

Seyed Mahdi Mousavi



PhD. In Applied Chemistry, Assistant Professor
University of Kashan, Kashan, Iran

Date of Birth: 7th Mar. 1983

Marital Status: Married

Postal Address: Faculty of Chemistry, University of Kashan,
Kashan 87317, Iran.

Email: mousavi.smahdi@kashanu.ac.ir
moosavi.smahdi@gmail.com

Educational Background

- 2010-2014** PhD. in Applied Chemistry, University of Tabriz, Tabriz, Iran.
Dissertation “*Study and Optimizing of Performance of Some Mixed Metal Oxide Nanocatalysts in Selective Catalytic Reduction of NO_x*”
- 2006- 2009** M. Sc. in Applied Chemistry, University of Tabriz, Tabriz, Iran.
Dissertation “*Study of activity of immobilized α -Amylase on perlite modified by Nanoporous silica*”
- 2001-2005** B. Sc. in Applied Chemistry, University of Razi, Kermanshah, Iran.

Awards & Activities

- ✓ Ranked at position 1 in the PhD. entrance exam University of Tabriz, 2010.
- ✓ Ranked at position 2 in the B. Sc. course, Razi University, Kermanshah, 2006.
- ✓ Member of gifted and talented office, University of Tabriz, 2008- 2014
- ✓ Member of young researchers club of Azad University, Tabriz branch, 2009- 2013.
- ✓ Member of Iranian Nanotechnology Society (INS), Iran, 2013- Continuing.
- ✓ Member of Iranian Society of Environmentalists, Iran, 2014- Continuing.
- ✓ Member of Iranian Association of Chemical Engineering, Iran, 2012- Continuing.

Research Interests

- ✓ Synthesis, Characterization & Application of Nanocatalysts (*Supported Metal oxides, Mixed Metal Oxides*)
- ✓ Environmental Remediation Process
- ✓ Modeling & Optimization of Chemical Process
- ✓ Design of Experiments

Job Experiences

- ✓ **Faculty Member** University of Kashan, Kashan, Iran, 2014- Continuing.
- ✓ **R&D Expert** Lavan Oil Co., Lavan, Iran, 2012-2013.
- ✓ **Technical Officer** Ghorbani Teflon container Co., Tabriz, Iran, 2009-2011.
- ✓ **Technical Expert** Meybod Narin Tile Co., Meybod, Iran, 2005-2006.

Teaching Experiences

- ✓ **Principles and Calculations in Industrial Chemistry** B. Sc. University of Kashan
- ✓ **Graphic** B. Sc. University of Kashan
- ✓ **General Chemistry** B. Sc. University of Kashan & University of Tabriz
- ✓ **General Chemistry Laboratory** B. Sc. University of Kashan & University of Tabriz

Research Activities

- ✓ Executer in project of “*Synthesis and structural characterization of cadmium (II) oxide from coordination compound and study of its catalytic activity*” gifted and talented office, University of Tabriz, Tabriz, Iran, 2011-2012.
- ✓ Co-worker in project of “*Immobilization of enzyme in self-assembling Nanoporous*”, University of Tabriz, Tabriz, Iran, 2008-2009.
- ✓ Patent certificate “*Preparation of modified Nanoporous Perlite*” 50241, 2008, Iran.
- ✓ Patent certificate “*Nanoporous Perlite as support of Enzyme*” 51698, 2008, Iran.

Publication

Journal Papers

- 1- **Seyed Mahdi Mousavi**, Aligholi Niaei, María José Illán Gómez, Dariush Salari, Parvaneh Nakhostin Panahi, “Physico-Chemical Properties and Catalytic Activity of Supported CeO₂-MnO_x Mixed Oxides”, *Materials Chemistry and Physics*, **2014**, Submitted.
- 2- Parvaneh Nakhostin Panahi, Aligholi Niaei, Dariush Salari, **Seyed Mahdi Mousavi**, “Selective Catalytic Reduction of NO over M-Ag/ZSM-5 (M: Mn, Fe and Ni) Bimetal Nanocatalysts: Chemical-Physical Properties and Catalytic Performance”, *The Korean Journal of Chemical Engineering*, **2014**, Under review.

- 3- Parvaneh Nakhostin Panahi, Aligholi Niaei, Hui-Hsin Tsenga, Dariush Salari, **Seyed Mahdi Mousavi**, "Selective catalytic reduction of NO by NH₃ on Cu-SAPO-34 nanocatalysts: a comparative study of different preparation techniques", *Material Research Bulletin*, **2014**, Under review.
- 4- Parvaneh Nakhostin Panahi, Aligholi Niaei, Dariush Salari, **Seyed Mahdi Mousavi**, Carolina Petitto, "Effect of the preparation method on activity of Cu-ZSM-5 nanocatalysts for the selective reduction of NO by NH₃", *Microporous & Mesoporous Materials*, **2014**, Under review.
- 5- **Seyed Mahdi Mousavi**, Aligholi Niaei, María José Illán Gómez, Dariush Salari, Parvaneh Nakhostin Panahi, Vicente Abaladejo-Fuentes, Characterization and activity of alkaline earth metals loaded CeO₂-MO_x (M=Mn, Fe) mixed oxides in catalytic reduction of NO, *Materials Chemistry and Physics*, **2014**, 143: 921-928.
- 6- **Seyed Mahdi Mousavi**, Dariush Salari, Aligholi Niaei, Parvaneh Nakhostin Panahi and Sirous Shafiei, "A modelling study and optimization of catalytic reduction of NO over CeO₂-MnO_x (0.25)-Ba mixed oxide catalyst using design of experiments", *Environmental Technology*, **2014**, 35(5): 581-589.
- 7- **Seyed Mahdi Mousavi**, Aligholi Niaei, Dariush Salari, Parvaneh Nakhostin Panahi and Masoud Samandari, "Modelling and optimization of Mn/activate carbon nanocatalysts for NO reduction: comparison of RSM and ANN techniques", *Environmental Technology*, **2013**, 34 (11): 1377-1384.
- 8- Parvaneh Nakhostin Panahi, Dariush Salari, Aligholi Niaei, **Seyed Mahdi Mousavi**, "NO reduction over nanostructure M-Cu/ZSM-5 (M: Cr, Mn, Co and Fe) bimetallic catalysts and optimization of catalyst preparation by RSM", *Journal of Industrial and Engineering Chemistry*, **2013**, 19: 1793-1799.
- 9- Dariush Salari, Aligholi Niaei, Javad Amanpour, **Seyed Mahdi Mousavi**, Parvaneh Nakhostin Panahi, "Optimization of Cu/Activate carbon catalyst in low temperature selective catalytical reduction of NO process using response surface methodology", *Journal of Environmental Science and Health, Part A*, **2013** 48: 879-886.
- 10- **Seyed Mahdi Mousavi**, Parvaneh Nakhostin Panahi, Aligholi Niaei, Ali Farzi, Dariush Salari, "Modeling and Simulation of Styrene Monomer Reactor: Mathematical and Artificial Neural Network Model", *International Journal of Scientific & Engineering Research*, **2012**, 3 (3), 1-8.
- 11- Parvaneh Nakhostin Panahi, **Seyed Mahdi Mousavi**, Aligholi Niaei, Ali Farzi, Dariush Salari, "Simulation of methanol synthesis from synthesis gas in fixed bed catalytic reactor using mathematical modeling and neural networks", *International Journal of Scientific & Engineering Research*, **2012**, 3 (2), 1-8.
- 12- Afzal Karimi, **Seyed Mahdi Mousavi**, Bahman Ghiasi, John R. Grace, "Immobilization of α -Amylase on Modified Mesostructure Perlite", *American Journal of Scientific Research*, **2011**, 32: 107-114.
- 13- Afzal Karimi, **Seyed Mahdi Mousavi**, "Use of Enzyme as a structure directing agent in preparation of nano-porous silica", *Iranian Journal of Chemistry & Chemical*

Engineering (IJCCE), 2010, 29 (1): 95-101.

14- Afzal Karimi, **Seyed Mahdi Mousavi**, Dariush Salari, Aligholi Niaei, “Enhancement of Perlite specific surface area using nano-porous silica deposition method”, *Iranian Journal of Chemistry & Chemical Engineering (IJCCE), 2009, 28 (3): 41-48.*

Conference papers

Catalytic Removal of NO_x over CeO₂-MO_x (M=Mn, Fe, Co, Ni and Cu) Binary Oxide Nanocatalysts, *2nd Technical Conference on Nanotechnology in Power and Energy, June 2014, Tehran, Iran.*

Nitric Oxide Removal over Ce-Mn Mixed Oxide Nanocatalyst, Comparison with Cu-ZSM-5 and Pt-Al₂O₃ Catalysts, *2nd National Conference on New technologies for Environmental Pollution Control, November 2013, Tehran, Iran.*

Catalytic Performance of Some Transition Metals supported on Kaolin in Nitric Oxide Removal Process, *2nd National Conference on New technologies for Environmental Pollution Control, November 2013, Tehran, Iran.*

Selective Catalytic Reduction of NO with Ammonia over Nanostructure Copper Supported ZSM-5 Zeolite Catalysts, *2nd National Conference on New technologies for Environmental Pollution Control, November 2013, Tehran, Iran.*

Effect of Si/Al₂ Ratios on the Activity of Cu-ZSM-5 Catalysts in the NO_x Reduction Performance, *2nd National Conference on New technologies for Environmental Pollution Control, November 2013, Tehran, Iran.*

Catalytic Removal of NO_x by CeO₂-MnO_x Solid Solution Catalysts, *Iranian National Seminar of Chemistry and the Environment, October 2013, Tabriz, Iran.*

M-Pt/Al₂O₃ (M: V, Cr, Mn and Fe) Nanocatalysts in Selective Catalytic Reduction of NO_x, *Iranian National Seminar of Chemistry and the Environment, October 2013, Tabriz, Iran.*

Kinetic Modeling of NO_x Reduction Process by Ammonia over Cu/ZSM-5 Nanocatalyst, *20th International Congress of Chemical and Process Engineering CHISA 2012, August 2012, Prague, Czech Republic.*

Selective Catalytic Reduction of NO with NH₃ over Zeolite Supported Transition Metal Oxide Nanocatalysts, *International Congress on Nanoscience & Nanotechnology (ICNN2012), September 2012, Kashan, Iran.*

Development of LaCo_xFe_{1-x}O₃ perovskite nano catalysts for reduction of NO_x with NH₃, *4th International Conference on Nanostructures, March, 2012, Kish Island, Iran.*

Study of solvent effect on preparation of vanadium oxide nanostructure with hydrothermal process, 7th International Chemical Engineering Congress & Exhibition, November 2011, Kish Island, Iran.

Mathematical modelling and simulation of styrene monomer reactor: a Case Study, 7th International Chemical Engineering Congress & Exhibition, November 2011, Kish Island, Iran.

Hybrid ANN and mathematical modeling of a methanol synthesis fixed bed reactor, 7th International Chemical Engineering Congress & Exhibition, November 2011, Kish Island, Iran.

Catalytical reduction of NO_x over granular active carbon nanocatalysts impregnated with copper oxide, 7th International Chemical Engineering Congress & Exhibition, November 2011, Kish Island, Iran.

Immobilization of α -Amylase on Enhanced Surface Area Perlite, 3rd International Congress on Nanoscience and Nanotechnology, November 2010, Shiraz, Iran.

α -Amylase: New Template in Nanoporous Material Synthesis, 6th National Biotechnology Congress of I. R. Iran, August 2009, Tehran, Iran.

Immobilization of α -Amylase via Adsorption on Ordered Nanoporous Silica, 2nd International Congress on Nanoscience and Nanotechnology, October 2008, Tabriz, Iran.

Stabilized Laccase on Ordered Mesoporous Silica, 2nd International Congress on Nanoscience and Nanotechnology, October 2008, Tabriz, Iran.

Modification of Perlite Surface Structure via Coating of Mesoporous Silica Microspheres, 4th Nanotechnology Iranian Student Conference, October 2008, Kermanshah, Iran.

Immobilization of Laccase on ordered mesoporous silica: case of an inorganic-organic hybrid, 10th Iranian Inorganic Conference, May 2008, Zahedan, Iran