



## Gholamreza Moussavi, Ph.D

### Professor

Department of Environmental Health Engineering  
 Tarbiat Modares University, Tehran, Iran  
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- **Published articles:** 155 (**Scopus:** 12-June-2022)
- **h-index:** 41
- **Citations:** 5567 total citations by 4339 documents

## PERSONAL INFORMATION

Name and surname: **Gholamreza Moussavi**

Date of birth: 22 May 1975

Marital: Married

## EDUCATIONAL BACKGROUND

Degree	Major	Department	Year
Researcher	Chemical Engineering	Chemical & Biochemical Engineering, University of British Columbia, Canada	2005
Ph.D	Environmental Health Engineering	Environmental Health Engineering, Tehran University of Medical Science	2001-2005
M.Sc	Environmental Health Engineering	Environmental Health Engineering, Tehran University of Medical Science	1999-2001
B.Sc	Environmental Health	Environmental Health Engineering, Beheshti University of Medical Science	1996-1999

## INTERNATIONAL COLLABORATION

- Universidad Politécnica de Madrid, **Spain**
- Group of Advanced Oxidation Processes, EPFL, **Switzerland**.
- Lappeenranta University of Technology, **Finland**.
- Universidad de Córdoba, **Spain**.
- University of British Columbia, **Canada**.

## SCIENTIFIC AND ACADEMIC ACCOUNTS

- Researcher ID: O-8699-2017
- Scopus: <https://www.scopus.com/authid/detail.uri?authorId=21934761400>
- ORCID: <http://orcid.org/0000-0003-4708-4507>
- Publons: <https://publons.com/researcher/1267055>
- Mendeley: <https://www.mendeley.com/profiles/gholamreza-moussavi/>

## TEACHING EXPERIENCES

I have taught many courses to Ph.D. and M.Sc. students in the Environmental Engineering program.

2006-present **Professor**, Dept. of Environmental Health Engineering, Tarbiat Modares University

- Advanced water treatment systems: Principles and design (Ph.D students)
- Advanced wastewater treatment systems: Principles and design (Ph.D students)
- Wastewater sludge treatment (Ph.D students)
- Advanced air pollution control systems (Ph.D students)
- Hazardous waste management (Ph.D students)
- Wastewater sludge processing (Ph.D students)
- Water treatment plant design (M.Sc. students)
- Wastewater treatment plant design (M.Sc. students)
- Industrial wastewater treatment, (M.Sc. students)
- Air pollution control (M.Sc., students)

2002-2005 Lecturer, Department of Environmental Health Engineering, Azad University

- Wastewater Treatment (B.Sc. class of 52 students)
- Water Treatment, (B.Sc. class of 48 students)

2004 Instructor, Workshop on impact of untreated wastewater discharge, Tehran

2003-2004 Lecturer, Department of Environmental Health Engineering, Tehran University of Medical University

- Wastewater Treatment, (B.Sc. class of 32 students)

**RESEARCH EXPERIENCES**

- 2005-present    Department of Environmental Health Engineering, Tarbiat Modares University, Tehran, Iran
- Advanced oxidation processes for air, water, and wastewater treatment
  - Advanced biological processes for soil, air, water, and wastewater treatment
  - Nanotechnology for degradation of environmental contaminants
  - Catalytic ozonation for removal of micropollutants from liquid and gas streams
  - Biofiltration and biotrickling filtration of VOCs and odorants
  - Ozonation of excess activated sludge
  - Saline wastewater Treatment
- 2005            Department of Chemical and Biological Engineering, University of British Columbia, Vancouver, Canada
- Innovated and Investigated a novel photobioreactor (UV-Biofiltration) for the Biodegradation of recalcitrant air pollutants
- 2001-2005    Department of Environmental Health Engineering, Tehran University of Medical Sciences
- Designed and investigated a novel bioreactor (UA/AFB) for complete treatment of municipal wastewater treatment
  - Investigated performance of UA/AFB reactor for industrial wastewater treatment
  - Evaluated performance of an Ultraviolet Germicidal Irradiation reactor for indoor air disinfection
  - Developed and set-up the H<sub>2</sub>S sampling and measurement method from waste air streams
  - Designed and evaluated a novel bioscrubber for H<sub>2</sub>S removal from waste air stream
  - Investigated use of H<sub>2</sub>O<sub>2</sub> as an oxidant for H<sub>2</sub>S removal from waste air emission in a chemical scrubber
  - Conducted a comparative study on collection and treatment alternatives for part 22 Tehran city
  - Studied the performance of UV photoreactor for disinfecting effluent air from a bioscrubber treating H<sub>2</sub>S gas stream
  - Performed field work on optimization of an activated sludge process
  - Studied the effect of lime for sewage sludge stabilization

- Provided scientific consulting to various companies on water and wastewater treatment plant design
- Provided scientific consulting to M.Sc. students in environmental engineering on their thesis
- Conducted lab work on combined advanced oxidation and biological processes for pollution control
- Organized field visits to various wastewater treatment plants for B.Sc. students in environmental engineering

1999-2001 Department of Environmental Health Engineering, Tehran University of Medical Sciences

- Investigated the effects of Lyophilization process on kinetic coefficients of activated sludge process
- Evaluated the effects of Lyophilization process on characteristics and microbial quality of activated sludge process
- Extracted and studied the chitosan as a coagulant in water treatment

1998 Performed field sampling from waste streams

## **PATENTS**

- Innovated the UV-Photobiofiltration for treatment of waste air containing recalcitrant pollutants (*patent No. 33334, Iran*)
- Up flow Anaerobic/Aerobic Fixed Bed (UA/AFB) combined reactor for municipal and industrial wastewater treatment (*patent No. 33333, Iran*)

## **ANALYTICAL SKILLS**

- Gas chromatograph/Mass spectrophotometry (GC-MS)
- Spectrophotometer
- TOC and BDOC analyzer
- High performance liquid chromatograph (HPLC)
- Fourier transform infrared (FT-IR) spectrometer
- Air, water and wastewater microbial examination
- Air, water and wastewater sampling and physico-chemical analysis

## **COMPUTER SKILLS**

- Microsoft Windows and office,

- Extensive experience with Excel and Origin (graphing, programming, and statistical data analysis)
- SPSS (statistical data analysis)

## **SPORT SKILLS**

- Kyokushin Karate, Dan III.
- Official Referee, IKF.

## **PROFESSIONAL TRAINING COURSES / WORKSHOPS**

- Teaching Methods Training Workshop, 2004
- Research Methods Training Workshop, 2003
- Laboratory Safety Course, 2002
- Technology Tour, Water and wastewater treatment plants, Petrochemical industry, Composting Plant, and 5 research center, Iran, 2002
- Analytical instruments training course, 2001

## **HONOURS AND AWARDS**

- 2021        ***26<sup>th</sup> Razi International Award, Distinguished Researcher***
- 2021        ***2% of highly cited researchers.***
- 2020        ***IRAN Scientific Leader (35/100), ISEF.***
- 2018-2021 ***1% of highly cited researchers.***
- 2012-2020 ***University Outstanding Researcher***
- 2019        ***Distinguished Researcher in Research***, among all researchers in IRAN held by the Iran Ministry of Sciences and Technology.
- 2015        ***Distinguished Researcher in Research***, among all researchers in IRAN held by the Iran Association of Environmental Health (IAEH) and received award and the appreciation letter from the Head of IAEH.
- 2014        ***Distinguished Researcher in Environmental Biotechnology***, among all researchers in IRAN held by the Iran Association of Biotechnology

- 2013 **Razi International Award, *Distinguished Researcher in Research & Technology***, among all researchers in IRAN held by the Ministry of Health and received award and the appreciation letter from the President of Iran.
- 2005 **Razi International Award *Distinguished Researcher in Research & Technology***, among all researchers in IRAN held by the Ministry of Health and received award and the appreciation letter from the President of Iran
- 2003 ***The Honored First-Class Ph.D. Candidate*** among all Ph.D. students in IRAN based on Excellence in education and research, received award and the appreciation letter from the President of Iran
- 2002 ***Outstand Graduate Student*** award in education, Tehran University of Medical Sciences
- 2001 ***First Rank in Ph.D. Entrance Exam*** among all applicants throughout the country
- 1999 ***First Rank in M.Sc. Entrance Exam*** among all applicants throughout the country

## MEMBERSHIPS

- ***Editorial Board Member***, Research Journal of Applied Sciences, Asian Network for Scientific Information
- Member of Iranian Association of Environmental Health (IAEH), IRAN  
Member of Environmental Engineering Scientists, IRAN

## REVIEWER FOR PEER REVIEWED JOURNALS

1. *Applied Catalysis B: Environmental*
2. *Bioresource Technology*
3. *Water Research*
4. *Environmental Science and Technology*
5. *Environmental Progress & Sustainable Energy*
6. *Environmental Science: Nano*
7. *Chemosphere*
8. *Journal of Hazardous Materials*
9. *Chemical Engineering Journal*
10. *Biochemical Engineering Science*
11. *Desalination*
12. *Environmental Engineering and Management Journal*
13. *Process Biochemistry*
14. *Environmental Technology*
15. *Clean air, soil and water*
16. *Iranian Journal of Environmental Health Science & Engineering*
17. *Iranian Journal of Biotechnology*

18. *Iranian Journal of Chemistry and Chemical Engineering*
19. *Iranian Journal of Chemical Engineering*
20. *African Journal of Environmental Science and Technology*
21. *Journal of Environmental Chemistry and Ecotoxicology*
22. *International Journal of Industrial Chemistry*
23. *International Journal of Environmental Science and Technology*
24. *Journal of Environmental Management*
25. *Mesoporous and Microporous Materials*
26. *Journal of the Iranian Chemical Society*
27. *Desalination and Water Treatment*
28. *Ecotoxicology and Environmental Safety*
29. *Environmental Engineering and Management Journal*
30. *Arabian Journal of Chemistry*
31. *Journal of Environmental Chemical Engineering*
32. *Journal of Toxicology and Environmental Health Sciences*
33. *Bioprocess and Biosystems Engineering*
34. *World Applied Sciences Journal*
35. *Applied Surface Science*
36. *Asia-Pacific Journal of Chemical Engineering*
37. *Materials Research Bulletin*
38. *Environmental Science and Pollution Research*
39. *Water, Air, & Soil Pollution*
40. *Separation Science and Technology*
41. *Environmental Processes*
42. *Advances in Physical Chemistry*
43. *RSC Advances*
44. *International Journal of Global Environmental Issue*
45. *Journal of Chemical Technology & Biotechnology*
46. *Water Science and Technology*
47. *Science Asia*
48. *Ozone: Science & Engineering*
49. *Archives of Environmental Protection*
50. *Research on Chemical Intermediates*
51. *Waste and Biomass Valorization*
52. *Environmental Science: Processes & Impacts*
53. *Water Science and Engineering*
54. *Chemical Engineering Communications*
55. *Water Resource and Industry*
56. *The Korean Journal of Chemical Engineering*
57. *International Journal of Chemical Reactor Engineering*
58. *Songklanarin Journal of Science and Technology*
59. *Environmental Health Engineering and Management Journal*
60. *Journal of Advanced Research*
61. *Chinese Journal of Chemical Engineering*
62. *Critical Reviews in Biotechnology*
63. *Journal of Fluorine Chemistry*
64. *Environmental Processes*
65. *Resource-Efficient Technologies*
66. *Chemical Engineering & Technology*
67. *Journal of Materials and Design*
68. *Caspian Journal of Environmental Sciences*
69. *Biochimie*

70. *Journal of Material Cycles and Waste Management*

71. *The Canadian Journal of Chemical Engineering*

72. *Journal of Chemistry*

73. *3Biotech*

74. *AIMS Environmental Science*

## **SPORT ACTIVITIES**

- Black Belt-Dan 3 in Karate
- Referee, Iranian Sport Organization
- Member of International Karate Organization (IKO)

## **PERSONAL INTERESTS**

- Karate, Volleyball, Horse Riding,
- Traveling and Touristy

## **THESIS SUPERVIZED**

- **PostDoc Reserchers**
  - **completed: 4**
  - **active: 4**
- **Ph.D Dissertations**
  - **defended: 18**
  - **active: 3**
- **MSc. Theses:**
  - **defended: 25**
  - **active: 2**

### **Active PhD Students:**

**Somayeh Akhbari**, co-supervision with Universidad Politécnica de Madrid, Spain (Dr. Stefanos Giannakis)

**Samira Mohammadi**, co-supervision with Universidad Politécnica de Madrid, Spain (Dr. Stefanos Giannakis)

**PUBLICATIONS AND PRESENTATIONS****BOOKS (Persian):**

- 1) Moussavi G., Wastewater Examination for Using in Agriculture, Kermanshah University Publisher, 2002.
- 2) Moussavi G., Wastewater Treatment, Khaniran publisher, 2003
- 3) Moussavi G., Air Pollution and its Control, Khaniran publisher, 2003.
- 4) Moussavi G., Water Engineering, Khaniran publisher, 2003.
- 5) Moussavi G., Wastewater Engineering, Khaniran publisher, 2003.
- 6) Moussavi G., Environmental Microbiology, Khaniran publisher, 2003.
- 7) Moussavi G., Environmental Chemistry, Khaniran publisher, 2003.
- 8) Moussavi G., Fluid Mechanic and Hydraulic, Khaniran publisher, 2003.
- 9) Moussavi G., Fundamentals of Environmental Health, Shahrab publisher, 2005.
- 10) Moussavi G., Water Works Engineering, Hafiz publisher, (2007).
- 11) Moussavi G., Wastewater Sludge Processing, Hafiz publisher, 2009.
- 12) Moussavi G., Wastewater Collection Systems, Hafiz publisher, 2009.
- 13) Moussavi G., Wastewater Treatment in Wetlands, Shahrab publisher, 2009.

## Peer Reviewed Papers (2007 – 2022):

### 2022

1. N. Abdollahi, G. Moussavi, S. Giannakis, A review of heavy metals' removal from aqueous matrices by Metal-Organic Frameworks (MOFs): State-of-the art and recent advances, *Journal of Environmental Chemical Engineering*, Volume 10, Issue 3, June 2022, 107394.
2. H. Mohebali, G. Moussavi, M. Karimi, S. Giannakis, Catalytic ozonation of Acetaminophen with a magnetic, Cerium-based Metal-Organic framework as a novel, easily-separable nanocomposite, *Chemical Engineering Journal*, Volume 434, 15 April 2022, 134614.
3. S. Mohammadi, G. Moussavi, M. Rezaei, Enhanced peroxidase-mediated biodegradation of polyethylene using the bacterial consortia under H<sub>2</sub>O<sub>2</sub>-biostimulation, *Polymer*, Volume 240, 1 February 2022, 124508.
4. A. Mahmoudnia, N. Mehrdadi, M. Baghdadi, G. Moussavi, Change in global PFAS cycling as a response of permafrost degradation to climate change, *Journal of Hazardous Materials Advances*, Volume 5, February 2022, 100039.
5. S. Mohammadi, G. Moussavi, K. Yaghmaeian, S. Giannakis, Development of a percarbonate-enhanced Vacuum UV process for simultaneous fluoroquinolone antibiotics removal and fecal bacteria inactivation under a continuous flow mode of operation, *Chemical Engineering Journal*, Volume 431, March 2022, 134064.
6. M. Kohantorabi, G. Moussavi, P. Oulego, S. Giannakis, Heterogeneous catalytic ozonation and peroxone-mediated removal of Acetaminophen using natural and modified hematite-rich soil as an efficient environmental catalyst, *Applied Catalysis B: Environmental*, Volume 301, 2022, 120786.
7. M. Kohantorabi, G. Moussavi, S. Mohammadi, P. Oulego, S. Giannakis, Vacuum UV pre-treatment coupled with self-generated peroxide stimulation of biomass: An innovative hybrid system for detoxification and mineralization of toxic compounds, *Chemosphere*, Volume 286, 2022, 131701.
8. Saeed Molaei, Gholamreza Moussavi, Nasser Talebbeydokhti, Sakine Shekoohiyan, Biodegradation of the petroleum hydrocarbons using an anoxic packed-bed biofilm

reactor with in-situ biosurfactant-producing bacteria, *Journal of Hazardous Materials*, Volume 421, 2022, 126699.

## 2021

9. M. Kohantorabi, G. Moussavi, S. Mohammadi, P. Oulego, S. Giannakis, Synthesis of a novel, ternary AgI/CeO<sub>2</sub>@g-C<sub>3</sub>N<sub>4</sub> nanocomposite with exceptional stability and reusability for visible light-assisted photocatalytic reduction of hexavalent chromium, *Applied Surface Science*, Volume 555, 2021, 149692.
10. M. Kohantorabi, G. Moussavi, P. Oulego, S. Giannakis, Radical-based degradation of sulfamethoxazole via UVA/PMS-assisted photocatalysis, driven by magnetically separable Fe<sub>3</sub>O<sub>4</sub>@CeO<sub>2</sub>@BiOI nanospheres, *Separation and Purification Technology*, Volume 267, 2021, 118665.
11. M. Kohantorabi, G. Moussavi, S. Mohammadi, P. Oulego, S. Giannakis, Photocatalytic activation of peroxymonosulfate (PMS) by novel mesoporous Ag/ZnO@NiFe<sub>2</sub>O<sub>4</sub> nanorods, inducing radical-mediated acetaminophen degradation under UVA irradiation, *Chemosphere* Volume 277, 2021, 130271.
12. M. Kohantorabi, S. Giannakis, G. Moussavi, M. Bensimon, M. Gholami, C. Pulgarin, An innovative, highly stable Ag/ZIF-67@GO nanocomposite with exceptional peroxymonosulfate (PMS) activation efficacy, for the destruction of chemical and microbiological contaminants under visible light, *Journal of Hazardous Materials*, Volume 413, 2021, 125308.
13. H. Amanollahi, G. Moussavi, S. Giannakis, Enhanced Vacuum UV-based process (VUV/H<sub>2</sub>O<sub>2</sub>/PMS) for the effective removal of ammonia from water: Engineering configuration and mechanistic considerations, *Journal of Hazardous Materials*, Volume 402, 2021, 123789.
14. M. Kohantorabi, G. Moussavi, S. Giannakis, A review of the innovations in metal- and carbon-based catalysts explored for heterogeneous peroxymonosulfate (PMS) activation, with focus on radical vs. non-radical degradation pathways of organic contaminants, *Chemical Engineering Journal*, Volume 411, 2021, 127957.

15. S. Akbari, G. Moussavi, S. Giannakis, Efficient photocatalytic degradation of ciprofloxacin under UVA-LED, using S,N-doped MgO nanoparticles: Synthesis, parametrization and mechanistic interpretation, *Journal of Molecular Liquids*, Volume 324, 2021, 114831.
16. Z. Amiri, G. Moussavi, S. Mohammadi, S. Giannakis, Development of a VUV-UVC/peroxymonosulfate, continuous-flow Advanced Oxidation Process for surface water disinfection and Natural Organic Matter elimination: Application and mechanistic aspects. *Journal of Hazardous Materials*, Volume 402, 2021, 123789.
17. S. Mohammadi, G. Moussavi, S. Giannakis, S. Shekoohian, M. Luisa Marín, F. Boscá, A continuous-flow catalytic process with natural hematite-alginate beads for effective water decontamination and disinfection: Peroxymonosulfate activation leading to dominant sulfate radical and minor non-radical pathways, *Chemical Engineering Journal*, Volume 411, 2021, 127738.
18. E. Aseman-Bashiz, A. Rezaee, G. Moussavi, Ciprofloxacin removal from aqueous solutions using modified electrochemical Fenton processes with iron green catalysts, *Journal of Molecular Liquids*, Volume 324, 2021, 114694.

## 2020

19. F. Fanaei, G. Moussavi, S. Shekoohian, Enhanced treatment of the oil-contaminated soil using biosurfactant-assisted washing operation combined with H<sub>2</sub>O<sub>2</sub>-stimulated biotreatment of the effluent, *Journal of Environmental Management*, 2 July 2020, Volume 271 , 110941.
20. S. Karimian, G. Moussavi, F. Fanaei, S. Mohammadi, S. Shekoohian, S. Giannakis, Shedding light on the catalytic synergies between Fe(II) and PMS in vacuum UV (VUV/Fe/PMS) photoreactors for accelerated elimination of pharmaceuticals: The case of metformin, *Chemical Engineering Journal*, Volume 40015 November 2020 Article 125896.
21. M. Moradi, , G. Moussavi, K. Yaghmaeian, A. Yazdanbakhsh, M. Sillanpää, Synthesis of novel Ag-doped S-MgO nanosphere as an efficient UVA/LED-activated photocatalyst for non-radical oxidation of diclofenac: Catalyst preparation and characterization and photocatalytic mechanistic evaluation, *Applied Catalysis B: Environmental*, Volume 260, January 2020, Article 118128.

22. M. Rezaei, G. Moussavi, K. Naddafi, M.S. Johnson, Enhanced biodegradation of styrene vapors in the biotrickling filter inoculated with biosurfactant-generating bacteria under H<sub>2</sub>O<sub>2</sub> stimulation, *Science of The Total Environment*, Volume 704, 20 February 2020, Article 135325.
23. S. Shekoohiyan, A. Rahmania, M. Chamack, G. Moussavi, S. Giannakis, A novel CuO/Fe<sub>2</sub>O<sub>3</sub>/ZnO composite for visible-light assisted photocatalytic oxidation of Bisphenol A: Kinetics, degradation pathways, and toxicity elimination, *Separation and Purification Technology*, Volume 242, 1 July 2020, Article 116821.
24. H.M. Nejad, G. Moussavi, Advanced biodegradation process of atrazine in the peroxidase-mediated sequencing batch reactor (SBR) and moving-bed SBR (MSBR): mineralization and detoxification, *Journal of Environmental Health Science and Engineering*, 2020, 18(2), pp. 433–439.
25. R., Rostami, G., Moussavi, A.J., Jafari, S. Darbari, A modeling concept on removal of VOCs in wire-tube non-thermal plasma, considering electrical and structural factors, 2020, *Environmental Monitoring and Assessment*.
26. A.H. Cheshme Khavar, G. Moussavi, K. Yaghmaeian, et al., A new Ru(II) polypyridyl complex as an efficient photosensitizer for enhancing the visible-lightdriven photocatalytic activity of a TiO<sub>2</sub>/reduced graphene oxide nanocomposite for the degradation of atrazine: DFT and mechanism insights, *RSC Advances*, 2020, 10, 22500.

## 2019

1. H. Amanollahi, G. Moussavi, S. Giannakis, VUV/Fe(II)/H<sub>2</sub>O<sub>2</sub> as a novel integrated process for advanced oxidation of methyl tert-butyl ether (MTBE) in water at neutral pH: Process intensification and mechanistic aspects, *Water Research*, Volume 166, 1 December 2019, Article 115061.
2. A.H. Cheshme Khavar, G. Moussavi, A.R. Mahjoub, R. Luque, M. Sattari, Enhanced visible light photocatalytic degradation of acetaminophen with Ag<sub>2</sub>S-ZnO@rGO core-shell microsphere as a novel catalyst: Catalyst preparation and characterization and mechanistic catalytic experiments, *Separation and Purification Technology*, Volume 229, 15 December 2019, Article 115803.

3. F. Fanaei, G. Moussavi, V. Srivastava, M. Sillanpää, The enhanced catalytic potential of sulfur-doped MgO (S-MgO) nanoparticles in activation of peroxysulfates for advanced oxidation of acetaminophen, *Chemical Engineering Journal*, Volume 371, 1 September 2019, Pages 404-413.
4. F. Abbaszadeh Haddad, G. Moussavi, M. Moradi, Advanced oxidation of formaldehyde in aqueous solution using the chemical-less UVC/VUV process: Kinetics and mechanism evaluation, *Journal of Water Process Engineering*, Volume 27, February 2019, Pages 120-125.
5. S. Shekoohiyan, S. Rtimi, G. Moussavi, S. Giannakis, C. Pulgarin, Enhancing solar disinfection of water in PET bottles by optimized in-situ formation of iron oxide films. From heterogeneous to homogeneous action modes with H<sub>2</sub>O<sub>2</sub> vs. O<sub>2</sub> – Part 2: Direct use of (natural) iron oxides, *Chemical Engineering Journal*, Volume 360, 15 March 2019, Pages 1051-1062.
6. S. Shekoohiyan, S. Rtimi, G. Moussavi, S. Giannakis, C. Pulgarin, Enhancing solar disinfection of water in PET bottles by optimized in-situ formation of iron oxide films. From heterogeneous to homogeneous action modes with H<sub>2</sub>O<sub>2</sub> vs. O<sub>2</sub> – Part 1: Iron salts as oxide precursors, *Chemical Engineering Journal*, Volume 358, 15 February 2019, Pages 211-224.
7. G. Moussavi, E. Fathi, M. Moradi, Advanced disinfecting and post-treating the biologically treated hospital wastewater in the UVC/H<sub>2</sub>O<sub>2</sub> and VUV/H<sub>2</sub>O<sub>2</sub> processes: performance comparison and detoxification, *Process Safety and Environmental Protection*, 126C (2019) pp. 259-268.
8. M. Moradi, G. Moussavi, Enhanced treatment of tannery wastewater using the electrocoagulation process combined with UVC/VUV photoreactor: Parametric and mechanistic evaluation, *Chemical Engineering Journal*, Volume 358, 15 February 2019, Pages 1038-1046.
9. G. Moussavi, F. Abbaszadeh Haddad, Bacterial peroxidase-mediated enhanced biodegradation and mineralization of bisphenol A in a batch bioreactor, *Chemosphere*, Volume 222, 15 May 2019, Pages 549-555.
10. A. Sheikhmohammadi, A. Yazdanbakhsh, G. Moussavi, A. Eslami, M. Almasian, Degradation and COD removal of trichlorophenol from wastewater using sulfite anion

radicals in a photochemical process combined with a biological reactor: Mechanisms, degradation pathway, optimization and energy consumption, ***Process Safety and Environmental Protection***, Volume 123, March 2019, Pages 263-271.

11. R. Rostami, G. Moussavi, S. Darbari, A.J. Jafari, Enhanced removal of benzene in non-Thermal plasma with ozonation, flow recycling, and flow recirculation, ***Plasma Science and Technology***, 21(9),095501. (IF: 1.193)
12. N. Shafeei, G. Asadollahfardi, G. Moussavi, M.M.A. Akbar Boojar, Degradation of ibuprofen in the photocatalytic process with doped TiO<sub>2</sub> as catalyst and UVA-LED as existing source, ***Desalination and Water Treatment***, 142, pp. 341-352.
13. E. Aghayani, G. Moussavi, K. Naddafi, Improved peroxidase-mediated biodegradation of toluene vapors in the moving-bed activated sludge diffusion (MASD) process using biosurfactant-generating biomass stimulated with H<sub>2</sub>O<sub>2</sub>, ***Journal of Hazardous Materials***, Volume 361, 5 January 2019, Pages 259-266.

## 2018

14. P. Baratpour, G. Moussavi, The accelerated biodegradation and mineralization of acetaminophen in the H<sub>2</sub>O<sub>2</sub>-stimulated upflow fixed-bed bioreactor (UFBR), ***Chemosphere***, Volume 210, November 2018, Pages 1115-1123.
15. G. Moussavi, M. Pourakbar, E. Aghayani, M. Mahdavianpour, Investigating the aerated VUV/PS process simultaneously generating hydroxyl and sulfate radicals for the oxidation of cyanide in aqueous solution and industrial wastewater, ***Chemical Engineering Journal***, Volume 350, 15 October 2018, Pages 673-680.
16. A.H. Cheshmehkavar, G. Moussavi, A. Mahjoub, M. Satari, P. Abdolmaleki, Synthesis and visible-light photocatalytic activity of In,S-TiO<sub>2</sub>@rGO nanocomposite for degradation and detoxification of pesticide atrazine in water, ***Chemical Engineering Journal***, Volume 345, 1 August 2018, Pages 300-311.
17. M. Mahdavianpour, G. Moussavi, M. Farrokhi, Biodegradation and COD removal of p-Cresol in a denitrification baffled reactor: Performance evaluation and microbial community, ***Process Biochemistry***, Volume 69, June 2018, Pages 153-160.

18. A.H. Cheshmehkhavar, G. Moussavi, A. Mahjoub, The preparation of TiO<sub>2</sub>@rGO nanocomposite efficiently activated with UVA/LED and H<sub>2</sub>O<sub>2</sub> for high rate oxidation of acetaminophen: Catalyst characterization and acetaminophen degradation and mineralization, ***Applied Surface Science***, Volume 440, 15 May 2018, Pages 963-973.
19. M. Pourakbar, G. Moussavi, K. Yaghmaeian, Enhanced biodegradation of phenol in a novel cyclic activated sludge integrated with a rotating bed bioreactor in anoxic and peroxidase-mediated conditions, ***RSC Advances***, Volume 8 (12), Pages 6293-6305.
20. Eskandari, M., Goudarzi, N., G. Moussavi, Application of low-voltage UVC light and synthetic ZnO nanoparticles to photocatalytic degradation of ciprofloxacin in aqueous sample solutions, ***Water and Environment Journal***, 32(2018), pp. 58-66.
21. R. Khosravi, G. Moussavi, M.T. Ghaneian, M.H. Ehrampoush, G. Sharifzadeh, Chromium adsorption from aqueous solution using novel green nanocomposite: Adsorbent characterization, isotherm, kinetic and thermodynamic investigation, ***Journal of Molecular Liquids***, Volume 258, 15 April 2018, Pages 163-174.
22. G. Moussavi, A. Mashayekh, K. Yaghmaeian, A., Mohseni-bandpei, The catalytic destruction of antibiotic tetracycline by sulfur-doped manganese oxide (S-MgO) nanoparticles, ***Journal of Environmental Management***, Volume 210, 15 March 2018, Pages 131-138.
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