Curriculum Vitae (CV)

Saeed Sahebdelfar
PhD of Chemical Engineering

Senior Consultant

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Education

1. Ph.D. in Chemical Engineering, Department of Chemical and Petroleum Engineering, Sharif University of Technology, Tehran, Iran, 1997-2002.
   Thesis title: Preparation and Evaluation of a Solid Acid Catalyst for Alkylation of Isobutane with Butenes.
2. M.Sc. in Chemical Engineering, Department of Chemical Engineering, Sharif University of Technology, Tehran, Iran, 1989-1992.
   Thesis title: Investigation of Multicomponent Separation Mechanism in Reverse Osmosis.
3. B.Sc. in Chemical Engineering, Petroleum University of Technology, Ahwaz, Iran, 1984-1988.

Lecturing

1. Industrial Heterogeneous Catalysis, Graduate Course, Petroleum University of Technology, Ahwaz, Iran, 2011-2012.
2. Basic Principles and Calculations in Chemical Engineering, Undergraduate Course (TA), Sharif University of Technology, Tehran, Iran, 1997-2000.
3. Heat Transfer, Undergraduate Course (TA), Sharif University of Technology, Tehran, Iran, 1997-2000.

Work Experience

1. Catalysis Research Group, Petrochemical Research and Technology Group, National Petrochemical Company, 2001-Present (as the manager).
2. Process Engineering Department, Iran Carbon Company (ICC), Ahwaz, Iran, 1994-1997 (as supervisor)

Projects

1. Feasibility study of regeneration of alkylation and trans-alkylation Pars petrochemical company, 0850249215 (Jan. 2014- Dec. 2014) as conductor.
2. Acquisition of the know-how for new generation of PDH catalysts, 08070249106 (Jul. 2013-Dec. 2014) as co-worker.
3. Nonoxidative catalytic conversion of lower paraffins to aromatics, 0.870248905 (Dec. 2010-Feb. 2013) as co-worker.
4. Formulation development and preparation of ruthenium catalyst for ammonia synthesis and comparison with other catalysts, 0870249201, (May. 2013-present) as co-worker.
5. Methane dry reforming and coke formation mechanism, 083114661 (Dec. 2004- May 2007) as co-worker.
6. Optimization of operating condition for propane dehydrogenation over commercial isobutane dehydrogenation, 084114208 (May 2005- Aug. 2006) as conductor.
7. Synthesis of the catalyst for dehydrogenation of linear C_{10}-C_{14} normal paraffins to unbranched mono-olefins, 080114202 (Apr. 2002-Sep. 2004) as conductor.

Skills

1. Programming with Matlab.
2. Modeling with Aspen Plus.
3. Lab-scale synthesis of heterogeneous catalysts.
4. Characterization of heterogeneous catalysts
5. Proposal writing

Awards

1. Research Excellence Award in Ministry of Science, Research and Technology, 2018.
2. Research excellence award in Iranian Petroleum Ministry, 2014.
3. 1st Book Festival in Petroleum Industry award 2014 (S. Sahebdelfar, F. Tahriri Zangeneh, C_1 Chemistry and Natural Gas Conversions, National Petrochemical Company Press, Tehran, 2011 (in Persian).
4. Research excellence award in National Petrochemical Company, 2010.

Publications

Journal papers

1. **S. Sahebdelfar**, M.T. Ravanchi, Carbon monoxide clean-up of the reformate gas for PEM fuel cell applications: A conceptual review, *International Journal of Hydrogen Energy*, 2022
2. **S. Sahebdelfar**, P.M. Bijani, F. Yaripour, Deactivation kinetics of γ-Al_2O_3 catalyst in methanol dehydration to dimethyl ether, *Fuel*, 2022, 310, 122443
3. M. Takht Ravanchi, M. Rahimi Fard, , **S. Sahebdelfar**, P. Bigdeli, Synthesis of Pd–Ag/Al_2O_3 catalyst by colloidal oxide method for acetylene selective hydrogenation: a study on the sintering of PdO nanoparticles, *Research on Chemical Intermediates*, 2022, 48(2), pp. 817–837
4. M. Takht Ravanchi, **S. Sahebdelfar**, Catalytic conversions of CO_2 to help mitigate climate change: Recent process developments, *Process Safety and Environmental Protection*, 2021, 145, pp. 172–194
5. J. Howeizi, S. Taghvaei-Ganjali, M. Malekzadeh, F. Motiee, **S. Sahebdelfar**, Effect of the distribution and dispersion of palladium nanoparticles on the reducibility and performance of Pd/Al_2O_3 catalyst in liquid-phase hydrogenation of olefins, *Reaction Kinetics, Mechanisms and Catalysis*, 2020, 130(2), pp. 777–795
6. J. Howeizi, S. Taghvaei-Ganjali, M. Malekzadeh, F. Motiee, **S. Sahebdelfar**, Effect of preparation parameters on properties and performance of Pd/Al_2O_3 catalyst in saturation of olefins, *Research on Chemical Intermediates*, 2019, 45(5), pp. 3165–3181.
7. **S. Sahebdelfar**, F. Yaripour, S. Ahmadpour, F. Khorasheh, Methanol-to-hydrocarbons product distribution over sapo-34 and zsm-5 catalysts: The applicability of thermodynamic equilibrium and Anderson-Schulz-Flory distribution, *Iranian Journal of Chemistry and Chemical Engineering*, 2019, 38(2), pp. 49–59
8. A. Jafari, A. Ebadi, **S. Sahebdelfar**, Effect of iron oxide precursor on the properties and ammonia synthesis activity of fused iron catalysts, Reaction Kinetics, *Mechanisms and Catalysis*, 2019, 126(1), pp. 307–325
9. M. Takht Ravanchi, **S. Sahebdelfar**, S. Komeili, Acetylene selective hydrogenation: A technical review on catalytic aspects, *Reviews in Chemical Engineering*, 2018, 34(2), pp. 215–237.
10. M. Hamidzadeh, M. Ghassemzadeh, A. Tarlani, **S. Sahebdelfar**, The effect of hydrothermal impregnation of Ni, Co, and Cu on HZSM-5 in the nitrogen oxide removal, *International Journal of Environmental Science and Technology*, 15(1) (2018) 93-104.
11. **S. Sahebdelfar**, Steam reforming of propionic acid: Thermodynamic analysis of a model compound for hydrogen production from bio-oil, *International Journal of Hydrogen Energy*, 42(26) (2017) 16386-16395.
12. **S. Sahebdelfar**, M.T. Ravanchi, Deoxygenation of propionic acid: Thermodynamic equilibrium analysis of upgrading a bio-oil model compound, *Renewable Energy*, 114 (2017) 1113-1122.
13. A.Z. Varzaneh, J. Towfighi, **S. Sahebdelfar**, Carbon nanotube templated synthesis of metal containing hierarchical SAPO-34 catalysts: Impact of the preparation method and

metal avidities in the MTO reaction, *Microporous and Mesoporous Materials*, 236 (2016) 1-12.
14. A.Z. Varzaneh, J. Towfighi, **S. Sahebdelfar**, H. Bahrami, Carbon nanotube templated synthesis of hierarchical SAPO-34catalysts with different structure directing agents for catalyticconversion of methanol to light olefins, *Journal of Analytical and Applied Pyrolysis*, 121 (2016) 11–23.
15. M. Jafarbegloo, A. Tarlani, A.W. Mesbah, J. Muzart, **S. Sahebdelfar**, NiO–MgO solid solution prepared by sol–gel method as precursor for Ni/MgO methane dry reforming catalyst: Effect of calcination temperature on catalytic performance, *Catal Lett*, (2016) 146:238–248.
16. S. Baradaran, M. Sohrabi, P.M. Bijani, S.J. Royaee, **S. Sahebdelfar**, Experimental and modelling study of propane aromatization over H-ZSM-5 catalysts prepared by different silica sources, *Canadian Journal of Chemical Engineering*, 93-4 (2015) 727–735.
17. E. Geravand, Z. Shariatinia, F. Yaripour, **S. Sahebdelfar**, Synthesis of copper-silica nanosized catalysts for 2-butanol dehydrogenation and optimization of preparation parameters by response surface method, *Chemical Engineering Research and Design*, 96 (2015) 63–77.
18. A. Jafari, N. Saadatjou, **S. Sahebdelfar**, Influence of chemical treatments of activated carbon support on the performance and deactivation behavior of promoted Ru catalyst, *International Journal of Hydrogen Energy*, 40 (2015) 3659-3671.
19. F. Yaripour, Z. Shariatinia, **S. Sahebdelfar**, A. Irandoukht, Conventional hydrothermal synthesis of nanostructured H-ZSM-5 catalysts using various templates for light olefins production from methanol, *Journal of Natural Gas Science and Engineering*, 22 (2015) 260–269.
20. M. Jafarbegloo, A. Tarlani, A. Wahid Mesbah, **S. Sahebdelfar**, Thermodynamic analysis of carbon dioxide reforming of methane and its practical relevance, *International Journal of Hydrogen Energy*, 40 (2015) 2445–2451.
21. F. Yaripour, Z. Shariatinia, **S. Sahebdelfar**, A. Irandoukht, The effects of synthesis operation conditions on the properties of modified γ-alumina nanocatalysts in methanol dehydration to dimethyl ether using factorial experimental design, *Fuel*, 2015, 139 40–50.
22. M. Jafarbegloo, A. Tarlani, A.W. Mesbah, **S. Sahebdelfar**, One-pot synthesis of NiO-MgO nanocatalysts for CO2 reforming of methane: The influence of active metal content on catalytic performance, *Journal of Natural Gas Science and Engineering*, 27 (2015) 1165e1173
23. F. Yaripour, Z. Shariatinia, **S. Sahebdelfar**, A. Irandoukht, Effect of boron incorporation on the structure, products selectivities and lifetime of H-ZSM-5 nanocatalyst designed for application in methanol-to-olefins (MTO) reaction, *Microporous and Mesoporous Materials*, 2015, 203, 41–53.
24. N. Saadatjou, A. Jafari, **S. Sahebdelfar**, Ruthenium Nanocatalysts for Ammonia Synthesis: A Review, *Chemical Engineering Communications*, 2015, 202(4) 420-448.
25. B.V. Farahani, F.H. Rajabi, M. Bahmani, M. Ghelichkhani, **S. Sahebdelfar**, Influence of precipitation conditions on precursor particle size distribution and activity of Cu/ZnO methanol synthesis catalyst, *Applied Catalysis A: General*, 482 (2014) 237–244.

26. M. Takht Ravanchi, **S. Sahebdelfar**, Carbon dioxide capture and utilization in petrochemical industry: potentials and challenges, *Appl. Petrochem. Res.* 2014, 4 (1) 63–77.
27. P. Moghimpour Bijani, M. Sohrabi, **S. Sahebdelfar**, Nonoxidative Aromatization of CH_4 Using C_3H_8 As a Coreactant: Thermodynamic and Experimental Analysis, *Ind. Eng. Chem. Res.*, 2014, *53* (2) 572–581.
28. S. Baradaran, M. Sohrabi, P. M. Bijani, S. J. Royaee, **S. Sahebdelfar**, An Investigation on Isobutane Aromatization Over an H-ZSM-5 Catalyst, *Petroleum Science and Technology*, 2014, 32(23) 2889-2895.
29. P. Moghimpour Bijani, M. Sohrabi, **S. Sahebdelfar**, Thermodynamic Analysis of Propane Aromatization, *Petroleum Science and Technology*, 2014, 32(12) 1480-1489.
30. F. Tahriri Zangeneh, S. Mehrazma, **S. Sahebdelfar**, The influence of solvent on the performance of Pt–Sn/θ-Al_2O_3 propane dehydrogenation catalyst prepared by co-impregnation method, *Fuel Processing Technology*, 2013, 109, 118–123.
31. F. Tahriri Zangeneh, **S. Sahebdelfar**, M. Bahmani, Propane dehydrogenation over a commercial Pt-Sn/Al_2O_3 catalyst for isobutane dehydrogenation: Optimization of reaction conditions, *Chin. J. Chem. Eng.*, 2013, 21 (7) 730-735.
32. **S. Sahebdelfar**, M. Takht Ravanchi, F. Tahriri Zangeneh, S. Mehrazma, Soheila Rajabi, Kinetic study of propane dehydrogenation and side reactions over Pt–Sn/Al_2O_3 catalyst, *Chemical Engineering Research and Design*, 2012, 90(8) 1090–1097.
33. **S. Sahebdelfar**, M. Takht Ravanchi, M. Gharibi, M. Hamidzadeh, Rule of 100: An inherent limitation or performance measure in oxidative coupling of methane? *Journal of Natural Gas Chemistry*, 2012, 21(3) 308–313.
34. M. Gharibi, F.T. Zangeneh, F. Yaripour, **S. Sahebdelfar**, Nanocatalysts for conversion of natural gas to liquid fuels and petrochemical feedstocks, *Applied Catalysis A: General,* 2012, 443-444, 8-26.
35. P. Moghimpour Bijani, M. Sohrabi, **S. Sahebdelfar**, Thermodynamic Analysis of Nonoxidative Dehydroaromatization of Methane, *Chemical Engineering & Technology*, 2012, 35(10) 1825-1832.
36. **S. Sahebdelfar**, P. M. Bijani, M. Saeedizad, F. T. Zangeneh, K. Ganji, Modeling of adiabatic moving-bed reactor for dehydrogenation of isobutane to isobutene, *Applied Catalysis A: General*, 2011, 395 (1-2) 107-113.
37. M. Fattahi , F. Khorasheh , **S. Sahebdelfar**, F. Tahriri Zangeneh , K. Ganji, M. Saeedizad, The effect of oxygenate additives on the performance of Pt–Sn/γ – Al_2O_3 catalyst in the propane dehydrogenation process, *Scientia Iranica C*, 2011, 18 (6), 1377–1383.
38. M. T. Ravanchi, **S. Sahebdelfar**, F. T. Zangeneh, Carbon dioxide sequestration in petrochemical industries with the aim of reduction in greenhouse gas emissions, *Frontiers of Chemical Science and Engineering* (2011) 5: 173-178.
39. F. T. Zangeneh, **S. Sahebdelfar**, M. T. Ravanchi, Conversion of carbon dioxide to valuable petrochemicals: An approach to clean development mechanism, *Journal of Natural Gas Chemistry,* 2011, 20 (3) 219-231.
40. A.Izadbakhsh, F. Farhadi, F. Khorasheh, **S. Sahebdelfar**, M. Asadi & Z-F. Yan, Key parameters in hydrothermal synthesis and characterization of low silicon content SAPO-

34 molecular sieve, *J. of Microporous and Mesoporous Materials,* Volume 126, Issues 1–2, November 2009, Pages 1–7.
41. M. Rezaei, S.M. Alavi, **S. Sahebdelfar** and Z.-F. Yan, A highly stable catalyst in methane reforming with carbon dioxide, *Scripta Materialia*, 61 (2009) 173–176.
42. M. Rezaei, S. M. Alavi, **S. Sahebdelfar**, Z-F. Yan, Synthesis of ceria doped nanozirconia powder by a polymerized complex method, *J Porous Mater* (2009) 16:497–505.
43. M. Mollavali, F. Yaripour, H. Atashi, **S. Sahebdelfar**, Intrinsic kinetics study of dimethyl ether synthesis from methanol on γ-Al_2O_3 catalysts, *Industrial & Engineering Chemistry Research*, 2008, 47 (9) 3265-3273.
44. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, P. Bai, X. Liu, Z.-F. Yan, CO_2 reforming of CH4 over nanocrystalline zirconia-supported nickel catalysts, *Applied Catalysis B: Environmental* 77 (2008) 346–354.
45. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Z-F. Yan, Effects of K_2O promoter on the activity and stability of nickel catalysts supported on mesoporous nanocrystalline zirconia in CH_4 reforming with CO_2, *Energy & Fuels* 2008, *22,* 2195–2202.
46. P. Moghimpour Bijani and **S. Sahebdelfar**, Modeling of a radial-flow moving-bed reactor for dehydrogenation of isobutane, *Kinetics and Catalysis*, 2008, 49 (4) 599-605.
47. M. Rezaei, S. M. Alavi, **S. Sahebdelfar**, Z-F. Yan, Effect of process parameters on the synthesis of mesoporous nanocrystalline zirconia with triblock copolymer as template, *J Porous Mater* (2008) 15:171–179.
48. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Zi-Feng Yan , Effect of CO2 content on the activity and stability of nickel catalyst supported on mesoporous nanocrystalline zirconia, *Journal of Natural Gas Chemistry*, 2008, 17 (2008) 278-282.
49. M. Aghaziarati, M. Kazemeini, M. Soltanieh and **S. Sahebdelfar**, Evaluation of zeolites in production of tetrahydrofuran from 1, 4- butanediol: Performance tests and kinetic investigations, *Ind. Eng. Chem. Res.*, 46. (2007) 726–733.
50. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Z-F. Yan, Mesoporous nanocrystalline zirconia powders: A promising support for nickel catalyst in CH4 reforming with CO2, *Materials Letters*, Volume 61, Issue 13, May 2007, Pages 2628−2631.
51. M. Rezaei, S. M.Alavi, **S. Sahebdelfar**, Zi-Feng Yan, Synthesis of mesoporous nanocrystalline zirconia with tetragonal crystallite phase by using ethylene diamine as precipitation agent, *Journal of Material Science*, 42 (2007) 7086-7092.
52. M. Rezaei, S.M. Alavi, **S.Sahebdelfar**, Liu Xinmei, Ling Qian, Zi-Feng Yan, CO_2-CH_4 reforming over nickel catalysts supported on mesoporous nanocrystalline zirconia with high surface area, *Energy & Fuels*, 21 (2007) 581-589.
53. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Zi-Feng Yan, J.H. Jacobsen, H. Teunissen, J.Sehested, Synthesis of pure tetragonal zirconium oxide with high surface area, *Journal of Materials Science,* 42 (2007) 1228–1237.
54. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Zi-Feng Yan, Syngas production by methane reforming with carbon dioxide on noble metal catalysts, *Journal of Natural Gas Chemistry*, 15 (2006) 327-334.
55. M. Rezaei, S. M.Alavi, **S. Sahebdelfar**, Zi-Feng Yan, Tetragonal nanocrystalline zirconia powder with high surface area and mesoporous structure, *Powder Technology*, 168 (2006) 59–63.

56. M. Rezaei, S. Mahdi Alavi, **S. Sahebdelfar**, and Zi-Feng Yan, Nanocrystalline zirconia as support for nickel catalyst in methane reforming with CO_2, *Energy & Fuels*, Vol. 20, No. 3: May 2006. pp 923 – 929.
57. M. Kazemeini, **S. Sahebdelfar**, F. Khorasheh, and A. Badakhshan, "Development of an Empirical Model for Catalyst Lifetime in Isobutane/Butene Alkylation" *Ind. Eng. Chem. Res.,* 2003, 42 (17), 3886 -3892.
58. **S. Sahebdelfar**, M. Kazemeini, F. Khorasheh, A. Badakhshan, Deactivation behavior of the catalyst in solid acid catalyzed alkylation: effect of pore mouth plugging, *Chem. Eng. Sci.*, 57 (2002) 3611 - 3620.
59. M. Soltanieh, **S. Sahebdelfar**. Interaction effects in multicomponent separation by reverse osmosis. *Journal of Membrane Science* 2001, 183 (1) 15-27.

Selected international conference papers

1. F. Tahriri Zangeneh, **S. Sahebdelfar**, A. Taeb, The Effect of Drying Step on The Performance of Pt-Sn-K/γ-Al_2O_3 Propane Dehydrogenation Catalyst , 11th International Chemical Engineering Congress (IChEC 2020) 28-30 October 2020, Fouman, Iran.
2. M. Takht Ravanchi, **S. Sahebdelfar**, M. Rahimi Fard, H. Moosavi, The Effect of Addition Method of Impregnation Solution on Catalytic Properties of Pd-Ag/Al_2O_3 Catalyst , 11th International Chemical Engineering Congress (IChEC 2020) 28-30 October 2020, Fouman, Iran.
3. **S. Sahebdelfar**, F. Yaripour, S. Shifteh, S. Rajabi, P. Moghimpour Bijani, The Influence of Catalyst Deactivation on Product Distribution in Methanol to Olefins Over ZSM-5 Catalysts, 11th International Chemical Engineering Congress (IChEC 2020) 28-30, October 2020 Fouman, Iran.
4. **S. Sahebdelfar**, M. Takht Ravanchi, A comparative study on the thermodynamics of methane and carbon dioxide reactions for greenhouse gases utilization Proceeding of International Gas Union Research Conference (IGRC) Rio 2017.
5. **S. Sahebdelfar**, M. Takht Ravanchi, CO_2 methanation for upgrading co2-rich natural gases: a thermodynamic equilibrium analysis, Proceeding of International Gas Union Research Conference (IGRC) Rio 2017.
6. M. Takht Ravanchi, **S. Sahebdelfar**, Technologies for Upgrading of Carbon Dioxide-Rich Natural Gases: Challenges and Recent Advances, Proceeding of the International Gas Union Research Conference 2014 (IGRC 2014) Copenhagen, Denmark, September 17 - 19, 2014.
7. M. Takht Ravanchi, **S. Sahebdelfar**, Sh. Mehrazma, A. Abedini, Preparation of Sn-Pt/Al_2O_3 dehydrogenation catalyst: an equilibrium and kinetic study on platinum adsorption, Proceeding of the 15th International Congress on Catalysis in Munich, Germany July 1 – 6, 2012
8. **S. Sahebdelfar**, M. Daftari Beshelli, M.R. Jafar Nasr, Dimethyl ether: The alternative multi-purpose, multi-source fuel of the future, Proceeding of the 20th World Petroleum Congress, 4-8 December 2011, Doha, Qatar.

9. M. R. Jafari Nasr, M. Daftari, **S. Sahebdelfar**, M. Takht Ravanchi, Petrochemical-refinery integration: re-processing of the products to achieve higher profits, Proceeding of the 20th World Petroleum Congress, 4-8 December 2011, Doha, Qatar.
10. **S. Sahebdelfar**, F. Tahriri Zangeneh, M. Takht Ravanchi M. In: Proceedings of the 7th Asia Pacific Conference on Sustainable Energy and Environmental Technologies, Qingdao, China, 2009.
11. F. Tahriri Zangeneh, **S. Sahebdelfar**, Effect of Cs to Pt-Sn-K/Al_2O_3 in the Propane Dehydrogenation, Proceeding of the 8th World Congress of Chemical Engineering ((WCCE8), August 23-27, 2009, Montreal, Canada.
12. M. Saeedizad, **S. Sahebdelfar**, Z. Mansourpour, Deactivation kinetics of platinum-based catalysts in dehydrogenation of higher alkanes, Proceeding of XVIII International Conference on Chemical Reactors - CHEMREACTOR -18, September 29 - October 3, 2008, Malta.
13. S. Aghaziarati, M. Soltanieh, M., Kazemaini, **S. Sahebdelfar**, Optimization of Cu/ZnO ratio in Cu-ZnO-ZrO2/H-Y bifunctional catalyst used for production of tetrahydrofuran from maleic Anhydride , presented at the 5th International Chemical Engineering Congress & Exhibition, Iran, 2008.
14. S. Aghaziarati, M. Soltanieh, M. Kazemaini, **S. Sahebdelfar**, Hydrogenation of maleic anhydride to tetrahydrofuran using, presented at the 18th International Congress of Chemical and Process Engineering" (CHISA), Czech Republic, 24-28 August 2008.
15. P. M. Bijani and **S. Sahebdelfar**, Modeling of a radial-flow moving-bed reactor for dehydrogenation of isobutane, III International Conference Catalysis: undamentals and Applications, July 4-8, 2007 Novosibirsk – Russia.
16. S. Aghaziarati, M. Soltanieh, M. Kazemaini, **S. Sahebdelfar**, An optimum catalyst for dehydrogenation of 1,4-butanediol in production of tetrahydrofuran, presented at the 17th International Congress of Chemical and Processes Engineering (CHISA), Czech Republic, 2006.
17. **S. Sahebdelfar**, M. Kazemeini, F. Khorasheh, A. Badakhshan, Catalyst lifetime in solid acid catalyzed alkylation, 4th European Congress on Chemical Engineering, Granada, Spain, 2003.
18. **S. Sahebdelfar**, M. Kazemeini, A mathematical model for deactivation of methanol synthesis catalyst by sintering, 16th Industrial Congress of Chemical and Process Engineering, Chisa 2004, 22-26 August 2004, Prague - Czech Republic.
19. A. Javadi, M. Soltanieh, **S. Sahebdelfar**, D. Bastani, Kh. Javadi, Evaluation of carbon black reactors: estimation of temperature and residence time, ASME International Mechanical Engineering Congress, Anahelm, California, USA, 13-19 November 2004.
20. A. Badakhshan, M. Kazemeini, F. Khorasheh, **S. Sahebdelfar**, Solid alkylation catalyst and green gasoline, World Petroleum Congress 2nd Regional Meeting, Doha, Dec. 2003.
21. A. Badakhshan, M. Kazemeini, F. Khorasheh, **S. Sahebdelfar**, Solid Acid Catalytic Alkylation: A Means for Gasoline Aromatic Reduction, 17th World Petroleum Congress, Rio de Janiero, Brazil, 2002.

Books

1. **S Sahebdelfar**, MT Ravanchi, AK Nadda, C_1 Chemistry: Principles and Processes, CRC Press, New York, 2022.
2. **S Sahebdelfar**, MT Ravanchi, Heterogeneous Catalytic Hydrogenation of CO_2 to Basic Chemicals and Fuels, in A. Kumar, S. Sharma, Chemo-Biological Systems for CO_2 Utilization, CRC Press, Boca Raton, 2020.
3. M.T. Ravanchi, **S. Sahebdelfar**, Catalytic upgrading of bio-oil for production of drop-in fuels, in L.M. Torres-Martínez, O.V. Kharissova, B.I. Kharisov (Eds.), Handbook of Ecomaterials, Springer Nature, 2019, 3, pp. 1965–1966.
4. M. Takht Ravanchi, **S. Sahebdelfar**, Palladium as a Catalyst for Selective Hydrogenation: Fundamentals and Applications, Lambert Academic Publishing, 2015
5. **S. Sahebdelfar**, M. Rezaei, F. Yaripour, Nanocatalysts: Application of Nanotechnology in Catalysis, Academic Book Press, Tehran, 2011 (in Persian).
6. **S. Sahebdelfar**, F. Tahriri Zangeneh, C_1 Chemistry and Natural Gas Conversions, National Petrochemical Company Press, Tehran, 2011 (in Persian).
7. **S. Sahebdelfar**, F. Yaripour, M. Hamidzadeh, The Principles of Catalyst Development, National Petrochemical Company Press, Tehran, 2009 (in Persian)
8. **S. Sahebdelfar** in Marcello Picciotti Ed., Petrochemical Catalysts. Catalysts, Applications, and Bench-Scale Reactors: NPC Publications, Tehran –Iran, July 2005.

Patents

1. M. Hamidzadeh, R. Khalili, A. Alamshahi, **S. Sahebdelfar**, Oxychlorination of ethylene over Cu-based catalysts, Iranian Patent, 82599, (2014) , Assigned to NPC-RT.
2. M. Hamidzadeh, H. Bonyad, S.K. Masoodian Torighi, M. Rashidzadeh, M. Jafarbegloo, **S. Sahebdelfar**, Process for production of alkali and alkali earth metal catalyst supports, Iranian Patent, 73739, (2014) , Assigned to NPC-RT.
3. M. Hamidzadeh, **S. Sahebdelfar**, M. R. Jafari Nasr, Catalyst and Process of Oxidative Coupling of Methane, GB 2,469,877 (2013), Assigned to NPC-RT.
4. M. Fattahi, F. Khorasheh, **S. Sahebdelfar**, M. Saeedizad, F.T. Zangeneh, improvement of propane dehydrogenation on platinum based catalyst by addition of oxygenates, Iranian Patent, 60585, (2009) , Assigned to NPC-RT.
5. M. Saeedizad, **S. Sahebdelfar**, Economic improvement of the synthesis of platinum containing catalysts by optimization of preparation method, Iranian Patent, 60964, (2009) , Assigned to NPC-RT.
6. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Preparation of zirconium oxide using ethylene diamine as template and precipitant, Iranian Patent, 45168 (2008) , Assigned to NPC-RT.
7. F.T. Zangeneh, E. Karimi, **S. Sahebdelfar**, Dehydrogenation of propane on promoted Pt on alumina catalyst, Iranian Patent, 54456 (2008) , Assigned to NPC-RT.
8. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Synthesis of stable nanocrystaline zirconium oxide support by precipitation, Iranian Patent, 40162, (2007) , Assigned to NPC-RT.
9. M. Rezaei, S.M. Alavi, **S. Sahebdelfar**, Synthesis of promoted nickel on zirconium oxide catalyst for production of synthesis gas, Iranian Patent, 41155 (2007) , Assigned to NPC-RT.

10. M. Jafari Nasr, **S. Sahebdelfar**, Production of ethylene from methane (catalysts and processes of oxidative coupling of methane to ethylene) with over 30% efficiency and special control of reactor bed, Iranian Patent, 32521, (2005) , Assigned to NPC-RT.