



Mehran Rezaei

Professor in Chemical Engineering

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Birthday: 20/09/1977

Nationality: Iranian

Education

Ph.D. Chemical Engineering, Iran University of Science and Technology, 2002-2007.

M.Sc. Chemical Engineering, Iran University of Science and Technology, 2000-2002.

B.Sc. Chemical Engineering, Isfahan University, 1996-2000.

Research Interests

- ❖ Heterogeneous Catalysis&Porous Materials
- ❖ Natural Gas Catalytic Conversion&Processing
- ❖ H₂ Production and Purification
- ❖ Characterization and Application of Mesoporous Materials
- ❖ Nanocatalysis and Nanomaterials.
- ❖ Reaction Engineering

Industrial Experiences

- ❖ Sarv Oil and Gas Industries Development Co., 2006-Present. (Catalyst Research and Engineering Manager)
- ❖ State Key Laboratory for Heavy Oil Processing, Key Laboratory of Catalysis, CNPC, China,2005-2006.

- ❖ Haldor Topsoe A/S company, Denmark , 2005.
- ❖ Iran Barit Company, 2003-2005.
- ❖ Ross Kimia Company, 2001-2003.
- ❖ Karkanehe Chini Iran, 2000.

Industrial Projects

- ❖ Preparation of methanation catalyst for hydrogen purification in Petrochemical and Petroleum industries in industrial scale, 2015.
- ❖ Preparation of high temperature water gas shift catalyst for hydrogen purification in Petrochemical and Petroleum industries in industrial scale, 2015.
- ❖ Preparation of promoted primary steam reforming catalysts in industrial scale for Petrochemical and Petroleum industries, 2013.
- ❖ Preparation of autothermal/secondary steam reforming catalysts in industrial scale for Petrochemical industries, 2014.
- ❖ Preparation of partial oxidation catalysts in industrial scale, 2014.
- ❖ Preparation of prereforming catalyst in bench scale, 2014.
- ❖ Preparation of Platforming catalyst in bench scale, 2013.
- ❖ Preparation of ammonia synthesis catalyst in bench scale, 2013.
- ❖ Preparation of Direct reduction of iron catalysts (Midrex catalysts) in industrial scale for Steel industries, 2008.
- ❖ Preparation of primary steam reforming catalysts in industrial scale for Petrochemical and Petroleum industries, 2006.

Graduate and Undergraduate Courses

- ❖ Basic Principles and Calculations in Chemical Engineering
- ❖ Construction Processes I & II
- ❖ Chemical Reaction Engineering.
- ❖ Advanced Chemical Reaction Engineering.
- ❖ Heterogeneous catalysis
- ❖ Nanocatalysis

Awards and honors

- ❖ Ranked as 1% Top World Scientists based on Citation, ISI Web of Science, January, 2016.
- ❖ Awarded as Young Scientist of the Iranian Academy of Science In chemical Engineering, 2017.
- ❖ Awarded as one of the top 10 researchers in the field of nanotechnology in Iran, 2016.
- ❖ Research Excellence Award, Ministry of Science, Research and Technology, 2014.
- ❖ Khwarizmi Youth Award (Rank. 1, Fundamental researches), 2016.
- ❖ Research Excellence Award in 2012, Isfahan Province.
- ❖ Research Excellence Award in 2010, Isfahan Province.
- ❖ Research Excellence Award in 2016, University of Kashan
- ❖ Technology Excellence Award in 2016, University of Kashan
- ❖ Research Excellence Award in 2015, University of Kashan

- ❖ Technology Excellence Award in 2015, University of Kashan
- ❖ Technology Excellence Award in 2014, University of Kashan
- ❖ Technology Excellence Award in 2012, University of Kashan
- ❖ Research Excellence Award in 2013, University of Kashan
- ❖ Research Excellence Award in 2012, University of Kashan.
- ❖ Research Excellence Award in 2011, University of Kashan.
- ❖ Research Excellence Award in 2010, University of Kashan.
- ❖ Research Excellence Award in 2008, University of Kashan (Faculty of Engineering).
- ❖ Teaching Excellence Award in 2008, University of Kashan (Faculty of Engineering).
- ❖ Distinguished as one of the top 20 researchers in the field of nanotechnology in Iran, 2008.
- ❖ Distinguished as one of the top 15 researchers in the field of nanotechnology in Iran, 2007.
- ❖ The highest-ranked researcher in chemical engineering in the field of nanotechnology in Iran, 2007.
- ❖ The third highest-ranked researcher in chemical engineering in the field of nanotechnology in Iran, 2008.
- ❖ Khwarizmi Youth Award (Rank. 3, Fundamental researches), 2007.
- ❖ Awarded as the best student of the chemical engineering department, IUST University, 2007.
- ❖ Awarded as the best student of the chemical engineering department, IUST University, 2001.
- ❖ Awarded as the best student of the chemical engineering department, IUST University, 2000.

Publications

Journal Papers

1. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan ,Nanocrystalline zirconia as support for nickel catalyst in methane reforming with CO₂, *Energy & Fuels* 20 (2006) 923-929
2. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, Tetragonal nanocrystalline zirconia powder with high surface area and mesoporous structure, *Powder Technology* 168 (2006) 59–63.
3. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, Syngas production by methane reforming with carbon dioxide on noble metal catalysts, *Journal of Natural Gas Chemistry* 15 (2006) 327-334.
4. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Liu Xinmei, Ling Qian, Zi-Feng Yan, CO₂-CH₄ reforming over nickel catalysts supported on mesoporous nanocrystalline zirconia with high surface area, *Energy&Fuels* 21 (2007) 581-589..
5. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, J.H. Jacobsen, H. Teunissen, J.Sehsted, Synthesis of pure tetragonal zirconium oxide with high surface area, *Journal of Materials Science* 42 (2007) 1228–1237.
6. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, Mesoporous nanocrystalline zirconia powders: A promising support for nickel catalyst in CH₄ reforming with CO₂, *Materials Letters* 61 (2007) 2628–2631
7. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, 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.
8. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, CO₂ reforming of CH₄ over nanocrystalline zirconia-supported nickel catalysts, *Appl. Catal. B.*, 77 (2007) 346.

9. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, Effect of process parameters on the synthesis of mesoporous nanocrystalline zirconia with triblock copolymer as template, *Journal of porous materials*, 15 (2008) 171-179
10. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, Effects of K₂O promoter on the activity and stability of nickel catalysts supported on mesoporous nanocrystalline zirconia in CH₄ reforming with CO₂, *Energy&Fuels*, 22(4) (2008) 2195.
11. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, 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.
12. E. Navaei, M.R. Golmohammadi, **M. Rezaei**, H. Navaei, A. Mardanloo, S. Habibzad, M. Didari, Preparation and Thermal Treatment of Pd/Ag Composite Membrane by Sequential Electroless Plating Technique, *Journal of Natural Gas Chemistry*, 17 (2008) 321.
13. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan Synthesis of ceria doped nanozirconia powder by a polymerized complex method, *Journal of Porous Materials*, 16 (2009) 497–505.
14. E. Navaei, **M. Rezaei**, H. Navaei, Zi-Feng Yan, Synthesis of Nanocrystalline MgAl₂O₄ Spinel by Using Ethylene Diamine as Precipitation Agent, *Chemical Engineering Communications*, 196 (2009) 1417-1424
15. M. Akia, S.M. Alavi, **M. Rezaei**, Zi-Feng, Optimizing the sol gel parameters on the synthesis of mesostructure nanocrystalline gamma-alumina, *Microporous and Mesoporous Materials*, 122 (2009) 72–78 .
16. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan , A highly stable catalyst in methane reforming with carbon dioxide, *Scripta Materialia*, 61 (2009) 173–176.
17. E. Navaei, **M. Rezaei**, Mesoporous nanocrystalline MgAl₂O₄ spinel and its applications as support for Ni catalyst in dry reforming, *Scripta Materialia*, *Scripta Materialia*, 61 (2009) 212–215.
18. Fereshteh Meshkani, **Mehran Rezaei**, Facile Synthesis of Nanocrystalline Magnesium Oxide with High Surface Area, *Powder Technology*, 196 (2009) 85–88.
19. M. Akia, S.M. Alavi, **M. Rezaei**, Zi-Feng Yan, Synthesis of high surface area as an efficient catalyst support for dehydrogenation of n-docecane, *Journal of Porous Materials*, 17 (2010) 85-90.
20. Fereshteh Meshkani, **Mehran Rezaei**, Effect of process parameters on the synthesis of nanocrystalline magnesium oxide with high surface area and plate-like shape by surfactant assisted precipitation method, *Powder Technology*, 199 (2010) 144–148
21. A. Keshavarz, **M. Rezaei**, F. Yaripour, Nanocrystalline γ -Al₂O₃: A Highly Potential Catalyst for Dimethyl Ether Synthesis, *Powder Technology*, 199 (2010) 176–179.
22. E. Navaei, **M. Rezaei**, H. Navaei, Synthesis of Mesoporous Nanocrystalline MgAl₂O₄ Spinel via Surfactant Assisted Precipitation Route, *Powder Technology*, 198 (2010) 275-278.
23. **M. Rezaei**, M. Khajenoori, B. Nematolahi, Synthesis of High Surface Area Nanocrystalline MgO by Pluronic P123 Triblock Copolymer Surfactant, *Powder Technology* 199 (2010) 176–179.

24. F. Meshkani, **M. Rezaei**, Nanocrystalline MgO supported nickel-based bimetallic catalysts for carbon dioxide reforming of methane, *International Journal of Hydrogen Energy*, 35 (2010) 10295-10301.
25. J. Safari, S.D. Khalili, M. Rezaei, S.H. Banitaba, F. Meshkani, Nanocrystalline magnesium oxide: A novel and efficient catalyst for facile synthesis of 2,4,5-trisubstituted imidazole derivatives, *Monatshefte für Chemie*, 141 (2010) 1339-1345
26. Fereshteh Meshkani, **Mehran Rezaei**, Nickel Catalyst supported on Magnesium oxide with High Surface Area and Plate-Like Shape: A Highly Stable and Active Catalyst in Methane Reforming with Carbon Dioxide, *Catalysis Communications*, 12 (2011) 1046-1050.
27. A. Keshavarz, **M. Rezaei**, F. Yaripour, Preparation of γ -Al₂O₃ catalyst using different procedures for methanol dehydration to dimethyl ether, *Journal of Natural Gas Chemistry*, 20 (2011) 334-338.
28. **Mehran Rezaei**, Majid Khajenoori, Behzad Nematollahi, Preparation of nanocrystalline MgO by surfactant assisted precipitation method, *Materials Research Bulletin*, 46 (2011) 1632-1637.
29. **M. Rezaei**, M. Khajenoori, B. Nematollahi, Combined Dry Reforming and Partial Oxidation of Methane to Synthesis Gas on Noble Metal Catalysts, *International Journal of Hydrogen Energy*, 36 (2011) 2969-2978.
30. **Mehran Rezaei**, Fereshteh Meshkani, Aboulfazl Biabani, Behzad Nematollahi, Atiyeh Ranjbar, Narges Hadian, Zeinab Mosayebi, Autothermal reforming of methane over Ni catalysts supported on nanocrystalline MgO with high surface area and plated-like shape, *International Journal of Hydrogen Energy*, 36 (2011) 11712-11717.
31. F. Meshkani, M. Rezaei, Ni catalysts supported on nanocrystalline magnesium oxide for syngas production by CO₂ reforming of CH₄, *Journal of Natural Gas Chemistry*, 20 (2011) 198-203.
32. Z. Mosayebi, **M. Rezaei**, N. Hadian, F. Zareie Kordshuli, F. Meshkani, Low temperature synthesis of nanocrystalline magnesium aluminate with high surface area by surfactant assisted precipitation method: Effect of preparation conditions, *Materials Research Bulletin* 47 (2012) 2154–2160.
33. A. Ranjbar, M. Rezaei, Preparation of nickel catalysts supported on CaO.2Al₂O₃ for methane reforming with carbon dioxide, *International Journal of Hydrogen Energy*, 37 (2012) 6356-6362.
34. A. Biabani, **M. Rezaei**, Low temperature CO oxidation over Fe–Co mixed oxide nanocatalysts, *Chemical Engineering Journal*, 184 (2012) 141-146.
35. A. Biabani, **M. Rezaei**, Z. Fattah, Optimization of Preparation Conditions of Fe-Co Nanoparticles in Low-Temperature CO Oxidation Reaction by the Taguchi Design Method, *Journal of Natural Gas Chemistry*, 21(2012)415–420.
36. A. Ranjbar, **M. Rezaei**, Dry Reforming Reaction over Nickel Catalysts Supported on Nanocrystalline Calcium Aluminates with Different CaO/Al₂O₃ Ratios, *Journal of Natural Gas Chemistry*, 21 (2012) 178-183.
37. N. Hadian, **M. Rezaei**, Z. Mosayebi, F. Meshkani, CO₂ reforming of methane over nickel catalysts supported on nanocrystalline MgAl₂O₄ with high surface area, *Journal of Natural Gas Chemistry*, 21 (2012) 200-206.
38. H. Eltejaei, H. R. Bozorgzadeh, J. Towfighi, M. Reza Omidkhah, **M. Rezaei**, R. Zanganeh, A. Zamaniyan, A. Zarrin Ghalam, Methane dry reforming on Ni/Ce_{0.75}Zr_{0.25}O₂-MgAl₂O₄ and

Ni/Ce_{0.75}Zr_{0.25}O₂- γ -alumina: Effects of support composition and water addition, *International Journal of Hydrogen Energy*, 37 (2012) 4107-4118.

39. Z. Mosayebi, **M. Rezaei**, A.B. Ravandi, N. Hadian, Autothermal reforming of methane over nickel catalysts supported on nanocrystalline MgAl₂O₄ with high surface area, *International Journal of Hydrogen Energy*, 37 (2012) 1236-1242

40. B. Nematollahi, **M. Rezaei**, E. Nemati, M. Khajenoori, Thermodynamic analysis of combined reforming process using Gibbs energy minimization method: In view of solid carbon formation, *Journal of Natural Gas Chemistry*, 19 (2013) 234–23939.

41. A. Biabani, **M. Rezaei**, Z. Fattah, Synthesis of Fe-Co nanoparticles and its application in catalytic low-temperature CO oxidation, *Process Safety and Environmental Protection*, 91 (2013) 489-494.

42. A. Biabani, **M. Rezaei**, Z. Fattah, Catalytic performance of Ag/Fe₂O₃ for the low temperature oxidation of carbon monoxide, *Chemical Engineering Journal* 219 (2013) 124–130

43. R. Zanganeh, **M. Rezaei**, A. Zamanian, Dry reforming of methane to synthesis gas on NiO-MgO nanocrystalline solid solution catalysts, *International Journal of Hydrogen Energy*, 38 (2013) 3012 - 3018.

44. **M. Rezaei**, M. Khajenoori, B. Nematollahi, Preparation of noble metal nanocatalysts and their applications in catalytic 3 partial oxidation of methane, *Journal of Industrial and Engineering Chemistry* 19 (2013) 981-986.

45. H. Naeimi, Kh. Rabiei, **M. Rezaei**, F. Meshkani, Nanocrystalline magnesium oxide as a solid base catalyst promoted one pot synthesis of gem-dichloroaziridine derivatives under thermal conditions, *IRAN CHEM SOC* (2013) 10:161–167.

46. A. Biabani, **M. Rezaei**, Z. Fattah, Low-Temperature CO oxidation over nanosized Fe-Co mixed oxide catalysts: Effect of calcination temperature and operational conditions, *Chemical Engineering Science*, 94 (2013) 237-244.

47. R. Zanganeh, **M. Rezaei**, A. Zamanian, H. R. Bozorgzadeh, Preparation of Ni_{0.1}Mg_{0.9}O nanocrystalline powder and its catalytic performance in methane reforming with carbon dioxide, *Journal of Industrial and Engineering Chemistry*, 19 (2013) 234–239.

48. N. Hadian, **M. Rezaei**, Combination of dry reforming and partial oxidation of methane over Ni catalysts supported on nanocrystalline MgAl₂O₄, *Fuel* 113 (2013) 571–579

49. M. Andache, **M. Rezaei**, M. Kazemimoghadam, A nanocrystalline MgO support for Ni catalysts for steam reforming of CH₄, *Chinese Journal of Catalysis* 34 (2013) 1443–1448

50. E. Amini, **M. Rezaei**, M. Sadeghinia, Low temperature CO oxidation over mesoporous CuFe₂O₄ nanopowders synthesized by a novel sol-gel method, *Chinese Journal of Catalysis* 34, 2013

51. S. Rahmani, **M. Rezaei**, F. Meshkani, Preparation of Highly active nickel catalysts supported on mesoporous nanocrystalline γ -Al₂O₃ for CO₂ methanation, *Journal of Industrial and Engineering Chemistry*, 20 (2014) 1352-1346.

52. A. Ranjbar, **M. Rezaei**, Low Temperature Synthesis of Nanocrystalline Calcium Aluminate Compounds with Surfactant-assisted Precipitation Method, *Advanced Powder Technology*, 25 (2014) 467-471.

53. E. Amini, **M. Rezaei**, M. Sadeghinia, Preparation of MnO₂ nanowires and its application in low temperature CO oxidation, *Korean Journal of Chemical Engineering*, 30 (2013) 2012-2016.

54. N. Majidian, N. Habibi, **M. Rezaei**, CH₄ reforming with CO₂ for syngas production over nickel catalysts supported on mesoporous nanostructured γ -Al₂O₃, Korean Journal of Chemical Engineering, 31 (2014), 1162-1167.
55. M. Zanganeh, **M. Rezaei**, A. Zamaniyan, Preparation of nanocrystalline NiO–MgO solid solution powders as 5 catalyst for methane reforming with carbon dioxide: Effect of preparation conditions, Advanced Powder Technology, 25 (2014) 1111-1117.
56. Z. Fattah, **M. Rezaei**, A. Biabani-Ravandi, Abdullah Irankhah, Preparation of Co-MgO mixed oxide nanocatalysts for low temperature CO oxidation: Optimization of preparation conditions, Process Safety and Environmental Protection, 2014, In Press.
57. N. Habibi, **M. Rezaei**, N. Majidian, M. Andacheh, CH₄ Reforming with CO₂ for Syngas Production over La₂O₃ promoted Ni Catalysts Supported on Mesoporous Nanostructured γ -Al₂O₃, Journal of Energy Chemistry 23(2014)435–442
58. F. Meshkani, **M. Rezaei**, Iron based catalysts prepared via simple and direct pyrolysis method for high temperature water gas shift reaction, Journal of Industrial and Engineering Chemistry, 201 (2014) 3297-3302.
59. M. Khajenoori, **M. Rezaei**, F. Meshkani, Effect of CeO₂ promoter on the activity and coke formation of nickel catalyst supported on nanocrystalline MgO in dry reforming, Chem. Eng. Technol. 2014, 37, No. 6, 957–963.
60. F. Mirzaei, **M. Rezaei**, F. Meshkani, Syngas production via carbon dioxide reforming of methane over Co-MgO mixed oxide nanocatalysts, Journal of Industrial and Engineering Chemistry. 2014, In Press
61. S. Rahmani, **M. Rezaei**, F. Meshkani, Preparation of promoted nickel catalysts supported on mesoporous nanocrystalline gamma alumina for carbon dioxide methanation reaction, Journal of Industrial and Engineering Chemistry 20 (2014) 4176–4182.
62. Z. Alipour, **M. Rezaei**, F. Meshkani, Effect of alkaline earth promoters (MgO, CaO, and BaO) on the activity and coke formation of Ni catalysts supported on nanocrystalline Al₂O₃ in dry reforming of methane, Journal of Industrial and Engineering Chemistry 20 (2014) 2858–2863
63. F. Meshkani, **M. Rezaei**, M. Andacheh, Investigation of the catalytic performance of Ni/MgO catalysts in partial oxidation, dry reforming and combined reforming of methane, Journal of Industrial and Engineering Chemistry, 20 (2014) 1251-1260.
64. Z. Alipour, **M. Rezaei**, F. Meshkani, Effect of Ni loadings on the activity and coke formation of MgO-modified Ni/Al₂O₃ nanocatalyst in dry reforming of methane, Journal of Energy Chemistry, 23(2014) 633–638.
65. F. Meshkani, **M. Rezaei**, High Temperature Water Gas Shift Reaction over Promoted Iron Based Catalysts Prepared by Pyrolysis Method, International Journal of Hydrogen Energy, 39 (2014) 16318-16328.
66. B. Nematollahi, **M. Rezaei**, E. Nemati, Synthesis of Nanocrystalline CeO₂ with High Surface Area Using Taguchi Method and Its Application in Methanation Reaction, Chemical Engineering & Technology, 2014, In Press.
67. B. Nematollahi, **M. Rezaei**, M. Asghari, A. Fazeli, E. Nemati, A comparative study between modeling and experimental results over rhodium supported catalyst in dry reforming reaction, Fuel, Fuel 134 (2014) 565–572.

68. Z. Alipour, **M. Rezaei**, F. Meshkani, Effects of support modifiers on the catalytic performance of Ni/Al₂O₃ catalyst in CO₂ reforming of methane, *Fuel*, 129 (2014) 197-203.
69. F. Meshkani, **M. Rezaei**, Preparation of Nanocrystalline Metal (Cr, Al, Mn, Ce, Ni, Co and Cu) Modified Ferrite Catalysts for the High Temperature Water Gas Shift Reaction, *Renewable Energy* 74 (2015) 588-598
70. F. Meshkani, **M. Rezaei**, Preparation of mesoporous nanocrystalline iron based catalysts for high temperature water gas shift reaction: Effect of preparation factors, *Chemical Engineering Journal*, 260 (2015) 107–116.
71. F. Meshkani, **M. Rezaei**, Mesoporous Ba-promoted chromium free Fe₂O₃-Al₂O₃-NiO catalyst with low methanation activity for high temperature water gas shift reaction, *Catalysis Communications*, *Catalysis Communications* 58 (2015) 26–29.
72. F. Meshkani, **M. Rezaei**, A Highly Active and Stable Chromium Free Iron Based Catalyst for H₂ Purification in High Temperature Water Gas Shift Reaction, *International J. of Hydrogen Energy*, 39 (2014) 18302-18311.
73. F. Meshkani, **M. Rezaei**, Preparation of Nanocrystalline Fe₂O₃-Cr₂O₃-CuO Powder by a Modified Urea Hydrolysis Method: A Highly Active and Stable Catalyst for High Temperature Water Gas Shift Reaction, *Materials Research Bulletin*, 64 (2015) 418-424.
74. F. Meshkani, **M. Rezaei**, The effect of preparation factors on the structural and catalytic properties of mesoporous nanocrystalline iron based catalysts for high temperature water gas shift reaction, *The Korean Journal of Chemical Engineering*, Accepted, 2014.
75. F. Meshkani, **M. Rezaei**, A facile method for preparation of iron based catalysts for high temperature water gas shift reaction, *Journal of Industrial and Engineering Chemistry* 20 (2014) 3297–3302.
76. Fereshteh Meshkani, **Mehran Rezaei**, Simplified direct pyrolysis method for preparation of nanocrystalline iron based catalysts for H₂ purification via high temperature water gas shift reaction, *Chemical Engineering Research and Design*, 95 (2015) 288-297.
77. Fereshteh Meshkani, **Mehran Rezaei**, Mohammad Jafarbagloo, Applying Taguchi robust design to the optimization of the synthesis parameters of nanocrystalline Cr-free Fe-Al-Cu catalyst for high temperature water gas shift reaction, *Materials Research Bulletin* 70 (2015) 229–235.
78. Ehsan Amini, **Mehran Rezaei**, Behzad Nematollahi, SYNTHESIS OF MESOPOROUS MAGNESIUM ALUMINATE (MGAL₂O₄) NANOPOWDER WITH HIGH SURFACE AREA WITH A NOVEL AND SIMPLE SOL–GEL METHOD, *Journal of Porous Materials*, (2015) 22:481–485.
79. Behzad Nematollahi, **Mehran Rezaei**, Ebrahim Nemati, Selective Methanation of Carbon Monoxide in Hydrogen Rich Stream over Ni/CeO₂ Nanocatalysts, *Journal of Rare Earth*, 33 (2015) 619.
80. Behzad Nematollahi, **Mehran Rezaei**, Ebrahim Nemati, Preparation of Highly Active and Stable NiO-CeO₂ Nanocatalysts for CO Selective Methanation, *International Journal of Hydrogen Energy*, 40 (2015) 8539 -8547.

81. Fereshteh Meshkani, **Mehran Rezaei**, Preparation of 1 mesoporous nanocrystalline alkali promoted chromium free catalysts (Fe₂O₃-Al₂O₃-NiO) for a high temperature water gas shift reaction, RSC Advances, 5 (2015) 9995.
82. Amirali Hosseinzadeh, Behzad Nematollahi, **Mehran Rezaei**, Ebrahim Nemati, Low temperature CO methanation over Ni catalysts supported on high surface area mesoporous nanocrystalline γ -Al₂O₃ for CO removal in H₂-rich stream, International Journal of Hydrogen Energy, 30 (2015) 1809-1818.
83. Fereshteh Meshkani, **Mehran Rezaei**, Preparation of mesoporous chromium promoted magnetite based catalysts for high temperature water gas shift reaction, Industrial & Engineering Chemistry Research, 54 (2015) 1236-1242.
84. Fereshteh Meshkani, **Mehran Rezaei**, Promoted Fe₂O₃-Al₂O₃-CuO Chromium Free Catalysts for High Temperature Water Gas Shift Reaction, Chemical Engineering and Technology, 38 (2015), 1380-1386.
85. Fereshteh Meshkani, **Mehran Rezaei**, Comparison of Preparation Methods of Iron-Based Catalysts for High-Temperature Water-Gas Shift Reaction, Chemical Engineering and Technology, 38 (2015) 1-10.
86. Fatemeh Mohandes; Masoud Salavati-Niasari, **Mehran Rezaei**; Preparation of Mn₂O₃ nanostructures with different shapes by a simple solid-state method; Journal of Materials Science: Materials in Electronics, 2015, Accepted.
87. Fereshteh Meshkani, **Mehran Rezaei**, High-Temperature Water-Gas Shift Reaction over Nanostructured Cr-Free Fe₂O₃-Al₂O₃-CuO-MO (M: Ba, Ca, Mg and Sr) Catalysts for Hydrogen Production, Journal of Industrial and Engineering Chemistry 30 (2015) 353-358.
88. Ehsan Amini, **Mehran Rezaei**, Preparation of mesoporous Fe-Cu mixed metal oxide nanopowder as a very active and stable catalyst for low temperature CO oxidation, Chinese Journal of Catalysis, 36 (2015) 1711-1718.
89. Nima Bayat, **Mehran Rezaei**, Fereshteh Meshkani, CO_x-free hydrogen and carbon nanofibers production by methane decomposition over Nickel-Alumina catalysts, Korean Journal of Chemical Engineering, 33(2) (2016), 490-499.
90. M.H. Aboonasr, **M. Rezaei**, F. Meshkani, Preparation of nanocrystalline Ni/Al₂O₃ catalysts with microemulsion method for dry reforming of methane, The Canadian Journal of Chemical Engineering, 94 (2016), 1177-1183.
91. Soodeh Sepehri, **Mehran Rezaei**, Preparation of Highly Active Nickel Catalysts Supported on Mesoporous Nanocrystalline γ -Al₂O₃ for Methane Autothermal Reforming, Chemical Engineering and Technology, 38 (2015) 1637-1645.
92. Fereshteh Meshkani, **Mehran Rezaei**, High-Temperature Water-Gas Shift Reaction over Nanostructured Cr-Free Fe₂O₃-Al₂O₃-CuO-MO (M: Ba, Ca, Mg and Sr) Catalysts for Hydrogen Production, Journal of Industrial and Engineering Chemistry, 30 (2015) 353-358.

93. Ehsan Amini, **Mehran Rezaei**, Preparation of mesoporous Fe-Cu mixed metal oxide nanopowder as a very active and stable catalyst for low temperature CO oxidation, *Chinese Journal of Catalysis*, 36 (2015) 1711-1718.
94. Fereshteh Meshkani, **Mehran Rezaei**, The effect of preparation factors on the structural and catalytic properties of mesoporous nanocrystalline iron-based catalysts for high temperature water gas shift reaction, *Korean J. Chem. Engineering*, 32 (2015) 1278-1288.
95. F. Mirzaei, M. Rezaei, F. Meshkani, Z. Fattah, Synthesis, characterization and application of Co-MgO mixed oxides in oxidation of carbon monoxide, *Chemical Engineering Communications*, 203 (2016) 200–209.
96. M. Rahimi, A. Irankhah, **M. Rezaei**, Performance Research on a Methane Compact Reformer Integrated with Catalytic Combustion, *Chemical Engineering and Technology*, 37 (2015) 1220-1226.
97. Bahareh Ghods, **Mehran Rezaei**, Fereshteh Meshkani, Synthesis of nanostructured magnesium silicate with high surface area and mesoporous structure, *Ceramics International* 42(2016) 6883–6890.
98. M.H. Aboonaser, **M. Rezaei**, F. Meshkani, Microemulsion synthesis method for preparation of mesoporous nanocrystalline γ -Al₂O₃ powders as catalyst carrier for nickel catalyst in dry reforming Reaction, *International Journal of Hydrogen Energy*, 41(2016) 6353-6361.
99. F. FARSHIDFAR, M. KAZEMZAD, A. KHANLARKHANI, **M. REZAEI**, IONIC LIQUID ASSISTED ACETYLENE PARTIAL HYDROGENATION OVER SURFACE OF PALLADIUM NANOPARTICLES, *Surf. Rev. Lett.*, Accepted, 2016.
100. Nima Bayat, **Mehran Rezaei**, Fereshteh Meshkani, Thermocatalytic decomposition of methane to CO_x-free hydrogen and carbon over Ni-Fe-Cu/Al₂O₃ catalysts, *International Journal of Hydrogen Energy*, 41(2016) 1-11.
101. Z. Alipour, **M. Rezaei**, F. Meshkani, Effect of K₂O on the catalytic performance of Ni catalysts supported on nanocrystalline Al₂O₃ in CO₂ reforming of methane, *Iranian Journal of Hydrogen & Fuel Cell* 4(2015) 215-226.
102. M. Peymani, S.M. Alavi, **M. Rezaei**, Preparation of highly active and stable nanostructured Ni/CeO₂ catalysts for syngas production by partial oxidation of methane, *International Journal of Hydrogen Energy*, 41(2016) 6316-6325.
103. S. Sepehri, **M. Rezaei**, G. Garbarino, G. Busca, Preparation and characterization of mesoporous nanocrystalline La-, Ce-, Zr-, Sr-containing Ni/Al₂O₃ methane autothermal reforming catalysts, *International Journal of Hydrogen Energy*, 41(2016) 8 8 5 5 -8 8 6 2.
104. A. Zarei, S.M. Fattahi, **M. Rezaei**, F. Meshkani, A comparative study of experimental investigation and response surface optimization of steam reforming of glycerol over nickel nano-catalysts, *International Journal of Hydrogen Energy*, 41(2016) 10178-10192.

105. M.H. Aboonasr, **M. Rezaei**, F. Meshkani, Ni catalysts supported on nano-crystalline aluminum oxide prepared by a microemulsion method for dry reforming reaction, Res Chem Intermed, In Press, 2016.
106. N. Habibi, H.R. Arandiyan, **M. Rezaei**, Mesoporous MgO-Al₂O₃ nanopowder-supported meso-macroporous nickel catalysts: a new path to high-performance biogas reforming for syngas, RSC Adv., 2016, 6, 29576.
107. J. Shabani Shayeh, S. Omid Ranaei Siadat, M. Sadeghnia, K. Niknam, **M. Rezaei**, N. Aghamohammadi, Advanced studies of coupled conductive polymer/metal oxide nano wire composite as an efficient supercapacitor by common and fast fourier electrochemical methods, Journal of Molecular Liquids 220 (2016) 489–494.
108. F. R. Shamskar, F. Meshkani, **M. Rezaei**, Ultrasound assisted co-precipitation synthesis and catalytic performance of mesoporous nanocrystalline NiO-Al₂O₃ powders, Ultrasonics Sonochemistry, Ultrasonics Sonochemistry 34 (2017) 436–447.
109. M. Zarei, **M. Rezaei**, F. Meshkani, Preparation of Mesoporous Nanocrystalline Ni-MgAl₂O₄ Catalysts by Sol-Gel Combustion Method and Its Applications in Dry Reforming Reaction, Advanced Powder Technology, Accepted, 2016.
110. F. Meshkani, **M. Rezaei**, M.H. Aboonasr, Preparation of High Temperature Water Gas Shift Catalyst with Coprecipitation Method in Microemulsion System, Chemical Engineering Research and Design, Accepted, 2016.
111. Shayeh, J.S., Siadat, S.O.R., Sadeghnia, **M. Rezaei**, M., Aghamohammadi, N., Advanced studies of coupled conductive polymer/metal oxide nano wire composite as an efficient supercapacitor by common and fast fourier electrochemical methods, Journal of Molecular Liquids, Journal of Molecular Liquids 220 (2016) 489–494.
112. Zahra Alipour, Fereshteh Meshkani, Mehran Rezaei, Effect of K₂O on the catalytic performance of Ni catalysts supported on nanocrystalline Al₂O₃ in CO₂ reforming of methane, Iranian Journal of Hydrogen & Fuel Cell 4(2015) 215-226.
113. Alireza Zarei, Fereshteh Meshkani, Mehran Rezaei, Steam reforming of glycerol on mesoporous nanocrystalline Ni/Al₂O₃ catalysts for H₂ production, International Journal of Hydrogen Energy, 2016, In Press.
114. M. Peymani, S.M. Alavi, M. Rezaei, Synthesis gas production by catalytic partial oxidation of methane, ethane and propane on mesoporous nanocrystalline Ni/Al₂O₃ catalysts, International Journal of Hydrogen Energy, 2016, In Press.
115. N. Habibi, H.R. Arandiyan, M. Rezaei, Biogas Reforming for Hydrogen Production: A New Path to High-Performance of Ni/MgAl₂O₄ Spinel Catalysts, ChemCatChem, 2016, In Press.
116. M. Peymani, S.M. Alavi, M. Rezaei, Synthesis Gas Production by Catalytic Partial Oxidation of Propane on Mesoporous Nanocrystalline Ni/Al₂O₃ Catalysts, Applied Catalysis A: General, 2016, In Press.

117. Fatemeh Mohandes, Masoud Salavati-Niasari, Mehran Rezaei, Preparation of Mn_2O_3 nanostructures with different shapes by a simple solid-state method, *Journal of Materials Science: Materials in Electronics*, 26 (2015), 7013–7019
118. Nima Bayat, Mehran Rezaei, Fereshteh Meshkani, Methane dissociation to CO_x -free hydrogen and carbon nanofiber over $\text{Ni-Cu/Al}_2\text{O}_3$ catalysts, *Fuel*, 195 (2017) 88-96.
119. Ehsan Akbari, Seyed Mahdi Alavi, Mehran Rezaei, Synthesis gas production over highly active and stable nanostructured $\text{Ni-MgO-Al}_2\text{O}_3$ catalysts in dry reforming of methane: Effects of Ni contents, *Fuel* 194 (2017) 171-179.
120. Javad Shabani Shayeh, Mohammad Sadeghini, Seyed Omid Ranaei Siadat, Ali Ehsani, Mehran Rezaei, Meisam Omidi, A novel route for electrosynthesis of CuCr_2O_4 nanocomposite with p-type conductive polymer as a high performance material for electrochemical supercapacitors, *Journal of Colloid and Interface Science*, 496 (2017) 401–406
121. Sajad Mobini, Fereshteh Meshkani, Mehran Rezaei, Synthesis and characterization of nanocrystalline copper–chromium catalyst and its application in the oxidation of carbon monoxide, *Process Safety and Environmental Protection*, 107 (2017) 181–189.
122. Fereshteh Meshkani, Sayyede Fateme Golesorkh, Mehran Rezaei, Mahmood Andache, Nickel catalyst supported on mesoporous MgAl_2O_4 nanopowders synthesized via a homogenous precipitation method for dry reforming reaction, *Research on Chemical Intermediates*, 43 (2017), Issue 1, 545–559.
123. Bahare Ghods, Fereshteh Meshkani, Mehran Rezaei, Effects of alkaline earth promoters on the catalytic performance of the nickel catalysts supported on high surface area mesoporous magnesium silicate in dry reforming reaction, *International Journal of Hydrogen Energy*, 41 (2016), Issue 48, 22913–22921
124. Sude Sepehri, Mehran Rezaei, Ce promoting effect on the activity and coke formation of Ni catalysts supported on mesoporous nanocrystalline $\gamma\text{-Al}_2\text{O}_3$ in autothermal reforming of methane, *ra*
125. Narges Habibi, Yuan Wang, Hamidreza Arandiyani, Mehran Rezaei, Low-temperature synthesis of mesoporous nanocrystalline magnesium aluminate (MgAl_2O_4) spinel with high surface area using a novel modified sol-gel method, *Advanced Powder Technology*, 28, 2017, 1249-1257.
126. Ali Rastegarpanah, Fereshteh Meshkani, Mehran Rezaei, CO_x -free hydrogen and carbon nanofibers production by thermocatalytic decomposition of methane over mesoporous $\text{MgO}\cdot\text{Al}_2\text{O}_3$ nanopowder-supported nickel catalysts, *Fuel Processing Technology*, 167, 2017, 250-262.
127. Alireza Zarei, Mehran Rezaei, Fereshteh Meshkani, Glycerol steam reforming over noble metal nanocatalysts, *Chemical Engineering Research and Design*, 123, 2017, 360-366.
128. Ali Rastegarpanah, Fereshteh Meshkani, Mehran Rezaei, Thermocatalytic decomposition of methane over mesoporous nanocrystalline promoted $\text{Ni/MgO}\cdot\text{Al}_2\text{O}_3$ catalysts, *International Journal of Hydrogen Energy*, 42 (2017), 16476-16488.
129. Reyhaneh Darooghegi, Fereshteh Meshkani, Mehran Rezaei, Enhanced activity of CO_2 methanation over mesoporous nanocrystalline $\text{Ni-Al}_2\text{O}_3$ catalysts prepared by ultrasound-

assisted co-precipitation method, International Journal of Hydrogen Energy, 42 (2017), 15115-16488.

130. F. R. Shamskar, M. Rezaei, F. Meshkani, The influence of Ni loading on the activity and coke formation of ultrasound-assisted co-precipitated Ni–Al₂O₃ nanocatalyst in dry reforming of methane, International Journal of Hydrogen Energy, 42 (2017), 4155-4164 .

Conference Papers

1. **M. Rezaei**, S.M.Alavi, A. Taeb, S. Sahebdehfar, A Comparison between combined processes for producing of synthesis gas, 9th Chemical Engineering Congress, IUST University, Tehran, Iran, 2004.

2. **M. Rezaei**, S.M. Alavi, S. Sahebdehfar, Preparation of nanocrystallite of zirconium oxide by hydrolysis of ZrOCl₂ solution in the reverse micelle system, First international congress of nanotechnology and its application in Petroleum, Gas and Petrochemical industries, Tehran, Iran, 2007.

3. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, CO₂ reforming of methane to syngas over highly active and stable nickel catalyst supported on mesoporous nanocrystalline zirconia, First international congress of nanotechnology and its application in Petroleum, Gas and Petrochemical industries, Tehran, Iran, 2007.

4. **M.Rezaei**, S.M.Alavi, S.Sahebdehfar, Zi-Feng Yan, Synthesis of nano zirconia powders by sucrose as a chelating agent and template materials and their applications for CH₄/CO₂ reforming, Submitted to the 5th International Chemical Engineering Congress (IChEC 2008).

5. **M.Rezaei**, Traditional applications for industrial clays, 7th World Congress of chemical engineering, Glasgow, 2005.

6. **M. Rezaei**, S.M.Alavi, A. Taeb, S. Sahebdehfar, A Comparison between combined processes for producing synthesis gas, 9th Chemical Engineering Congress, IUST University, Tehran, Iran, 2004.

7. N. Habibi, **M. Rezaei**, Methods for treatment of contaminated water and soil with MTBE, 9th Chemical Engineering Congress, IUST University, Tehran, Iran, 2004.

8. **M. Rezaei**, S.H. Jazayeri , Raw materials selection for chemical stoneware, 9th Chemical Engineering Congress, IUST University, Tehran, Iran, 2004.

9. **M. Rezaei**, N. Habibi, MTBE and Human Health, 8th Chemical Engineering Congress, Mashhad University, Iran, 2003.

10. **M. Rezaei**, A. Taeb, Plasma catalytic treatment of volatile organic compounds, 8th Chemical Engineering Congress, Mashhad University, Iran, 2003.

11. **M. Rezaei**, H. Jazayeri, Production of Alum, 8th Chemical Engineering Congress, Mashhad, Iran, 2003.

12. **M. Rezaei**, A. Taeb, Non-thermal plasma treatment of automotive exhaust gases, 44th Scandinavian Conf. on Simulation and Modeling SIMS2003, Vasteras, Sweden

13. **M. Rezaei**, H. Jazayeri, Studies on the acid activation of Bentonite Clays, 15th International Congress of Chemical and Process Engineering, 25 - 29 August 2002, Praha, Czech Republic
14. **M. Rezaei**, H. Jazayeri, Anti acid tile production, 7th Chemical Engineering Congress, Tehran University, Iran, 2002.
15. **M. Rezaei**, H. Jazayeri, M.M. Rezaei, Activation of Bentonite based on the Isomorphous substitution on clay minerals, 7th Chemical Engineering Congress, Tehran University, Iran, 2002.
16. M.M. Rezaei, **M. Rezaei**, M.T. Beheshti, Modeling and Neural Network of Steam Pressure in Drum Boilers, 7th Chemical Engineering Congress, Tehran University, Iran, 2002.
17. M.M. Rezaei, **M. Rezaei**, Modeling of Drum Boiler, 7th Chemical Engineering Congress, Tehran University, Iran, 2002.
18. **M. Rezaei**, S.M. Alavi, S. Sahebdehghan, Zi-Feng Yan, Synthesis of nano zirconia powders by sucrose as a chelating agent and template material and their applications for CH₄/CO₂ reforming, 5th International Chemical Engineering Congress & exhibition (IChEC 2008), 2008.
19. M. Akia, **M. Rezaei**, S.M. Alavi, Synthesis of mesoporous nanocrystalline γ -Alumina by sol-gel method with using cationic surfactant, 5th International Chemical Engineering Congress & exhibition (IChEC 2008), 2008.
20. M. Akia, **M. Rezaei**, S.M. Alavi, Synthesis of nano crystalline sized gamma-alumina with thermal stability by sol-gel method, 2nd Conference on NanoStructures - NS 2008, 2008.
21. E. Navaei, M.R. Golmohammadi, **M. Rezaei**, H. Navaei, A. Mardanloo, M. Didari, Preparation of Pd/Ag composite membrane by sequential electroless plating technique for H₂ separation in steam reforming process, International catalysis conference (ICC2008), Shahid beheshti university, Tehran, Iran.
22. **M. Rezaei**, H. Navaei Alvar, M.R. Golmohammadi, A. Mardanloo, E. Navaei alvar, H. Feyzollahzadeh, An overview to development of direct reduction of iron catalysts (Midrex catalysts), International catalysis conference (ICC2008), Shahid beheshti university, Tehran, Iran.
23. M. Didari, H. Navaei Alvar, **M. Rezaei**, A. Mardanloo, H. Feyzollahzadeh, E. Navaei Alvar, S. Habibzad, M. R. Golmohammadi, An overview to development of steam reforming catalyst for syngas production by Sarv Oil & Gas Industries Development Co., 1st Iranian petrochemical conference, Tehran, Iran, 2008.
24. E. Navaei Alvar, **M. Rezaei**, Novel synthesis method of Nanocrystalline MgAl₂O₄ spinel via surfactant assisted precipitation route, Materials research bulletin, submitted.
25. E. Navaei Alvar, **M. Rezaei**, H. Navaei, A. Mardanloo, H. Feyzollahzadeh, M.R. Golmohammadi, Investigation on the structural properties of nanocrystalline MgAl₂O₄ spinel powder synthesized by surfactant assisted precipitation method, 12th Iranian Chemical Engineering Congress, 2008, Sahand University of Technology.
26. E. Navaei Alvar, **M. Rezaei**, H. Navaei, A. Mardanloo, H. Feyzollahzadeh, M.R. Golmohammadi, New synthesis method of nanocrystalline MgAl₂O₄ spinel by using ethylene diamine as precipitation agent, 12th Iranian Chemical Engineering Congress, 2008, Sahand University of Technology.

27. **M. Rezaei**, S.M. Alavi, S. Sahebdehfar, Studies on carbon deposition in CO₂ reforming of methane over nickel catalysts, 12th Iranian Chemical Engineering Congress, 2008, Sahand University of Technology.
28. **M. Rezaei**, Making a bleaching clay based on the bentonitic clays, 12th Iranian Chemical Engineering Congress, 2008, Sahand University of Technology.
29. **M. Rezaei**, Production of bleaching earth for decolorizing of edible oils, 6th International Chemical Engineering Congress & exhibition (IChEC 2009), 2009.
30. F. Meshkani, **M. Rezaei**, Synthesis of Nanocrystalline Magnesium Oxide with Plate-Like Shape, 6th International Chemical Engineering Congress & exhibition (IChEC 2009), 2009.
31. **M. Rezaei**, Investigation on the coke formation over Ni-CeO₂/ZrO₂ catalyst in dry reforming reaction by thermal gravimetric analysis (TGA), 6th International Chemical Engineering Congress & exhibition (IChEC 2009), 2009.
32. F. Meshkani, **M. Rezaei**, Nanotechnology: Applications in Heterogeneous Catalysis, 6th International Chemical Engineering Congress & exhibition (IChEC 2009), 2009.
33. F. Meshkani, **M. Rezaei**, Nanotechnology Synthesis of Nanostructured Magnesium Oxide with Polyvinyl alcohol and Sucrose as Surfactant and Chelating Agent, 6th International Chemical Engineering Congress & exhibition (IChEC 2009), 2009.
34. M. Khajenoori, B. Nematollahi, **M. Rezaei**, Combined Dry Reforming and Partial Oxidation of Methane to Synthesis Gas on Noble Metal Catalysts, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.
35. F. Meshkani, **M. Rezaei**, Stable Nickel Catalyst Supported on Nanocrystalline MgO in Methane Reforming with Carbon Dioxide, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.
36. F. Meshkani, **M. Rezaei**, Preparation of NiO-MgO Catalysts for Dry Reforming Reaction, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.
37. M. Khajenoori, **M. Rezaei**, B. Nematollahi, , Preparation of Noble Metal Nanocatalysts and their Applications in Catalytic Partial Oxidation of Methane, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.
38. M. Khajenoori, B. Nematollahi, **M. Rezaei**, Investigation of Thermodynamic analysis in methane Partial Oxidation for syngas production, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.
39. **M. Rezaei**, Synthesis of nanocrystalline zirconia in reverse micelle system, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.
40. M. Khajenoori, B. Nematollahi, **M. Rezaei**, Synthesis of High Surface Area Nanocrystalline MgO With Polymeric Surfactant, 13th Iranian Chemical Engineering Congress, 2010, Razi University, Kermanshah, Iran.

41. M. Khajenoori, B. Nematollahi, **M. Rezaei**, Thermodynamic Analysis of Combined CO₂ and O₂ Reforming of Methane to Produce Syngas, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
42. A. Ranjbar, **M. Rezaei**, F. Meshkani, Low temperature synthesis of nanocrystalline calcium aluminate compounds with surfactant-assisted precipitation method, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
43. Z. Mosayebi, **M. Rezaei**, N. Hadian, Synthesis of mesoporous MgAl₂O₄ spinel nanopowder with high surface area, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
44. Z. Mosayebi, **M. Rezaei**, A. Biabani, N. Hadian Autothermal Reforming of Methane over Nickel Catalysts Supported on Nanocrystalline MgAl₂O₄ with High Surface Area, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
45. A. Biabani, **M. Rezaei**, B. Nematollahi, CO oxidation over iron oxide nanocatalysts prepared via different methods and precursors, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
46. A. Biabani, **M. Rezaei**, B. Nematollahi, F. Meshkani, Effect of calcination on low-temperature CO oxidation over iron-cobalt nanocatalysts, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
47. A. Biabani, **M. Rezaei**, B. Nematollahi, F. Meshkani, Carbon monoxide oxidation over iron – cobalt mixed oxide nanocatalysts, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
48. A. Ranjbar, **M. Rezaei**, F. Meshkani, Dry reforming reaction over nickel catalysts supported on calcium aluminates with different CaO/Al₂O₃ ratios, 7th International Chemical Engineering Congress & Exhibition, Kish, 2011.
49. A. Ranjbar, Nickel Catalysts Supported on Calcium Aluminates in Dry Reforming Reaction, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, 2012.
50. S. Rahmani, M. Rezaei, A Survey on Recent Developments in Catalysis Using Nanostructured Materials, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, 2012.
51. E. Amini, M. Rezaei, M. Sadeghinia, Low Temperature CO Oxidation over CuO-Fe₂O₃ Nanopowder, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, 2012.
52. N. Hadian, M. Rezaei, Z. Mosayebi, F. Meshkani, Combiend Dry Reforming and partial Oxidatin of Methane Over Nickel Catalysts Supported on Nanocrystalline MgAl₂O₄, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, 2012.
53. E. Amini, M. Rezaei, M. Sadeghinia, Low temperature CO Oxidation over Promoted MnO₂ Nanowires, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, 2012.
54. M. Andache, M. Rezaei, Ni catalyst supported on nanocrystalline magnesium oxide for syngas production by steam reforming of CH₄, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, 2012.

55. A. Ranjbar, M. Rezaei, Modified 7wt.% Nickel Catalysts Supported on CaO.2Al₂O₃ for Methane Reforming with Carbon Dioxide, The 14th Iranian National Chemical Engineering Congress (IChEC 2012), Tehran, Iran.

56. Z. Fattah, M. Rezaei, A. Biabani, A. Irankhah, Preparation of Nanostructured Co-MgO Catalysts for Low Temperature CO Oxidation, The 14th Iranian National Chemical Engineering Congress (IChEC 2012), Tehran, Iran.

57. S. Sadeghinia, M. Rezaei, A. Amini, Z. Fattah, Preparation of Solid Solution CuFe₂O₄ Nanocatalyst via Sol-gel Method for Low-Temperature CO Oxidation, The 14th Iranian National Chemical Engineering Congress (IChEC 2012), Tehran, Iran.

Books

Nanocatalysis: Application of nanotechnology in catalysis, 2011.

Direct Reduction of Iron and Catalysts, 2016

Patents

1- **M. Rezaei**, S.M. Alavi, S. Sahebdehfar, Preparation of stable zirconium oxide as catalyst support with precipitation method, Local Patent (40162), 2007.

2- **M. Rezaei**, S.M. Alavi, S. Sahebdehfar, Preparation of promoted nickel catalyst supported on zirconium oxide for production of synthesis gas, Local Patent (41155), 2007.

3- **M. Rezaei**, S.M. Alavi, S. Sahebdehfar, Preparation of Nanocrystalline Zirconia with ethylene diamine as template and precipitation agent. 2007.

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<https://www.journals.elsevier.com/international-journal-of-hydrogen-energy/editorial-board/mehran-rezaei>

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12. Fuel Processing Technology
13. Colloids and Surfaces A: Physicochemical and Engineering Aspects
14. Bioresource Technology
15. Journal of Porous Materials
16. Journal of Natural Gas Chemistry
17. Journal of Alloys and Compounds
18. Materials Research Bulletin
19. Drying Technology: An International Journal
20. Applied Catalysis B: Environmental
21. The Korean Journal of Chemical Engineering
22. Chemical Communications
23. Environmental Technology
24. Nanoscale Research Letters
25. Journal of Biomaterials and Nanobiotechnology (JBNB)
26. Thermochemica Acta
27. Chemical Engineering Communications
28. Journal of Natural Gas Science&Engineering
29. Journal of Petroleum Science and Technology
30. International Journal of Engineering
31. New Journal of Chemistry
32. Nano Bulletin
33. Iranian Journal of Chemical Engineering
34. International Journal of Engineering
35. Catalysis Science and Technology
36. ACS Applied Materials & Interfaces
37. Energy Technology
38. Angewandte Chemie
39. Journal of the Taiwan Institute of Chemical Engineers
40. Applied Surface Science
41. ACS Catalysis
42. CHEMCATCHEM
43. Results in Physics

44. Journal of CO₂ Utilization
45. Materials & Design
46. ChemistrySelect
47. Journal of Materials Research
48. Environmental Science & Technology
49. Ultrasonics Sonochemistry
50. The Canadian Journal of Chemical Engineering
51. Advanced Powder Technology
52. Reviews in Chemical Engineering
53. Journal of Colloid and Interface Science
54. International Journal of Environmental Science and Technology
55. Separation and Purification Technology