution source and control, (Persian), 2022
* Highlights of the solid waste management, (Persian), 2022
* Principles of water treatment and contaminant control methods, (Persian), 2022
* Toxicology and health risk assessment, (Persian), 2022

**Papers**

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| **Number**  | **Title**  | **year** | **Journal**  | **Article type**  |  **DOI number** |
| 1 | A comparative study of response surface methodology and artificial neural network based algorithm genetic for modeling and optimization of EP/US/GAC oxidation process in dexamethasone degradation: Application for real wastewater, electrical energy consumption | 2024 | Chemosphere | Research article (ISI) | 10.1016/j.chemosphere.2023.140832 |
| 2 | 4-Chlorophenol adsorption from water solutions by activated carbon functionalized with amine groups: response surface method and artificial neural networks | 2023 | Scientific Reports | Research article (ISI) | 10.1038/s41598-023-35117-4 |
| 3 | Effective degradation of amoxicillin using peroxymonosulfate activated with MWCNTs-CuNiFe2O4 as a new catalyst: optimization, degradation pathway, and toxicity assessment | 2023 | Biomass Conversion and Biorefinery | Research article (ISI) | 10.1007/s13399-022-02305-7 |
| 4 | Modeling, optimization and efficient use of MMT K10 nanoclay for Pb (II) removal using RSM, ANN and GA | 2023 | Scientific Reports | Research article (ISI) | 10.1038/s41598-023-35709-0 |
| 5 | Modeling and optimization of advanced oxidation treatment of dexamethasone from aquatic solutions using electro-peroxone/ultrasonic process: Application for real wastewater, electrical energy consumption and degradation pathway | 2023 | Separation and Purification Technology | Research article (ISI) | 10.1016/j.seppur.2023.124871 |
| 6 | Influence of heating systems on indoor air quality and sick building syndrome (a case study in Qom, Iran) | 2023 | International Journal of Ventilation | Research article (ISI) | 10.1080/14733315.2022.2068250 |
| 7 | Removal of Rhodamine B from aqueous solution by stalk corn activated carbon: adsorption and kinetic study | 2023 | Biomass Conversion and Biorefinery | Research article (ISI) | 10.1007/s13399-021-01628-1 |
| 8 | Mineralization and biodegradability improvement of textile wastewater using persulfate/dithionite process | 2023 | Biomass Conversion and Biorefinery | Research article (ISI) | 10.1007/s13399-023-04128-6 |
| 9 | Development of AC/ZnO/Fe2O3 for efficiently adsorptive removal of Tetracycline from water environment: isotherm, kinetic and thermodynamic studies and adsorption mechanism | 2023 | Biomass Conversion and Biorefinery | Research article (ISI) | 10.1007/s13399-023-03875-w |
| 10 | Facile fabrication of amino-functionalized MIL-68(Al) metal–organic framework for effective adsorption of arsenate (As(V)) | 2022 | Scientific Reports | Research article (ISI) | 10.1038/s41598-022-16038-0 |
| 11 | Catalytic activation of persulphate with Mn3O4 nanoparticles for degradation of acid blue 113: process optimisation and degradation pathway | 2022 | International Journal of Environmental Analytical Chemistry | Research article (ISI) | 10.1080/03067319.2020.1773810 |
| 12 | Adsorption of Cr(VI) from aqueous solution using mesoporous metal-organic framework-5 functionalized with the amino acids: Characterization, optimization, linear and nonlinear kinetic models | 2022 | Journal of Molecular Liquids | Research article (ISI) | 10.1016/j.molliq.2021.117835 |
| 13 | Kinetic studies of dexamethasone degradation in aqueous solution via a photocatalytic UV/H2O2/MgO process | 2022 | Scientific Reports | Research article (ISI) | 10.1038/s41598-022-25577-5 |
| 14 | Optimization of 2-Chlorophenol Removal Using Ultrasound/Persulfate: Prediction by RSM Method, Biodegradability Improvement of Petrochemical Refinery Wastewater | 2022 | Arabian Journal for Science and Engineering | Research article (ISI) | 10.1007/s13369-021-06084-7 |
| 15 | Adsorptive removal of humic substances using cationic surfactant-modified nano pumice from water environment: Optimization, isotherm, kinetic and thermodynamic studies | 2022 | Chemosphere | Research article (ISI) | 10.1016/j.chemosphere.2022.135983 |
| 16 | Acid red 18 removal from aqueous solution by nanocrystalline granular ferric hydroxide (GFH); optimization by response surface methodology & genetic-algorithm | 2022 | Scientific Reports | Research article (ISI) | 10.1038/s41598-022-08769-x |
| 17 | Characterisation, modeling, and optimisation of acid blue 113 dye degradation from aqueous media via catalytic ozonation using NH2-modified MIL-68 (Al) composite nano sorbent | 2022 | International Journal of Environmental Analytical Chemistry | Research article (ISI) | 10.1080/03067319.2022.2072216 |
| 18 | Process optimization and enhancement of pesticide adsorption by porous adsorbents by regression analysis and parametric modelling | 2021 | Scientific Reports | Research article (ISI) | 10.1038/s41598-021-91178-3 |
| 19 | The superior adsorption capacity of 2,4-Dinitrophenol under ultrasound-assisted magnetic adsorption system: Modeling and process optimization by central composite design | 2021 | Journal of Hazardous Materials | Research article (ISI) | 10.1016/j.jhazmat.2021.126348 |
| 20 | Magnetic Fe3O4@graphene oxide improves the therapeutic effects of embryonic stem cells on acute liver damage | 2021 | Cell Proliferation | Research article (ISI) | 10.1111/cpr.13126 |
| 21 | Heterogeneous activation of peroxymonosulfate with Fe3O4magnetic nanoparticles for degradation of Reactive Black 5: Batch and column study | 2021 | Journal of Environmental Chemical Engineering | Research article (ISI) | 10.1016/j.jece.2021.105414 |
| 22 | Process modeling of municipal solid waste compost ash for reactive red 198 dye adsorption from wastewater using data driven approaches | 2021 | Scientific Reports | Research article (ISI) | 10.1038/s41598-021-90914-z |
| 23 | Modelling and optimisation of catalytic ozonation process assisted by ZrO2-pumice/H2O2 in the degradation of Rhodamine B dye from aqueous environment | 2021 | International Journal of Environmental Analytical Chemistry | Research article (ISI) | 10.1080/03067319.2019.1704748 |
| 24 | Mesoporous metal organic frameworks functionalized with the amino acids as advanced sorbents for the removal of bacterial endotoxins from water: Optimization, regression and kinetic models | 2021 | Journal of Molecular Liquids | Research article (ISI) | 10.1016/j.molliq.2021.116801 |
| 25 | Carbon felt modified with N-doped rGO for an efficient electro-peroxone process in diuron degradation and biodegradability improvement of wastewater from a pesticide manufacture: Optimization of process parameters, electrical energy consumption and degradation pathway | 2021 | Separation and Purification Technology | Research article (ISI) | 10.1016/j.seppur.2021.118962 |
| 26 | Diuron degradation using three-dimensional electro-peroxone (3D/E-peroxone) process in the presence of TiO2/GAC: Application for real wastewater and optimization using RSM-CCD and ANN-GA approaches | 2021 | Chemosphere | Research article (ISI) | 10.1016/j.chemosphere.2020.129179 |
| 27 | Sono electro-chemical synthesis of LaFeO3nanoparticles for the removal of fluoride: Optimization and modeling using RSM, ANN and GA tools | 2021 | Journal of Environmental Chemical Engineering | Research article (ISI) | 10.1016/j.jece.2021.105320 |
| 28 | Heterogeneous persulfate activation by nano-sized Mn3O4 to degrade furfural from wastewater | 2020 | Journal of Molecular Liquids | Research article (ISI) | 10.1016/j.molliq.2019.112088 |
| 29 | Synergistic degradation of acid blue 113 dye in a thermally activated persulfate (TAP)/ZnO-GAC oxidation system: Degradation pathway and application for real textile wastewater | 2020 | Separation and Purification Technology | Research article (ISI) | 10.1016/j.seppur.2020.116931 |
| 30 | Adsorptive removal of cobalt(II) from aqueous solutions using multi-walled carbon nanotubes and γ-alumina as novel adsorbents: Modelling and optimization based on response surface methodology and artificial neural network | 2020 | Journal of Molecular Liquids | Research article (ISI) | 10.1016/j.molliq.2019.112154 |
| 31 | Forecasting nitrate concentration in Babol groundwater resources using the Grey model (1,1) | 2020 | International Journal of Environmental Health Engineering | Research article (Scopus) | 10.4103/ijehe.ijehe\_14\_19 |
| 32 | Sonophotocatalytic treatment of AB113 dye and real textile wastewater using ZnO/persulfate: Modeling by response surface methodology and artificial neural network | 2020 | Environmental Research | Research article (ISI) | 10.1016/j.envres.2020.109367 |
| 33 | Evaluation of quality, scaling and corrosion potential of groundwater resources using stability index; case study Kerman province (Iran) | 2020 | Desalination and Water Treatment | Research article (ISI) | 10.5004/dwt.2020.24999 |
| 34 | Performance of heterogeneous catalytic ozonation process using Al2 onanoparticles in dexamethasone removal from aqueous solutions | 2020 | Desalination and Water Treatment | Research article (ISI) | 10.5004/dwt.2020.25609 |
| 35 | Catalytic ozonation assisted by rGO/C-MGO in the degradation of humic acid from aqueous solution: Modeling and optimization by response surface methodology, kinetic study | 2020 | Desalination and Water Treatment | Research article (ISI) | 10.5004/dwt.2020.24869 |
| 36 | Sono-catalytic activation of persulfate by nZVI-reduced graphene oxide for degradation of nonylphenol in aqueous solution: Process optimization, synergistic effect and degradation pathway | 2020 | Journal of Environmental Chemical Engineering | Research article (ISI) | 10.1016/j.jece.2020.104202 |
| 37 | Optimization of chromium (VI) adsorption by novel nano-pumice modified by cationic surfactant from aqueous media using the response surface method: Isotherm and kinetic studies | 2020 | Desalination and Water Treatment | Research article (ISI) | 10.5004/dwt.2020.24931 |
| 38 | Bacterial co-infections with SARS-CoV-2 | 2020 | IUBMB Life | Review article (ISI) | 10.1002/iub.2356 |
| 39 | Enhanced degradation of furfural by heat-activated persulfate/nZVI-rGO oxidation system: Degradation pathway and improving the biodegradability of oil refinery wastewater | 2020 | Journal of Environmental Chemical Engineering | Research article (ISI) | 10.1016/j.jece.2020.104468 |
| 40 | Statistical modelling of endocrine disrupting compounds adsorption onto activated carbon prepared from wood using CCD-RSM and DE hybrid evolutionary optimization framework: Comparison of linear vs non-linear isotherm and kinetic parameters | 2020 | Journal of Molecular Liquids | Research article (ISI) | 10.1016/j.molliq.2020.112526 |
| 41 | The sorption of cationic and anionic heavy metal species on the biosorbent of Aspergillus terreus: Isotherm, kinetics studies | 2020 | Environmental Progress and Sustainable Energy | Research article (ISI) | 10.1002/ep.13309 |
| 42 | Bacterial Contamination of Mobile Phones Carried by Medical Staff in Maternity, Neonatal, and ICU Wards of Shahid Beheshti and Imam Sajjad Hospitals in Yasuj | 2020 | Avicenna Journal of Environmental Health Engineering | Research article  | 10.34172/ajehe.2020.14 |
| 43 | An integrated evaluation of groundwater quality using drinking water quality indices and hydrochemical characteristics: a case study in Jiroft, Iran | 2019 | Environmental Earth Sciences | Research article (ISI) | 10.1007/s12665-019-8321-1 |
| 44 | Optimized synthesis of carbon-doped nano-MgO and its performance study in catalyzed ozonation of humic acid in aqueous solutions: Modeling based on response surface methodology | 2019 | Journal of Environmental Management | Research article (ISI) | 10.1016/j.jenvman.2019.03.055 |
| 45 | Thermochemical degradation of furfural by sulfate radicals in aqueous solution: optimization and synergistic effect studies | 2019 | Environmental Science and Pollution Research | Research article (ISI) | 10.1007/s11356-019-04382-0 |
| 46 | Evaluation of the relation of acetylcholinesterase enzyme level of the worker of a poison‑producing industry with the application of personal protective equipment and the amount of poison production within 2012–2015 | 2019 | International Journal of Environmental Health Engineering | Research article (Scopus) | 10.4103/ijehe.ijehe\_7\_18 |
| 47 | Evaluation of carcinogenic risks related to nitrate exposure in drinking water in Iran | 2019 | MethodsX | Research article (ISI) | 10.1016/j.mex.2019.07.008 |
| 48 | Fluoride removal from aqueous solution by acid-treated clinoptilolite: Isotherm and kinetic study | 2019 | Desalination and Water Treatment | Research article (ISI) | 10.5004/dwt.2019.23625 |
| 49 | High performance removal of phenol from aqueous solution by magnetic chitosan based on response surface methodology and genetic algorithm | 2019 | Journal of Molecular Liquids | Research article (ISI) | 10.1016/j.molliq.2019.04.065 |
| 50 | The efficiency of UV/S2O8 2 photo-oxidation process in the presence of Al2O3 for the removal of dexamethasone from aqueous solution: Kinetic studies | 2019 | Water Science and Technology | Research article (ISI) | 10.2166/wst.2019.109 |
| 51 | Land capability evaluation for identifying industrial zones: combination multi-criteria decision-making method with geographic information system | 2019 | International Journal of Environmental Science and Technology | Research article (Scopus) | 10.1007/s13762-018-1925-2 |
| 52 | Evaluation of magnetic ZSM-5 composite performance in 2, 4 dichlorophenol removal from synthetic solutions: Response surface method (RSM) modeling and isotherm, kinetic and thermodynamic studies | 2019 | Desalination and Water Treatment | Research article (ISI) | 10.5004/dwt.2019.24451 |
| 53 | RelationshipofFormaldehyde Concentration in Ambient Air withCO, NO2, O3, Temperature and Humidity: Modeling by Response Surface Model | 2019 | Archives of Hygiene Sciences | Research article | https://doi.org/10.29252/ArchHygSci.8.1.9 |
| 54 | Performance of Advanced Oxidization UV/S2O8-2 in Removing Acid Green 3 from Aqueous Solutions: Modeling Based Linear Regression, Kinetic Studies | 2018 | Journal of Kermanshah University of Medical Sciences | Research article | https://doi.org/10.5812/jkums.74139 |
| 55 | Evaluation of formaldehyde concentration in the ambient air of a most populated Iranian city, Tehran | 2017 | Air Quality, Atmosphere and Health | Research article (ISI) | 10.1007/s11869-017-0468-x |

**Conferences**

* 6th International and 25th National Conference on Environmental Health

Title: Comparison of continuous and batch reactor efficiency of electrocoagulation process removing organic pollutant using iron electrodes

December, 20-22, 2022, Ahvaz Jundishapur University of Medical Sciences, poster

* 6th International and 25th National Conference on Environmental Health

Title: phenyl benzene degradation using the photocatalytic process of silica nanoparticles in aqueous solutions

December 20-22, 2022, Ahvaz Jundishapur University of Medical Sciences, poster

* 4th International and 23th National Conference on Environmental Health

Title: Investigation of lead concentration in cultivated vegetables in the suburbs of Sanandaj

March 2-4, 2021, Yazd University of Medical Sciences, poster

* 4th International and 23th National Conference on Environmental Health

Title: Investigation of legionella pneumophila bacterial in hospital water supply systems

March 2-4, 2021, Yazd University of Medical Sciences, poster

* 4th International and 23th National Conference on Environmental Health

Title: The evaluation of adsorption efficiency of pentachlorophenol by magnetized chitosan from aqueous media: optimization by response surface methodology

March 2-4, 2021, Yazd University of Medical Sciences, poster

* 3th International and 21th National Conference on Environmental Health

Magnetic adsorption/pre-concentration of nitrobenzene using Fe3O4@GO nanocomposite: process modeling, isotherm, kinetic and thermodynamic

February 26-28, 2019, Zanajn University of Medical Sciences, poster

* 3th International and 21th National Conference on Environmental Health

Application of artificial neural network-genetic algorithm in prediction and optimization of catalytic degradation process:2-chlorophenol removal using ultrasound-Fe2O4@TiO2 hybrid system

February 26-28, 2019, Zanajn University of Medical Sciences, poster

**Reviewer (journal)**

* Avicenna Journal of Environmental Health Engineering
* Chemosphere
* Environmental Research
* Journal of Environmental Chemical Engineering
* Chemical Physics Letters
* Science of the Total Environment
* Water Research
* Materials Chemistry and Physics
* Journal of Contaminant Hydrology
* International Journal of Environmental Analytical Chemistry
* Scientific Report

**Teaching experience**

* Fundamentals of Thermodynamics & Heat Transfer
* Statics and Mechanics of Materials
* Geographical Information System (GIS)
* Hydraulic laboratory
* Radiation health
* Environmental health
* Overview of the environment
* Environmental ecology
* English for the students of environmental health engineering

**Honors and awards**

* Premier researcher at deputy of research and technology, Hamadan University of Medical Sciences
* Awards "Research project superseding military service" from the National Elite Foundation of Iran

**Research interests**

* Advanced water treatment methods such as advanced oxidation methods
* Wastewater treatment methods
* Modeling and optimization of water and wastewater treatment processes
* Air pollution modeling and exposure assessment

**Technical Skills**

* Experienced user of SPSS, GIS, design experts, MATLAB, Minitab software
* Analytical instruments: working with Atomic Adsorption, Spectrophotometer, and High-Performance Liquid Chromatography (HPLC) instruments and TOC analyzer