

Naeimeh Jodeiri Naghashkar

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Profile

First name: Naeimeh
Last name: Jodeiri Naghashkar
Place of birth: Tabriz, Iran
Nationality: Iranian

Education

- PhD in Chemical Engineering, University of Alberta, Edmonton, Canada (January 2006-January 2011)
- Master of Engineering in Environmental Engineering, University of Alberta, Edmonton, Alberta (January 2004-January 2006)
- Bachelor of Science in Chemical Engineering, Sahand University of Technology, Tabriz, Iran, (September 1998-September 2002)

Research Experience

PhD Research: “Modeling and optimization of catalytic diffusive radiant heater for treatment of fugitive methane and BTEX emissions”

Master’s Thesis: “Treatment of pharmaceuticals using Advanced Oxidation Processes”

Bachelor’s Thesis: “Sorbitol Production: Feasibility Studies and Plant Design”

Teaching Experience

- Organic chemistry, BSc course (2019-now)
- Chemical kinetics and reactor design, BSc course (2011-2018)
- Advanced fuel and combustion, MSc course (2012-now)
- Advanced chemical kinetics and reactor design, MSc course (2011-now)
- Technical writing, BSc course (2013-now)
- Heat transfer laboratory, BSc course (2013-2014)
- Introduction to chemical engineering, BSc course (2014-2015)

Thesis Supervision

- Kiani S., Jodeiri N., Ahmadlou M"Antibiotics removal from aqueous environment by persulfate ios based advanced oxidation processes", September 2024.

- Mardizad J, Fatehifar E. and Jodeiri N., "Modelling and optimization of car air filters", January 2022.
- Daryani M., Fatehifar E. and Jodeiri N., "Optimization of operating conditions in liquid-liquid extraction column in the process of purification of industrial phosphoric acid", January 2020.
- Mahmoudi, E., Jodeiri N., Fatehifar E., "Implementation of material flow cost accounting for efficiency improvement in wastewater treatment unit of Tabriz oil refining company", September 2017.
- Mohammadi zadeh Z., Jodeiri N., Farshi A, rouiaee S. J., "Investigation of spent caustic treatment methods in oil and gas industry", September 2017.
- Baneshi J., Haghighi M., Jodeiri N., "Comparison of precipitation and combustion methods in synthesis of Cu-based nanocatalysts for hydrogen production from methanol used in fuel cells", September 2014.
- Shokrani R., Haghighi M., Jodeiri N., "Effect of alumina addition on the performance of CuO-ZnO nanocatalyst synthesized via combustion method for hydrogen production from methanol", September 2014.
- Talkhoncheh S., Haghighi M., Jodeiri N., "Synthesis and characterization of Ni/ γ - Al_2O_3 -Clinoptilolite- CeO_2 nanocatalyst for syngas production from greenhouse gases CH_4/CO_2 ", September 2014.
- Minaei S. Haghighi M. Jodeiri N., "Influence of CeO_2 addition on performance of CuO/ZnO/ Al_2O_3 nanocatalyst used in methanol reforming process" September 2014.
- Kheyrollahi Nazhad P., Haghighi M., Jodeiri N., "Synthesis and evaluation of Ni/ ZrO_2 / MgO nanocatalyst used in ethane conversion to ethylene", September 2014.
- Omrani S., Tavakoli A., Babalou A., Jodeiri N., "Synthesis of Pt/HMOR nanocatalyst and its performance in n-pentane isomerization", October 2013.
- Valinia M., Babalou A., Jodeiri N., "Investigation of processing parameters on the performance of nanostructure zeolite membranes in separation of ethylene glycol from water via pervaporation process", October 2013.
- Bagheri S., Yegani R., Jodeiri N., "Investigation of the effect of alkaline solutions on the structure and performance of PSF polymeric membranes", September 2013.
- Behrooz Chekan M., Yegani R., Jodeiri N., "Investigation of the effect of alkaline solutions on the structure and performance of polyethylene membranes", September 2013.
- Safari Dehnavi M., Yegani R., Jodeiri N., "Investigation of the effect of various oxidizing agents on the increment of OH groups on the PSF microporous membranes", September 2013.
- Farid Bagheri M., Mogaddas J.S., Jodeiri N., "Experimental investigation of effect of increasing the area on production of bi-naphthol by using a reciprocating reactor", January 2013
- Noparvar P., Moghaddas J.S., Jodeiri N., "The effect of humidity of powder mixing by reciprocating reactor", September 2012.

Publications and Presentations

Book

- Jodeiri N., "Chemical reactions and chemical reactors" by George W. Roberts, translated to Farsi, 2021.

Refereed publications:

- Daryani M., Jodeiri N., Fatehifar E. and Shahbazi J., "Optimization of operating conditions in purification of wet-process phosphoric acid in a liquid-liquid extraction column", Chemical Engineering Communications, Vol. 209, 1082-1095, 2022.
- Jodeiri N., Mahmoudi E., Rezaee M. and Fatehifar E., "Estimation of pollutant emission from wastewater treatment unit of Tabriz Oil Refining Company with TOXCHEM", Environmental Science and Technology (Quarterly), in press.
- Ahmadi O., Jafarizadeh H., Jodeiri N., "Optimization of processing parameters for hydrothermal silver nanoparticles synthesis using Aloevera leaf extract and estimation of their physicochemical and antifungal properties", Zeitschrift für Physikalische Chemie, Vol. 233, 651-667, 2019.
- Mohammadi zadeh Z., Jodeiri N., Farshi A, rouiaee S. J., "Investigation of spent coustic treatment methods in oil and gas industry", Iranian Chemical Engineering Journal, Vol. 17, 39-55, 2018.
- Mahmoudi, E., Jodeiri N., Fatehifar E., "Implementation of material flow cost accounting for efficiency improvement in wastewater treatment unit of Tabriz oil refining company", Journal of Cleaner Production, Vol. 165, 530-536, 2017.
- Minaei S. Haghighi M. Jodeiri N., Abdollahifar M., Ajamein H., "Influence of ceria on hydrogen production used in fuel cells via steam reforming of methanol on a mixture of Cu, Zn and Al nanocatalysts synthesized by urea-nitrate combustion method", Journal of Applied Researches in Chemistry, Vol. 8, 33-44, 2014.
- Baneshi J., Haghighi M., Jodeiri N., Abdollahifar M., Ajamein H., "Urea-nitrate synthesis of ZrO_2 and CeO_2 doped CuO/Al_2O_3 nanocatalyst used in steam reforming of biomethanol for hydrogen production" Ceramics International, Vol. 40, 14177-14184, 2014.
- Baneshi J., Haghighi M., Jodeiri N., Abdollahifar M., Ajamein H., "Homogeneous precipitation synthesis of $CuO-ZrO_2-CeO_2-Al_2O_3$ nanocatalyst used in hydrogen production via methanol steam reforming for fuel cell applications", Energy Conversion and Management, Vol. 87, 928-937, 2014.
- Shokrani R., Haghighi M., Jodeiri N., Ajamein H., Abdollahifar M., "Fuel cell grade hydrogen production via methanol steam reforming over $CuO/ZnO/Al_2O_3$ nanocatalyst with various oxide ratios synthesized via urea-nitrates combustion method" International Journal of Hydrogen Energy, 1-15, 2014.

- Jodeiri N., Wu L., Mmbaga J., Hayes R.E., Wanke S.E., “Catalytic combustion of VOC in a counter-diffusive reactor”, *Catalysis Today*, Vol. 155, No. 1-2, 147-153, 2010.
- Ikehata K., Jodeiri N., Gamal El-Din M., “Degradation of aqueous pharmaceuticals by ozonation and advanced oxidation processes: a review”, *Ozone: Science And Engineering*, Vol. 28, 353-414, 2006.
- Hayes R.E., Jodeiri N., Mannan T., Mmbaga J., Wanke S.E., “Designing catalytic radiant heaters for fugitive methane and BTEX combustion”, *Proceedings of 1st International Congress on Green Process Engineering*, April 24-26, 2007, Toulouse, France, <http://inpact.inp-toulouse.fr/GPE2007/scope.htm>

Presentations:

- Daryani M., Fatehifar E., Jodeiri N., Shahbazi J., "Optimization of operational parameters for reduction of Nickel impurities from phosphoric acid produced by wet method in liquid-liquid extraction column", *The 6th International Conference on Chemical and Petroleum Engineering*, Tehran, 2020.
- Kaari G., Fatehifar E., Jodeiri N., Hemmati B., "Reducing the environmental impact of vacuum distillation unit in Tabriz Oil Refinery by material flow cost accounting", *The 2nd International Conference on New Ideas in Agriculture, Environment and Tourism*, Ardabil, 2016.
- Minaei S., Haghighi M., Jodeiri N., Abdollahifar M., Ajamein H., “Effect of ceria (30%) addition on physicochemical properties and catalytic performance of nanostructured CuO/ZnO/Al₂O₃ oxides used in hydrogen production from steam reforming of methanol”, *The 1st Fuel and Combustion Conference of Iran*, Tehran, 2014.
- Baneshi J., Haghighi M., Jodeiri N., Abdollahifar M., Ajamein H., “Fuel cell grade hydrogen production from Methanol over Nanostructured CuO(50)/CeO₂(35)/Al₂O₃(15) and CuO(50)/ZrO₂(35)/Al₂O₃(15) catalysts synthesized via homogeneous precipitation”, *The 5th Fuel and Combustion Conference of Iran*, Tehran, 2014.
- alkhoncheh K. S., Haghighi M., Jodeiri N., “Hydrogen production via methanol steam reforming over CuO/ZnO/Al₂O₃/ZrO₂/CeO₂ nanocatalyst synthesized via homogeneous precipitation and combustion methods”, *The 5th International Congress on Nanoscience and Nanoscience*, Tehran, 2014.
- Talkhonche K. S., Haghighi M., Jodeiri N., “Influence of sSupport composition on catalytic properties and performance of ternary supported Ni/Al₂O₃-clinoptilolite-CeO₂ nanocatalyst used in hydrogen production via CH₄/CO₂ reforming”, *The 5th International Congress on Nanoscience and Nanoscience*, Tehran, 2014.
- Talkhonche K. S., Haghighi M., Jodeiri N., “Synthesis and characterization of supported Ni nanocatalyst over various supports of ceria, clinoptilolite and alumina used in hydrogen production via dry reforming of methane”, *The 5th International Congress on Nanoscience and Nanoscience*, Tehran, 2014.

- Kheirollahi P., Haghighi M., Jodeiri N., Rahmani F., “Impregnation vs. sol-gel preparation of Ni/ZrO₂(25%)-MgO(75%) nanocatalyst for conversion of ethane to ethylene in the presence of CO₂/O₂”, The 5th International Congress on Nanoscience and Nanoscience, Tehran, 2014.
- Kheirollahi P., Haghighi M., Jodeiri N., Rahmani F., “Synthesis and physicochemical characterization of Ni/ZrO₂(50%)-MgO(50%) nanocatalyst used in oxidative dehydrogenation of ethane to ethylene by carbon dioxide and oxygen”, The 5th International Congress on Nanoscience and Nanoscience, Tehran, 2014.
- Shokrani R., Haghighi M., Jodeiri N., Abdollahifar M., Ajamein H., “Comparison of physicochemical properties and process performance of CuO-ZnO(4/4) and CuO-ZnO-Al₂O₃(4/4/1) nanocatalysts synthesized via urea-nitrate combustion method and used in methanol conversion to hydrogen”, 1st National Hydrogen Conference, Shahin Shahr, 2013.
- Bagheri S., Yegani R., Jodeiri N., “Investigation of the effect of sodium hydroxide and monoethanol amin on the structure and performance of polysulfone membranes”, The First National Conference on New Technologies in Chemistry and Chemical Engineering, Tehran, 2013.
- Safari Dehnavi M., Yegani R., Jodeiri N., “Investigation of the effect of KMNO₄ on hydrophilic property of microporous polysulfone membrane”, The First National Conference on New Technologies in Chemistry and Chemical Engineering, Tehran, 2013.
- Noparvar P., Moghaddas J.S., Jodeiri N., “The effect of addition of water and CHCl₃ as solvent to oxidative coupling reaction of 2-naphtol in reciprocating reactor”, The 14th Conference of Chemical Engineering, Tehran, 2012.
- Noparvar P., Moghaddas J.S., Jodeiri N., “The effect of Cl contacting solvents on the yield of 1,1-2-binaphtol in reciprocating reactor”, The 14th Conference of Chemical Engineering, Tehran, 2012.
- Jodeiri N., Wu L., Mmbaga J., Hayes R.E., Wanke S.E., “Modeling the Counter-diffusive Radiant Heater” 21st Canadian Symposium on Catalysis, Banff, Canada, June 2010,.
- Jodeiri N., Wu L., Mmbaga J., Hayes R.E., Wanke S.E., “Catalytic combustion of natural gas dehydrator emissions” 21st North American Catalysis Society Meeting, San Francisco, USA, June 2009
- Jodeiri N., Wu L., Mmbaga J., Hayes R.E., Wanke S.E., “Counter-diffusive radiant heater for mitigation of methane and BTEX emissions” 20th Canadian Symposium on Catalysis, Kingston, Canada, June 2008.
- Jodeiri N., Wu L., Hayes R.E., Mannan T., Mmbaga J. and Wanke S.E., “Catalytic radiant heaters for fugitive methane and BTEX combustion, Oral presentation at 57th Canadian Chemical Engineering Conference, Edmonton, Canada, October 2007.

- Jodeiri N., Hayes R.E., Mannan T., Mmbaga J. and Wanke S.E., “Designing catalytic radiant heaters for fugitive methane and BTEX combustion”, poster presentation at 3rd Graduate Research Symposium at Chemical and Materials Engineering Department, University of Alberta, Edmonton, Canada, May 2007.
- Ikehata K., Jodeiri N., Gamal El-Din M., “A review on treatment of diclofenac using advanced oxidation processes”, Poster presentation at 55th Canadian Chemical Engineering Conference, Toronto, Canada, October 2005.

Activities related to productivity improvement

- Supervision of several MSc thesis on productivity improvement in different industries
- Active member of productivity and sustainable development research center at Sahand University of Technology
- Publishing several high impact papers from productivity related MSc projects
 - "Implementation of material flow cost accounting for efficiency improvement in wastewater treatment unit of Tabriz oil refining company" published in Journal of Cleaner Production.

Awards

- Provost Doctoral Entrance Award, University of Alberta, 2006.
- Professional Development Grant, Graduate Student’s Association, University of Alberta, 2008
- Professional Development Grant, Graduate Student’s Association, University of Alberta, November 2005.

Workshops and Training Programs

- Undergraduate Training Program, Tabriz Power Plant, Tabriz, Iran (June 2000-September 2000).
- Graduate Teaching Assistants Program, University Teaching Services, University of Alberta, 60 hours, 2006-now, Edmonton, Canada.