

+ Personal Profile:

- **Name:** Sogand
- **Surname:** Aghamohammadi
- **Date of birth:** 28 April 1989
- **Place of birth:** Tabriz, East Azerbaijan, Iran
- **Nationality:** Iranian
- **Marital Status:** Single

**+ Addresses:**

Chemical Engineering Faculty
Sahand University of Technology
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Education:

- **M.Sc.** student of Chemical Engineering, Sahand University of Technology, since September of 2011.
Thesis: Effect of mixed templates in synthesis of nanostructured CoAPSO-34 molecular sieves used in methanol to light olefins conversion.
Supervisor: Dr. Mohammad Haghighi
- **B.Sc.**, Chemical Engineering, Sahand University of Technology, Tabriz, Iran (2007-2011).
Thesis: synthesis and evaluation of the sol-gel made and impregnated nanocatalysts used in dry reforming of methane via low pressure pilot.
Supervisor: Dr. Mohammad Haghighi

Research Interests:

- Nano Materials and Synthesis
- Nano-Catalysts and Reactor Design
- Environmental Engineering
- GTL Processes
- CFD Modeling
- Membrane Reactors

Language Skills:

- English
- Persian
- Turkish

Associations:

- Research Assistant, Reactor and Catalysis Research Center, Department of Chemical Engineering, Sahand University of Technology, 2011 to now.
 - Attendance in 1st line following and micro mouse robots competition, member of Tabriz research institute, Ferdousi University, Mashhad, Feb. 2006.
 - Scientific Committee of the 12th Iranian Chemical Engineering Congress, ICHEC12, Member, 2008.
 - Member of Iranian Association of Chemical Engineering (IACHE), 2008 to now.
 - Apprentice about 2 month in poly ethylene unit, Tabriz petrochemical company, Iran, 2011.
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Awards and Honors:

- Distinguished student among B.Sc. students with the grade point average (GPA)17.15
- Distinguished student among M.Sc. students with the grade point average (GPA)17.83
- Elite Thesis among B.Sc students to be enrolled in the 1st festival on the selection of outstanding students theses in chemical engineering, Sahand University of technology, Tabriz, Iran.
- Elite paper award, Samira Karimipour, Mohammad Haghighi, Sogand Aghamohammadi and Nader Rahemi, "Synthesis of Metal Nano-Oxides from Al, Mg and Ni Nitrates via Sol-Gel Method Used for Hydrogen Production via Methane Reforming", The 2nd Conference on Hydrogen and Fuel Cell, Khajeh Nasir Toosi University of Technology, Tehran, Iran, 2-3 May 2012.
- Honored by the governor of Tabriz (Dr. Beigi) as a distinguished university student, 10th of November, 2011.
- 2nd place in the 16th Scientific Olympiad on Chemical engineering (among north-west universities of Iran), April 28-29, 2011, Tabriz University, Tabriz, Iran.
- Gaining of 40th rank in the 16th Scientific Olympiad on Chemical engineering, July 12-14, 2011 Tarbiat Modares University, Tehran, Iran.

Teaching Experience:

- Teaching Assistant (Unit operation 1), B.Sc. course, Chemical Engineering Faculty, Sahand University of Technology, Sahand New Town, Tabriz, Iran, (2012-Date).
- Teaching Assistant (Heat transfer 1), B.Sc. course, Chemical Engineering Faculty, Sahand University of Technology, Sahand New Town, Tabriz, Iran, (2011-Date).
- Teaching Assistant (Chemical reactor design), B.Sc. course, Chemical Engineering Faculty, Sahand University of Technology, Sahand New Town, Tabriz, Iran, 2011.

Research Projects:

- Evaluation and Optimization of Flare Performance and Combustion, South Pars Gas Field, (2012-Date).
 - CO₂-Reforming of Natural Gas on Innovative Catalysts Prepared via Plasma Technologies, National Iranian Oil Refining & Distribution Company, NIORDC (2008-2012).
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Publications (Journal Papers):

- [1] **Sogand Aghamohammadi**, Mohammad Haghghi and Samira Karimipour, "A Comparative Synthesis and Physicochemical Characterizations of Ni/Al₂O₃-MgO Nanocatalyst via Sequential Impregnation and Sol-Gel Methods Used for CO₂ Reforming of Methane ", Journal of Nano science and Nanotechnology (Nano-Catalysis), Tentative publication Date: May 2013. (Accepted)
- [2] **Sogand Aghamohammadi**, Mohammad Haghghi and Mojtaba Chorghand, " Methanol Conversion to Light Olefins over Nanostructured Ce-Doped SAPO-34 in a Fixed Bed Reactor: TEAOH vs. Morpholine Template ", Journal of Industrial and Engineering Chemistry, 2013. (Under Review)
- [3] Yaser Vafaeian, Mohammad Haghghi, **Sogand Aghamohammadi** "Ultrasound Assisted Dispersion of Different Amount of Ni over ZSM-5 Used as Nanostructured Catalyst for CO₂ Reforming of Methane ", Journal of Nanoscience and Nanotechnology (Nanocatalysis and Its Applications), 2012 (Under Review).

Publications/Presentations (Conferences):

- [1] **Sogand Aghamohammadi** and Mohammad Haghghi, " Effect of Different TEAOH/TEA/DEA/MOR Combinations on Nanostructured CoSAPO-34 Synthesis and Catalytic Performance toward Methanol to Light Olefins", 9th World Congress of Chemical Engineering, Coex, Seoul, Korea, 18-23 August 2013 (Submitted).
- [2] **Sogand Aghamohammadi**, Mohammad Haghghi and Mojtaba Chorghand, "Production of Light Olefins from Methanol over Nanostructured CeSAPO-34 Synthesized Using Morpholine and Ultrasound Method", 14th Iranian Inorganic Chemistry Conference (XIV IICC), Sharif University of Technology, Tehran, Iran, 28-29 August 2012.
- [3] **Sogand Aghamohammadi**, Mohammad Haghghi, Abolfazl Amoozegar and Erfan Aghaei, " Thermodynamic Analysis of Overall Reaction Network in Ethanol to Light Olefins Process", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.
- [4] **Sogand Aghamohammadi** and Mohammad Haghghi, "Cold Wall Chemical Vapor Deposition Reactor Design for Synthesis of Carbon Nanotubes: Parametric Study", 15th Iranian Physical Chemistry Conference (PCC15), University of Tehran, Tehran, Iran, 3-6 September 2012.
- [5] Mehdi Sharifi, Mohammad Haghghi, Farhad Rahmani and **Sogand Aghamohammadi**, " Comparative synthesis of Ni Nano-oxide over Al₂O₃ from Al and Ni nitrates via impregnation and Sol-Gel methods Used for CO₂ Reforming of CH₄", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.
- [6] **Sogand Aghamohammadi**, Mohammad Haghghi and Mojtaba Chorghand, "Effect of Template on Synthesis and Physicochemical Characterization of Nanostructured Ce-Doped SAPO-34 Used in Conversion of Methanol to Light Olefins", The First International Conference of Oil, Gas, Petrochemical and Power Plant (ICOGPP12), International Convention Center of Tehran Olympic Hotel, Tehran, Iran, 16 July 2012.
- [7] Tayebeh Souri, Mohammad Haghghi and **Sogand Aghamohammadi**, " Influence of crystallization times on the synthesis of SAPO-34 and catalytic activity in the MTO reaction ", 1st
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National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

[8] **Sogand Aghamohammadi** and Mohammad Haghghi, "On the Catalytic Conversion of Methanol to Light Olefins over Metal-Incorporated Sapo-34 Molecular Sieves", The First International Conference of Oil, Gas, Petrochemical and Power Plant (ICOGPP12), International Convention Center of Tehran Olympic Hotel, Tehran, Iran, 16 July 2012.

[9] **Sogand Aghamohammadi** and Mohammad Haghghi, "Thermodynamic Analysis of Overall Reaction Network in Methanol to Light Olefins Process", The 14th National Iranian Chemical Engineering Congress (IChEC14), Sharif University of Technology, Tehran, Iran, 16-18 October 2012.

[10] Erfan Aghaei, Mohammad Haghghi, Zahra Pazhohniya and **Sogand Aghamohammadi**, " Synthesis and Physicochemical Characterization of Nanostructured ZrAPSO-34 Molecular Sieve with Various Zr-Content Used in Catalytic Conversion of Methanol to Light Olefins ", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

[11] **Sogand Aghamohammadi**, Mohammad Haghghi and Samira Karimipour, "Impregnation vs. Sol-Gel Synthesis and Physicochemical Characterizations of Ni/Al₂O₃-MgO Nanocatalyst Used for Dry Reforming of Methane", The 14th National Iranian Chemical Engineering Congress (IChEC14), Sharif University of Technology, Tehran, Iran, 16-18 October 2012.

[12] **Sogand Aghamohammadi** and Mohammad Haghghi, " Mixed-Template Synthesis of Nanostructured CoAPSO-34 Catalyst Using TEA-DEA-MOR for Methanol to Light Olefins Conversion", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

[13] Samira Karimipour, Mohammad Haghghi, **Sogand Aghamohammadi** and Nader Rahemi, "Synthesis of Metal Nano-Oxides from Al, Mg and Ni Nitrates via Sol-Gel Method Used for Hydrogen Production via Methane Reforming", The 2nd Conference on Hydrogen and Fuel Cell (HFCC2012), Khajeh Nasir Toosi University of Technology, Tehran, Iran, 2-3 May 2012.

[14] **Sogand Aghamohammadi** and Mohammad Haghghi " Effect of Combination of Templates on SAPO-34 Synthesis and Methanol to Light Olefins Reaction Performance ", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

[15] Mojtaba Charghand, Mohammad Haghghi and **Sogand Aghamohammadi**, "Ultrasound Assisted Synthesis and Characterization of Nanostructured MnCoSAPO-34 Using Morpholine for Conversion of Methanol to Olefins", 14th Iranian Inorganic Chemistry Conference (XIV IICC), Sharif University of Technology, Tehran, Iran, 28-29 August 2012.

[16] **Sogand Aghamohammadi**, Mohammad Haghghi and Samira Karimipour, "Comparison of Impregnation and Sol-Gel Methods in Synthesis and Physicochemical Characterization Ni-Co/Al₂O₃-ZrO₂ Nanocatalyst", National Conference in High Technologies in Chemical Industries (NCHTCI91), Tarbiat Modares University, Tehran, Iran, 22-23 May 2012.

[17] **Sogand Aghamohammadi**, Mohammad Haghghi, Erfan Aghaei and Abolfazl Amoozegar, " Thermodynamic analysis of methanol to light olefins using Gibbs energy minimization method: A detailed study of the reaction conditions", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

[18] **Sogand Aghamohammadi**, Mohammad Haghghi and Mojtaba Charghand, "Conversion of

Methanol to Light Olefins over Nanostructured Ce-MnSAPO-34 Catalyst Synthesized via Ultrasound Method", 15th Iranian Physical Chemistry Conference (PCC15), University of Tehran, Tehran, Iran, 3-6 September 2012.

[19] **Sogand Aghamohammadi**, Mohammad Haghghi and Tayebah Souri, "Effect of TEA/Morpholine Ratio on Synthesis and Physicochemical Properties Nanostructured SAPO-34 Used in Catalytic Conversion of Methanol to Olefins", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

[20] **Sogand Aghamohammadi**, Mohammad Haghghi and Samira Karimipour, "Conversion of CH₄ and CO₂ Mixture to Syngas over Ni/Al₂O₃-CeO₂ Nanocatalyst Synthesized via Impregnation and Sol-Gel Methods", 15th Iranian Physical Chemistry Conference (PCC15), University of Tehran, Tehran, Iran, 3-6 September 2012.

[21] Tayebah Souri, Mohammad Haghghi and **Sogand Aghamohammadi**, "Comparative Synthesis and Physicochemical Properties of Nanostructured SAPO-34 Molecular Sieve Using TEA and Morpholine Templates", 1st National Industrial Catalyst Conference (NICC 1), Shiraz University, Shiraz, Iran, 20-21 Feb 2013.

Advanced Software courses:

- CFD modeling, Gambit & Fluent, Eng. Kuchaki, Sahand University of Technology, Tabriz, Iran, 2012.
- Advanced Dynamic Processes Simulation, Hysys, Dr. Sarand, Sahand University of Technology, Tabriz, Iran, 2012.

Workshops:

- Principles of Gas Chromatography Workshop, Mohammad Haghghi, Sahand University of Technology, Tabriz, Iran, 2012.
- Principles of Modern Methods for Characterization of Nanomaterials and Nanocatalysts Workshop, Mohammad Haghghi, Sahand University of Technology, Tabriz, Iran, 2012.
- Chemical Engineering Software Workshop, Hysys, Eng. Maliheh Darghi, Sahand University of Technology, Tabriz, Iran, 2009.
- Engineering Software Workshop, Matlab programming, Eng. Nader Rahemi, Sahand University of Technology, Tabriz, Iran, 2007.

Fantasy:

The more we think, the clearer our goals in life become. The clearer our goals, the harder we try to reach them.

 **References:**

- **Dr. Mohammad Haghghi**
Assistant Professor of Chemical Engineering
Founding Director of Reactor & Catalysis Research Center
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 - **Dr. Ali Baradar Khoshfetrat**
Assistant Professor of Biochemical Engineering (Tissue Engineering)
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