

# CURRICULUM VITAE

## *Personal Information*

- **Name:** Mohammad Saleh Shafeeyan
- **Date & Place of Birth:** 19 February 1985, Iran
- **E-mail:** ms.shafeeyan@gu.ac.ir

## *Educational Background*

- **PhD.** Chemical Engineering/ Separation Processes  
2011–2015, University of Malaya, Kuala Lumpur, Malaysia
- **M.Sc.** Chemical Engineering/ Reaction Engineering  
2009 –2011, University of Malaya, Kuala Lumpur, Malaysia
- **B.Sc.** Chemical Engineering  
2003 –2008, University of Tehran, Tehran, Iran

## *Theses*

- “Fixed-Bed Adsorption of Carbon Dioxide Onto Ammonia-Modified Activated Carbon: Experimental and Modeling Study”: Ph.D.
- “Amination of Palm Shell Based Activated Carbon for Carbon Dioxide Adsorption”: M.Sc.
- “Enzymatic treatment of cellulose fibers using cellulase enzyme”: B.Sc.

## *Work Experiences (Research and Teaching)*

- **2018- Up to now:** Assistant Professor, Department of Chemical Engineering, Golestan University, Gorgan, Iran
- **2017-2018:** Lecturer, Department of Chemical and Materials Engineering, Buein Zahra Technical University, Qazvin, Iran
- **2016-2017:** Post-Doctoral Research Fellow, School of Chemical Engineering, University of Tehran, Tehran, Iran.
- **2015-2016:** Post-Doctoral Research Fellow, Department of Chemical Engineering, University of Malaya, Kuala Lumpur, Malaysia.
- **2013-2015:** Research Associate, Centre for Separation Science & Technology, University of Malaya.
- **2009-2013:** Research Assistant, Centre for Separation Science & Technology, University of Malaya.

## *Honors/ Awards*

- Recipient, Iran National Elite Foundation award; “Dr. Kazemi Ashtiani”: Recruiting Faculties in Scientific Institutions & Research Grant for Young Assistant Professors, 2017.
- Recipient, Iran National Elite Foundation award; “Shahid Chamran Scientific Award for Postdoc Researchers”, 2016.
- Recipient, “Bright Sparks Scholarship”: Awarded from University of Malaya to outstanding postgraduate students with deep interest in research and academic work to pursue their study in PhD level, 2011.
- Publishing three articles that have been classified by Web of Science as “highly cited papers, in the top 1% of the academic field of chemistry and environment (Thomson Reuters' Essential Science Indicators.)
- Editorial board of the Journal of Chemical Engineering & Process Techniques.
- Reviewer of several ISI-indexed journals, including Journal of Analytical and Applied Pyrolysis, Carbon, Energy & Fuels, The Korean Journal of Chemical Engineering, Journal of Hazardous Materials, Environment Protection Engineering, Journal of Chemometrics, Materials Express, Journal of Molecular Liquids, Desalination and Water Treatment, Polish Journal of Environmental Studies, and ...

## Book

- Book chapter “Transition metal substituted magnetite as an innovative adsorbent and heterogeneous catalyst for water treatment” in: A. Bonilla-Petriciolet (Ed.), “Adsorption Processes for Water Treatment and Purification”, Springer International Publishing, Switzerland 2017.

## Journal Papers

1. The effects of high-energy ball milling on the synthesis, sintering and microwave dielectric properties of  $\text{Li}_2\text{TiO}_3$  ceramics, *Journal of Materials Science: Materials in Electronics*, 29 (13), 10933-10941.
2. Evaluating the efficiency of nano-sized Cu doped  $\text{TiO}_2/\text{ZnO}$  photocatalyst under visible light irradiation”, *Journal of Molecular Liquids*, 258, 354-365.
3. Enhanced UV-Visible Photocatalytic Activity of Cu-Doped  $\text{ZnO}/\text{TiO}_2$  nanoparticles”, *Journal of Materials Science: Materials in Electronics*, 29 (7), 5480-5495.
4. A comparative study on a cationic dye removal through homogeneous and heterogeneous Fenton oxidation systems”, *Acta Chimica Slovenica*, 65 (1), 166-171.
5. Comprehensive study on the influence of molybdenum substitution on characteristics and catalytic performance of magnetite nanoparticles”, *Research on Chemical Intermediates*, 44 (2018), 883–900.
6. Solubility of  $\text{CO}_2$  in aqueous solutions of glycerol and monoethanolamine”, *Journal of Molecular Liquids*, 249 (2018), 40–52.
7. Application of doped photocatalysts for organic pollutant degradation-A review”, *Journal of Environmental Management*, 198 (2017), 78–94.
8. Absorption of  $\text{CO}_2$  into aqueous mixtures of glycerol and monoethanolamine”, *Journal of Natural Gas Science & Engineering*, 209 (2016), 596–602.
9. Ultrasound and UV assisted Fenton treatment of recalcitrant wastewaters using transition metal-substituted-magnetite nanoparticles”, *Journal of Molecular Liquids*, 222 (2016), 1076–1084.
10. Modeling of carbon dioxide adsorption onto ammonia-modified activated carbon: Kinetic analysis and breakthrough behavior”, *Energy & Fuels*, 29 (2015), 6565–6577.
11. Effects of niobium and molybdenum impregnation on adsorption capacity and Fenton catalytic activity of magnetite”, *RSC Advances*, 5 (2015), 87535-87549.
12. Adsorption equilibrium of carbon dioxide on ammonia-modified activated carbon”, *Chemical Engineering Research and Design*, 104 (2015) 42-52.
13. Density and viscosity of aqueous mixtures of N-methyldiethanolamines (MDEA), piperazine (PZ) and ionic liquids”, *Journal of Molecular Liquids*, 209 (2015), 596–602.
14. Modification of Activated Carbon Using Nitration Followed by Reduction for Carbon Dioxide Capture”, *Bulletin of the Korean Chemical Society*, 36 (2015) 533–538.
15. A semi-empirical model to predict adsorption equilibrium of carbon dioxide on ammonia modified activated carbon”, *Journal of Advances in Science, Engineering & Technology*, 5 (2015) 72-77.
16. A review of mathematical modeling of fixed-bed columns for carbon dioxide adsorption”, *Chemical Engineering Research and Design*, 92 (2014) 961-988.
17. Physical properties of aqueous mixtures of N-methyldiethanolamine (MDEA) and ionic liquids”, *Journal of Industrial and Engineering Chemistry*, 20 (2014), 3349-3355.
18. Experimental and modeling analysis of propylene polymerization in a pilot scale fluidized bed reactor”, *Industrial & Engineering Chemistry Research*, 53 (2014), 8694-8705.
19. Anchoring a halogenated amine on the surface of a microporous activated carbon for carbon dioxide capture”, *Journal of the Taiwan Institute of Chemical Engineers*, 44 (2013), 774-779.
20. The application of response surface methodology to optimize the amination

of activated carbon for the preparation of carbon dioxide adsorbents”, *Fuel*, 94 (2012), 465-472.

21. Carbon dioxide capture with amine-grafted activated carbon”, *Water, Air, & Soil Pollution*, 223 (2012), 827-835.

22. Production of microporous palm shell based activated carbon for methane adsorption: Modeling and optimization using response surface methodology”, *Chemical Engineering Research and Design*, 90 (2012), 776-784.

23. Optimization of synthesis and characterization of palm shell-based bio-char as a by-product of bio-oil production process”, *BioResources*, 7 (2012), 246-264.

24. Tailoring the surface chemistry of activated carbon by nitric acid: Study using response surface method”, *Bulletin of the chemical society of Japan*, 84 (2011), 1251-1260.

25. Ammonia modification of activated carbon to enhance carbon dioxide adsorption: Effect of pre-oxidation”, *Applied Surface Sciences*, 257 (2011), 3936-3942.

26. Dynamic modeling of gas phase propylene homopolymerization in fluidized bed reactors”, *Chemical Engineering Science*, 66 (2011), 1189-1199.

27. Exploring Potential Methods for Anchoring Amine Groups on the Surface of Activated Carbon for CO<sub>2</sub> Adsorption”, *Separation Science and Technology*, 46 (2011), 1098-1112.

28. A review on surface modification of activated carbon for carbon dioxide adsorption”, *Journal of Analytical and Applied Pyrolysis*, 89 (2010), 143-151.

29. Enzymatic treatment of alpha-cellulose fibers by using a commercial cellulase”, *Journal of Biotechnology*, 136 (2008), S424.

### ***Conference Papers***

1. Ammonia modification of activated carbon to enhance carbon dioxide adsorption: Effect of pre-oxidation”, 2nd International Renewable Energy and Environment Conference (IREEC), Kuala Lumpur, Malaysia, 2013.

2. Statistical modeling and optimization of amination conditions of activated carbon for carbon dioxide adsorption using response surface methodology”, 3rd International Conference on Chemical, Biological and Environmental Engineering (IPCBEE), Singapore, 2011.

3. The most promising techniques for Functionalization of activated carbon surface with amine groups”, 17th Regional Symposium on Chemical Engineering (RSCE), Bangkok, Thailand, 2010.

4. Surface modification of activated carbon with gaseous ammonia for carbon dioxide adsorption”, 24th Symposium of Malaysian Chemical Engineers (SOMChE), Kuala Lumpur, Malaysia, 2010.

5. Enzymatic treatment of  $\alpha$ -cellulose fibers by using a cellulase enzyme”, 13<sup>th</sup> International Biotechnology Symposium and Exhibition (IBS), Dalian, China, 2008.

### ***Professional Membership***

- Associate member of the Institution of Chemical Engineers (IChemE)
- Associate member of American Chemical Society (ACS)
- Member of American Institute of Chemical Engineers (AIChE)

### ***Teaching courses***

- Heat Transfer
- Unit Operation
- Mass Transfer
- Fluid Mechanics
- Thermodynamics
- Physical Chemistry
- Transport Phenomena
- Kinetics & Reactor Design
- Plant Design & Economics for Chemical Engineers

***Computer Skills***

- Comsol Multiphysics, Hysys, Matlab, Design Expert, Sigma Plot, MS Office

***Lab Skills***

- Temperature Programmed Analysis (TPR, TPD, TPO, and TPA)
- Dynamic Physisorption and Chemisorption Analyzer
- High Performance Liquid Chromatography (HPLC)
- Fourier Transform Infrared Spectroscopy (FTIR)
- Transmission electron microscopy (TEM)
- X-ray photoelectron spectroscopy (XPS)
- Thermal Gravimetric Analyzer (TGA)
- Scanning Electron Microscope (SEM)
- X-ray crystallography (XRD)
- Gas Chromatography (GC)
- Elemental Analyzer

***References***

- **Prof. Dr. Wan Mohd Ashri Wan Daud**  
Department of Chemical Engineering, Faculty of Engineering,  
University of Malaya, E-mail: Ashri@um.edu.my
- **Prof. Dr. Navid Mostoufi**  
School of Chemical Engineering, University of Tehran  
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- **Prof. Dr. Manouchehr Haghighi**  
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