

Curriculum Vitae
Akram Tavakoli Araghi

Associated Professor of Chemical Engineering
Faculty of chemical Engineering
Sahand University of Technology, Tabriz, Iran
Emails: a.tavakoli@sut.ac.ir
ak.tavakoli@gmail.com

Phone: +984133459165
Phone: +989123073019
Fax: +98 41 33444355
URL: www.sut.ac.ir

Personal Information

Name: Akram
Family Name: Tavakoli Araghi
Birth Date: April 15, 1976
Gender: Female
Marital Status: Married, 2 Children
Language: Persian (National), English

Educational Background

- **Ph.D. Chemical Engineering**, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran. (2001-2008)
Supervisor: **Prof. Morteza Sohrabi**
Thesis Title: **Preparation of Iron Nanoparticles and Study on Their Catalytic Properties in Fischer-Tropsch Process**
- **M.Sc. Chemical Engineering**, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran. (1996-1998)
Supervisor: **Prof. Bahram Dabir**
Thesis Title: **Population Balance Application in Emulsion Polymerization of Vinyl Chloride to Predict the Particle Size Distribution**
- **B.Sc. Chemical Engineering**, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran. (1994-1998)
Supervisor: **Prof. Manoochehr Nikazar**
Thesis Title: **Study on the of solid waste recycling**

Employment History

- Tenured Associate Professor, Sahand University of Technology, **2017--Present**
- Associate Professor, Sahand University of Technology, **2016-2017**
- Assistant Professor, Sahand University of Technology, **2008-2016**

Research Interests

- Thermo-kinetics, Catalysis Synthesis, Nanotechnology, Water Treatments. Ionic Liquid Applications
-

Awards

- Teaching Excellence award in Sahand University of Technology (2011)
-

Publications

Patents

- S Raveshiyan, R Yegani, B Pourabbas, **A Tavakoli**, Fabrication of superhydrophobic microporous polypropylene flat membrane using in situ synthesis of modified fluorinated silica nano particles, **Iranian patent**, Approved, 87099-1392/11/28, **2014**.

Journal Papers

1. M. Elyasi Kojabada, M. Nouria, A.A. Babaluo, **A. Tavakolia**, R. Sardaria, Z. Farhadia, and M. Moharramia, Alumina-PEBA/PSf Multilayer composite membranes for CO₂ separation: Experimental and molecular simulation studies, **Scientia Iranica C (2023)** 30(6), 2043-2055.
2. Ensie Bekhradinassab, **Akram Tavakoli**, Mohammad Haghghi, Maryam Shabani, “2-hydroxyethylammoniumsulfate ionic liquid performance as simultaneous fuel and sulfating agent in tablet-like manganese and iron incorporated titania synthesis: Biodiesel production from waste oil”, **Fuel**, 340, 127402, **2023**.
3. E Bekhradinassab, M Haghghi, **A Tavakoli**, M Shabani, “Mn-Fe catalyzed microwave combustion-plasma hybrid synthesis of 2D chips-like Mn-Fe boosted TiO₂ architecture self-assembled of nano-walled honeycomb-like super-macroporous: Green fuel generation”, **Energy Conversion and Management**, 270, 116178, **2022**.
4. Mohammadjavad Shahbazi, **Akram Tavakoli**, Mehdi Hosseini, Mitra Khanian, “2-Hydroxyethylammonium Bisulfate (2-HEAS) as Brønsted Acidic Ionic Liquid Catalyst for Esterification”, **Industrial & Engineering Chemistry Research**, 61, 7874-7880, **2022**.
5. E Bekhradinassab, **A Tavakoli**, M Haghghi, M Shabani, “Catalytic biofuel production over 3D macro-structured cheese-like Mn-promoted TiO₂ isotype: Mn-catalyzed microwave-combustion design”, **Energy Conversion and Management**, 251, 114916, **2022**.
6. S Raveshiyan, P Amirabedi, R Yegani, B Pourabbas, **A Tavakoli**, “CO₂ absorption through PP/fSiO₂ nanocomposite hollow fiber membrane contactor”, **Polyolefins Journal**, 9 (1), 61-71, **2021**.

7. ME Kojabad, AA Babaluo, **A Tavakoli**, HG Kahnamouei, “A novel high-performance facilitated transport membrane by simultaneously using semi-mobile and fixed carriers for CO₂/N₂ separation”, *Process Safety and Environmental Protection*, 156, 304-314, **2021**.
8. ME Kojabad, AA Babaluo, **A Tavakoli**, RLM Sofla, HG Kahnamouei, “Comparison of acidic and basic ionic liquids effects on dispersion of alumina particles in Pebax composite membranes for CO₂/N₂ separation: Experimental study and molecular simulation”, *Journal of Environmental Chemical Engineering*, 9 (5), 106116, **2021**.
9. ME Kojabad, AA Babaluo, **A Tavakoli**, “A novel semi-mobile carrier facilitated transport membrane containing aniline/poly (ether-block-amide) for CO₂/N₂ separation: Molecular simulation and experimental study”, *Separation and Purification Technology*, 266, 118494, **2021**.
10. E Jannatdost, **A Tavakoli**, R Emamalisabzi, F Kheiri, “Synthesis of nanosized alumina templates with desired pores using Central Composite Design”, *Applied Chemistry*, 15 (55), 81-94, **2020**.
11. E Jafariyeh-Yazdi, **A Tavakoli**, F Abbasi, MJ Parnian, A Heidari, “Bi-supported Ziegler–Natta TiCl₄/MCM-41/MgCl₂ (ethoxide type) catalyst preparation and comprehensive investigations of produced polyethylene characteristics”, *Journal of Applied Polymer Science*, 137 (15), 48553, **2020**.
12. O Rafeie, MK Razavi Aghjeh, **A Tavakoli**, M Salami-Kalajahi, Amin Jameie-Oskooie, Mansour Ghayoumi, “Study on crystalline structure of poly (vinylidene fluoride)/polyethylene/graphene blend-nanocomposites”, *Polymer Composites*, 40 (11), 4402-4415, **2019**.
13. H Barzegari, **A Tavakoli**, D Jalali Vahid, E Bekhradinassab, “Experimental study of heat transfer enhancement in a helical tube heat exchanger by alumina nanofluid as current flow”, *Heat and Mass Transfer*, 55 (9), 2679-2688, **2019**.
14. NC Aghdam, M Ejtemaei, SM Sharafi, AA Babaluo, **A Tavakoli**, B Bayati, “Catalytic performance of nanostructured Pt/ZSM-5 catalysts synthesized by extended Charnell’s method in hydroisomerization of n-pentane”, *Polyhedron*, 162, 155-164, **2019**.
15. SM Sajjadi, **A Tavakoli**, “Calculation of the Thermal Conductivity Coefficient of Water and TiO₂ Nanofluid with Different Models”, *Iranian Chemical Engineering Journal*, 18 (104), 22-30, **2019**.
16. M Ejtemaei, NC Aghdam, A Babaluo, **A Tavakoli**, B Bayati, “Isomerization of C₅ isomers in the BZSM-5 membrane reactor packed with Pt/SZ nanocatalyst”, *Chemical Engineering and Processing-Process Intensification*, 130, 185-191, **2018**.

17. E Jannatdoust, **A Tavakoli**, RE Sabzi, “Fine-Tuning the Pore Diameter of Anodic Alumina Using Response Surface Methodology”, *Journal of The Electrochemical Society*, 165 (10), E445, **2018**.
18. O Rafeie, MK Razavi Aghjeh, **A Tavakoli**, M Salami Kalajahi, A Jameie Oskooie, “Conductive poly (vinylidene fluoride)/polyethylene/graphene blend-nanocomposites: Relationship between rheology, morphology, and electrical conductivity”, *Journal of Applied Polymer Science*, 135 (23), 46333, **2018**.
19. F Abbasi, **A Tavakoli**, MK Razavi Aghjeh,” Rheology, morphology, and mechanical properties of reactive compatibilized polypropylene/polystyrene blends via Friedel–Crafts alkylation reaction in the presence of clay”, *Journal of Vinyl and Additive Technology*, 24 (1), 18-26, **2018**.
20. M Ejtemaei, N Charchi Aghdam, AA Babaluo, **A Tavakoli**, B Bayati, “n-pentane isomerization over Pt-Al promoted sulfated zirconia nanocatalyst”, *Scientia Iranica*, 24 (3), 1264-1271, **2017**.
21. **A Tavakoli**, AA Babaluo, K Safaee, “Aqueous solution of Oxone as new oxidizing agent for multi-walled carbon nanotube functionalization”, *Fullerenes, Nanotubes and Carbon Nanostructures*, 25 (5), 312-317, **2017**.
22. A Jameie Oskooie, MK Razavi Aghjeh, O Rafeie, **A Tavakoli**, “Composition and compatibilization induced morphology alteration in PVDF/LLDPE blends: correlation between rheology and morphology”, *Journal of Polymer Research*, 24 (2), 1-11, **2017**.
23. M Fonouni, R Yegani, S Anarjani, **A Tavakoli**, “Anti-fouling behaviors of surface functionalized high density polyethylene membrane in microfiltration of bovine serum albumin protein”, *Polyolefins Journal*, 4 (1), 13-26, **2017**.
24. NC Aghdam, M Ejtemaei, AA Babaluo, **A Tavakoli**, B Bayati, Y Bayat, “Enhanced i-C5 production by isomerization of C5 isomers in BZSM-5 membrane reactor packed with Pt/ZSM-5 nanocatalyst”, *Chemical Engineering Journal*, 305, 2-11, **2016**.
25. M Mohammadiroudbari, **A Tavakoli**, MKR Aghjeh, M Rahi, “Effect of nanoclay on the morphology of polyethylene modified bitumen”, *Construction and building materials*, 116, 245-251, **2016**.
26. K Safaee, **A Tavakoli**, AA Babaluo, “Purification and functionalization of carbon nanotubes”, *Farayandno*, 10 (52), 149-166, **2016**.
27. S Khanjani, **A Tavakoli**, D Jalali Vahid, M Nazari, “Effect of cut twisted tape and Al₂O₃ nanofluid on heat transfer of double tube heat exchanger”, *Modares Mechanical Engineering*, 15 (11), 181-190, **2016**.

28. M Fonouni, R Yegani, **A Tavakkoli**, S Mollazadeh, “Investigating the effect of various oxidizing agents on the surface functionalization of microporous polypropylene membranes”, *Journal Of Textiles and Polymers*, 4 (2), 92-100, **2016**.
29. B Dehghanzad, MKR Aghjeh, O Rafeie, **A Tavakoli**, A Jameie Oskooie, “Synthesis and characterization of graphene and functionalized graphene via chemical and thermal treatment methods”, *RSC advances*, 6 (5), 3578-3585, **2016**.
30. N Charchi, **A Tavakoli**, AA Babaluo, M Ejtemaei, B Bayati, Y Bayat, “Effect of Reaction Conditions on Hydroisomerization of n-Pentane over Pt/ZSM-5 Nanocatalyst”, *Journal of Petroleum Research*, 25 (84), 4-11, **2015**.
31. A Ghaempour, **A Tavakoli**, MR Aghjeh, MM Roodbari, “Morphology, Microstructure and Physico-Mechanical Properties of Pasargad Bitumen, Modified by Ethylene-Vinyl Acetate Copolymer (EVA) and Nanoclay”, *J. Polym. Sci. Tech.*, 28, 290-299, **2015**.
32. M Sedaghat, R Yegani, Y Jafarzadeh, **A Tavakoli**, “The Effect of LiCl and Coagulation Bath Temperature on the Structure and Performance of PVDF Membranes”, *Iran. J. Polym. Sci. Technol. (Persian)*, 28, 301-311, **2015**.
33. A Pourabed, **A Tavakoli**, B Pourabbas, MK Razavi Aghjeh, “Preparation of polyethylene-graft-clay nanocomposites using Friedel–Crafts alkylation reaction as a new method”, *Iranian Polymer Journal*, 24 (9), 705-714, **2015**.
34. Omid Rafeie Donighi, Mir Karim Razavi Aghjeh, Akram Tavakoli, Compatibilization of PP/PS Blends via a Novel Acylation Reaction, 11th International Seminar on Polymer Science and Technology, **2014**, Iran.
35. M Ejtemaei, **A Tavakoli**, N Charchi, B Bayati, AA Babaluo, Y Bayat, “Synthesis of sulfated zirconia nanopowders via polyacrylamide gel method”, *Advanced Powder Technology*, 25 (3), 840-846, **2014**.
36. P Khajavi, AA Babaluo, **A Tavakoli**, A Mirzaei, “Stabilization of the metastable tetragonal phase in zirconia nanopowders synthesized via polyacrylamide gel method”, *Industrial & Engineering Chemistry Research*, 53 (1), 164-172, **2014**.
37. S Raveshiyan, R Yegani, B Pourabbas, **A Tavakkoli**, “Study on the fabrication of superhydrophobic microporous polypropylene flat membrane using in situ synthesis of modified fluorinated silica nano particles”, *Advanced Materials Research*, 829, 371-375, **2014**.
38. N Charchi, M Ejtemaei, **A Tavakoli**, AA Babalou, B Bayati, “Performance of MFI Zeolite Membranes Used for Hydrocarbons Separation in the Isomerization Membrane Reactors”, *Iranian Chemical Engineering Journal*, 12 (69), 18-27, **2013**.

39. M Ejtemaei, N Charchi, **A Tavakoli**, AA Babaluo, B Bayati, “Membrane contactor (MC), Microporous hollow fiber membrane (MHFM), CO₂ absorption, Membrane wettability, hydrophobicity”, *Farayandno*, 7 (39), 58-66, **2012**.
 40. E Pipelzadeh, MV Derakhshan, AA Babaluo, M Haghghi, **A Tavakoli**, “Formic Acid Decomposition Using Synthesized Ag/TiO₂ Nanocomposite in Ethanol-Water Media Under Illumination of Near UV Light”, *Int. J. Nanosci. Nanotechnol.*, 7 (2), 78-86, **2011**.
 41. **A Tavakoli**, M Sohrabi, CJ Choi, A Kargari, “Effects of pertinent operating parameters on the size of iron nanoparticles synthesised by chemical vapour condensation method applying experimental design procedure”, *Micro & Nano Letters*, 5 (2), 135-139, **2010**.
 42. E Pipelzadeh, AA Babaluo, M Haghghi, **A Tavakoli**, M Valizadeh Derakhshan, A Karimzadeh Behnami, “Silver doping on TiO₂ nanoparticles using a sacrificial acid and its photocatalytic performance under medium pressure mercury UV lamp”, *Chemical Engineering Journal*, 155 (3), 660-665, **2009**.
 43. **A Tavakoli**, M Sohrabi, A Kargari, CJ Choi, “Taguchi method prediction of effect of processing parameters on nanoparticle size in chemical vapor condensation process”, *Metals and Materials International*, 15 (5), 877-880, **2009**.
 44. **A Tavakoli**, M Sohrabi, A Kargari, “Application of Anderson–Schulz–Flory (ASF) equation in the product distribution of slurry phase FT synthesis with nanosized iron catalysts”, *Chemical Engineering Journal*, 136 (2-3), 358-363, **2008**.
 45. **A Tavakoli**, M Sohrabi, A Kargari, “A review of methods for synthesis of nanostructured metals with emphasis on iron compounds”, *Chemical Papers*, 61 (3), 151-170, **2007**.
-

Conference Papers

1. M. Asl-Farshbaf, M. Shayan-Asenjan, M.K.Razavi Aghjeh, **A. Tavakoli**, M. Rezaei, Synthesis and investigation of mechanical properties of TPU/MXene nanocomposites, 15th International Seminar on Polymer Science and Technology, 8-10 November **2022**, Isfahan University of Technology, Esfahan, Iran.
2. S. Kheirollahi, M.Shayan-Asenjan, M.K. Razavi Aghjeh, **A. Tavakoli**, Investigation of the strain sensing performance of PP/EPDM/CNT nanocomposites, 15th International Seminar on Polymer Science and Technology, 8-10 November **2022**, Isfahan University of Technology, Esfahan, Iran.
3. A. Haghghi, **A. Tavakoli**, Estimation of NRTL Binary Parameters in the Sulfur Compounds Extractive Process by Ionic Liquids Using Genetic Intelligent Optimization Algorithm, the 6th Conference of Thermodynamics (1st June **2022**) Tehran, I. R. Iran.

4. M. Aslangira, **A. Tavakolia**, E. Bekhradinassaba, Degradation of meropenem by TiO₂ coated on porous carbon modified with ionic liquid, The 11th International Chemical Engineering Congress & Exhibition (IChEC 2020) Fouman, Iran, 15-17 April, 2020.
5. M. Aslangira, **A. Tavakolia**, E. Bekhradinassaba, Synthesis of TiO₂/Porous Carbon Photocatalysts to Remove Dyes, 8th International Conference on Nanostructures, 18-20 November 2020, Tehran, Iran.
6. Elham Jannatdoust, **Akram Tavakoli**, Reza Emamali Sabzi, Farshad Kheiri, Application of Central Composite Design for Optimization of Pore Diameter of Anodic Alumina Synthesized in Different Electrolytes, IACC4, 2019, Iran
7. S Mohammadi Nasr, J. Rahbar Shahrouzi, **A. Tavakoli**, A. M. Jabbar, Humidity Sensing Properties of Graphene Oxide and PEGylated Film Nanosensor, 10th International Chemical Engineering Congress & Exhibition (IChEC 2018)
8. E. Jafariyeh Yazdi, **A. Tavakoli**, F. Abbasi, A. Heidari, Morphological study of bi-supported TiCl₄/MCM-41/MgCl₂ (Ethoxide type) Ziegler-Natta catalyst, 6th International Conference on Nanostructures (ICNS6), Iran, Kish Island, 7-10 March 2016.
9. S. Bigdeli, **A. Tavakoli**, A.A. Babaluo, Green synthesis of gold nanoparticles using sour grape juice, 6th International Conference on Nanostructures (ICNS6), Iran, Kish Island, 7-10 March 2016.
10. **Akram Tavakoli**, Khadijeh Safaee, Ali akbar Babalou, Functionalization of multi-walled carbon nanotubes by different concentrations of H₂SO₄/HNO₃ solution, Asian Nano Forum Conference, Iran, Kish Island, 8-11 March 2015.
11. **A. Tavakoli**, Z. Samiei, F. Abbasi, Synthesis of Ordered MCM-41 Mesoporous Material by three different methods, Asian Nano Forum Conference, Iran, Kish Island, 8-11 March 2015.
12. **Tavakoli A.**, KhakpourBonab S., Alizadeh R., Remove of Potassium nitrate from polluted water by Fe/Ni bimetallic nanoparticles, Asian Nano Forum Conference, Iran, Kish Island, 8-11 March 2015.
13. Motahareh Mohammadi, **Akram Tavakoli**, Mirkarim Razavi Aghjeh, Mohammad Rahi, Rheological Behavior of HDPE/bitumen Nanocomposites, 11th International Seminar on Polymer Science and Technology, 6-9 October 2014, Iran.
14. R. Yegani, **A. Tavakoli**, Y. Jafarzadeh, S. Mohammadzadeh, S. Anarjani, Functionalization of high density (HDPE) microporous membrane using various oxidizing agent, The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014), 24-27 February, 2014.
15. S.Mollazadeh, R.Yegani, **A.Tavakoli**, M.Safari Dehnavi, B.Mardangahi, Hydrophilization of Indoor Fabricated Polypropylene Microporous Membranes By Chemical Modification, The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014) Kish, Iran, 24-27 February, 2014.

16. Z. Samiei, **A. Tavakoli**, F. Abbasi, Facile synthesis of spherical mesoporous MCM-41 molecular sieve, The 5th International Congress on Nanoscience & Nanotechnology (ICNN2014), 22-24 October 2014, Tarbiat Modares University, Tehran, Iran.
17. Kh. Safaei, **A. Tavakoli**, A. Babalou, M. Salami Kalajahi, The influence of H₂SO₄/HNO₃ concentration on properties of functionalized multi-walled carbon nanotubes, The 5th International Congress on Nanoscience & Nanotechnology (ICNN2014), 22-24 October 2014, Tarbiat Modares University, Tehran, Iran.
18. Amir Kashkooli, Mehdi Foroutan, Mir Karim Razavi Agjeh, Mehdi Salami Kalajahi, **Akram Tavakoli**, Functionalized graphene oxide nanosheets with improved lipophilicity, 5th International Conference on Nanostructures (ICNS5), 6-9 March 2014, Kish Island, Iran.
19. Omid Rafeie, Mir Karim Razavi Agjeh, **Akram Tavakoli**, Effect of Matrix and Dispersed Phase Modification on the Partitioning of Clay in PP/PS Blends Nanocomposites, 5th International Conference on Nanostructures (ICNS5), 6-9 March 2014, Kish Island, Iran.
20. Mehdi Foroutan, Amir Kashkooli, Mir Karim Razavi Agjeh, **Akram Tavakoli**, Mehdi Salami Kalajahi, A new synthesis method for functionalization of graphene, 5th International Conference on Nanostructures (ICNS5), 6-9 March 2014, Kish Island, Iran.
21. Mohsen Kamranfar, **Akram Tavakoli**, Farhang Abbasi, Study on the effect of CTAB/TEOS ratio on the specific surface area of MCM-41, 5th International Conference on Nanostructures (ICNS5), 6-9 March 2014, Kish Island, Iran.
22. M. Mohammadi, **A. Tavakoli**, M. Rahi, M.K. Razavi Aghjeh, Effect of Nanoclay on Morphology and Flow Behavior of Polyethylene Modified Bitumen, The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014) Kish, Iran, 24-27 February, 2014.
23. Sh. Omrani, **A. Tavakoli**, A.A. Babaluo, N. Jodeiri Naghashkar, F. Banihashemi, H. Azani, Effect of Precursor Sources on the Successful Synthesis of Mordenite Zeolite, The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014) Kish, Iran, 24-27 February, 2014.
24. Saba Raveshian, Reza Yegani, Behzad Pourabbas, **Akram Tavakoli**, Study on the fabrication of superhydrophobic microporous polypropylene flat membrane using in situ synthesis of modified fluorinated silica nano particles, UFGNSM 2013, 4th international conference on Ultrafine Grained and Nanostructured Materials.
25. Arezoo Ghaempour, **Akram Tavakoli**, Mir Karim Razavi Aghjeh, Effect of nanoclay on the morphology stability of polymer modified bitumen, UFGNSM 2013, 4th international conference on Ultrafine Grained and Nanostructured Materials.
26. M. Ejtemaei, N. Charchi, A. A. Babaluo, **A. Tavakoli**, B. Bayati, Effect of operating conditions on nC₅ isomerization over Pt/SZ nano catalyst in zeolite based membrane reactor, 11th International Conference on Catalysis in Membrane Reactors, Porto, July 7th -11th 2013.
27. N. Charchi, M. Ejtemaei, **A. Tavakoli**, A.A. Babaluo, B. Bayati, Y. Bayat, Influence of Temperature on Skeletal Hydroisomerization of n-pentane over Pt/ZSM-5 Nanocatalyst, The 14th Iranian National Chemical Engineering Congress (IChEC 2012), Sharif University of Technology, Tehran, Iran, 16-18 October, 2012, Article code:06226.

28. P. Khajavi, M. Ejtemaei, A.A. Babaluo, **A. Tavakoli**, B. Bayati, Effect of initial salt precursor on the stabilization of metastable tetragonal phase in zirconia synthesized via polyacrylamide gel method, The 14th Iranian National Chemical Engineering Congress (IChEC **2012**), Sharif University of Technology, Tehran, Iran, 16-18 October, 2012, Article code:102754.
29. N. Charchi, M. Ejtemaei, B. Bayati, A.A. Babaluo, **A. Tavakoli**, Y. Bayat, Hydroisomerization of n-pentane over Pt/ZSM-5 Nanocatalyst, The 14th Iranian National Chemical Engineering Congress (IChEC **2012**), Sharif University of Technology, Tehran, Iran, 16-18 October, 2012, Article code:06227.
30. E. Pipelzadeh, M. Valizadeh Derakhshan, A.A. Babaluo, M. Haghighi, **A. Tavakoli**, A. Karimzadeh Behnami, Photocatalytic Decomposition of Formic Acid Using the Synthesized Ag/TiO₂ Nanocomposite, International Congress on Nanoscience and Nanotechnology (ICNN2012), Kashan, I. R. Iran, 8-10 September **2012**.
31. M. Ejtemaei, **A. Tavakoli**, N. Charchi, A.A. Babaluo, B. Bayati, Y. Bayat, Performance of the Synthesized PtSZAl Nano catalyst in nC₅ Isomerization, International Congress on Nanoscience and Nanotechnology (ICNN2012), Kashan, I. R. Iran, 8-10 September **2012**.
32. N. Charchi, **A. Tavakoli**, A.A. Babaluo, M. Ejtemaei B. Bayati, Y. Bayat, Effect of Zeolite Crystallinity on Catalytic Performance of Pt/zsm-5 Nanocatalysts in Hydroisomerization of n-Pentane, The 8th Nanoscience and Nanotechnology Congress 25-29 June **2012**, Ankara, Turkey.
33. M. Ejtemaei, **A. Tavakoli**, A.A. Babaluo, N. Charchi B. Bayati, Y. Bayat, Study on n-C₅ skeletal isomerization over Synthesized PtSZAl Nano Catalyst: dependence on temperature and Space velocity, The 8th Nanoscience and Nanotechnology Congress 25-29 June **2012**, Ankara, Turkey.
34. N. Charchi, **A. Tavakoli**, A.A. Babaluo, B. Bayati, M. Ejtemaei, Synthesis and characterization nanostructure Pt/ZSM5 for catalytic applications, The 7th International Chemical Engineering Congress and Exhibition, Kish Island, Iran, **2011**.
35. M. Ejtemaei, **A. Tavakoli**, A.A. Babaluo, B. Bayati, N. Charchi, Synthesis of sulfated zirconia nanopowders for catalytic applications, The 7th International Chemical Engineering Congress and Exhibition, Kish Island, Iran, **2011**.
36. L. Feyzi, J. Moghaddas, **A. Tavakoli**, Injection of kinetic hydrate inhibitors for preventing of gas hydrates formation in gas pipeline transmission versus not injection, The 13th Iranian National Chemical Engineering Congress and 1st International Regional Chemical and Petroleum Engineering Conference, 25-28 October **2010**, Kermanshah, I.R. Iran.
37. Mehdi Shahrezaei, Ali Akbar Babaluo, Amin Hasanzadeh, Mohammad Haghighi and **Akram Tavakoli**, "Synthesis of TiO₂ Nanorods by Hydrothermal Method", The 3rd International Congress on Nanoscience and Nanotechnology (ICNN2010), Shiraz University, Shiraz, Iran, 9-11 November **2010**.
38. L. Feyzi, J. Moghaddas, **A. Tavakoli**, The study of thermodynamic hydrate inhibitors mechanism for various components by calculating the activity of water in binary and ternary mixtures, The 13th Iranian National Chemical Engineering Congress and 1st International

Regional Chemical and Petroleum Engineering Conference, 25-28 October **2010**, Kermanshah, I.R. Iran.

39. **A. Tavakoli**, M. Sohrabi, C.J. Choi, A. Kargar, Effects of Operating Parameters on the Size of Iron Nanoparticles Synthesized by CVC Method Applying the Experimental Design Procedure, 2nd International Congress on Nanoscience and Nanotechnology, **2008** University of Tabriz, Tabriz, Iran.
40. **A. Tavakoli**, M. Sohrabi, A. Kargari, Product distribution in Fischer-Tropsch (FT) process using nanosized iron catalyst, 18th International congress of chemical and process engineering, 24th-28th August **2008**, Prague, CZECH Republic.
41. **A. Tavakoli**, M. Sohrabi, A. Kargari, Application of Anderson-Schultz-Flory (ASF) equation in the product distribution of slurry phase FT synthesis with nanosized iron catalyst, MSE2007, September 4-6, **2007**, Amman, Jordan.
42. **A. Tavakoli**, M. Sohrabi, A. Kargari, Study on Product Distribution of Slurry Phase FT Synthesis with Nanosized Iron Catalysts, Technical Proceedings of the **2007** NSTI nanotechnology conference and Trade Show, Santa Clara, USA, Volume 4, Pages 377 – 380.
43. **A. Tavakoli**, B. Dabir, Application of population balance method in prediction of particle size distribution in emulsion polymerization of vinyl chloride, 8th International Seminar on Polymer Science and Technology (ISPST **2007**).

Courses Taught

- Applied Mathematics and Modeling for Chemical Engineers (B.Sc.)
- Thermodynamics for Chemical Engineering (Part I and II) (B.Sc.)
- The Properties of Gases and Liquids (M.Sc.)
- Advanced Thermodynamics (M.Sc.)
- Advanced Chemical Reaction Engineering (M.Sc.)
- Thermodynamic Modeling (M.Sc.)

Working Experiences

- Chemical Engineer, Petrochemical Research and Technology Company, **2002-2003, 17 months**.

Research and Industrial Projects

- Preparation of Iron Nanoparticles and Study on Their Catalytic Properties in Fischer-Tropsch Process, funded by Iran Polymer and Petrochemical Institute, Tehran, Iran. **2006-2008**.
- Synthesis and characterization of alumina nanofluid for heat transfer applications, funded by Sahand University of Technology, Tabriz, Iran. **2010-2011**.

- Investigation of the effect of different oxidants on the increase of hydroxyl groups in polypropylene microporous membranes, funded by Gas Company of East Azarbaijan Province, Tabriz, Iran. **2013-2014.**
- Investigation of the effect of different oxidants on the increase of hydroxyl groups in polyethylene microporous membranes, funded by Gas Company of East Azarbaijan Province, Tabriz, Iran. **2013-2014.**
- Production of highly resistive bitumen and bituseal steel pipe coatings against planet root infiltration, funded by Gas Co. East Azarbaijan, Tabriz, Iran. **2015-2018.**