

Curriculum Vitae

Hassan S. Ghaziaskar

Professor of Chemistry
Isfahan University of Technology (IUT)
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Objectives

Supercritical Fluid Science and Technology, Biofuels and Biofuel Additives, and Industrial Chemistry

Education

<u>Institution</u>	<u>Degree</u>	<u>Year Conferred</u>
Univ. of Isfahan, Isfahan, I.R. Iran	B.Sc. (Chemistry)	1986
Mazandaran Univ., Babolsar, I.R. Iran	M.Sc. (Chemistry)	1988
Carleton Univ., Ottawa, Canada	Ph.D. (Chemistry)	1993

Professional Experience

Sept. 2016 to present	President of Isfahan University of Applied Science and Technology.
Sept. 2013 to Sept. 2016	Assistant to the Head of IUT Chemistry Department in Research Affairs.
Oct. 2014 to present	Representative of Minister of Science & Technology in Board of Foolad Higher Education Institute.
Sept. 2013 to present	Representative of IUT Chancellor in IUT Council
June 2013 to Sept. 2013	Head of Analytical Chemistry Group
Nov. 2010 to Aug. 2011	Sabbatical Leave at Chemical Engineering Department, Lakehead University, Thunder Bay, and Institute for Chemicals and Fuels from Alternative Resources (ICFAR), Faculty of Engineering, The University of Western Ontario, London, ON, Canada.
Since Aug. 2006	Professor of Chemistry, IUT.
Jan. 1998 to Aug. 2010 & Aug. 2011 to present	Managing Director, Farzin Chemicals Co., a knowledge based Co.
Nov. 2005 to Feb. 2010	Vice Chancellor of Research, IUT.
Feb. 2001 to Aug. 2006	Associate Professor of Chemistry, IUT.
July 1998 to June 2004	Head of Chemistry Department, IUT.
Sept. 1997 to May 1998	Researcher, Tohoku National Industrial Research Institute (TNIRI), Sendai, Japan.
Jan. 1995 to present	Head of Research Group for Know-How of Chemicals
June 1995 to Aug. 1997	Assistant to the Head of Chemistry Department in Research Affairs, IUT.
Sept. 1993 to Jan. 2001	Assistant Professor of Chemistry, IUT.

Honours

Full Ph.D. Scholarship from Ministry of Culture and Higher Education of I.R. Iran.

Research Fellowship from Japan International Cooperation Agency for working at TNIRI.

Personal Data

Male, married with three children, excellent health.

Date of Birth

April 17, 1960

Courses Taught

Analytical Chemistry

Instrumental Methods of Analysis

Lasers and its Applications in Chemistry

Analytical Chemistry for Chemical Engineers

Physical and Chemical Methods of Separations

Sample Preparation and Chromatographic Methods for Environmental Analysis

Technology Transfer Experience

Knowhow of producing toluene sulphonic acid and sodium toluene sulphonate were obtained and a company established to scale up the pilot plant to produce 10 tons per day of each after signing a technology transfer agreement with the IUT. A pilot plant was developed for capturing carbon dioxide to lower its global warming impacts.

Knowhow of producing Hydrogel[®] and Silagel[®] was developed and it was scaled up for dairy cattle industry.

Patents Granted or Pending

1. C. Xu, H.S. Ghaziaskar, **Continuous Catalytic Process to Produce 1-Butanol, 1-Hexanol and Biogasoline from Ethanol**, Invention Disclosure to WORLDdiscoveries, Oct., 2012.
2. H. Kamali and H.S. Ghaziaskar **A Setup for Pressurized Fluid Extraction of Oil**, Iranian Patent, # 38709341/55050, 2009.
3. H.S. Ghaziaskar and G.R. Ghorbani, **Processed Bentonite (Hydrogel[®]) as An Anti-acidosis Drug and Aflatoxin Adsorber for Dairy Cattle Industry**, Iranian Patent, # 38712859/58287, 2009.

Personal Skills

Working with high-pressure vessels and instrumentations; GC, GC-MS, HPLC, IR, NMR, UV-Vis spectrometers; and Nd-YAG, N₂, and He-Ne lasers. Microsoft office.

Technical skills are design of granulation system, working with fluidized bed flash dryer, glass and glass lined reactors, industrial hot-air and steam generators, pneumatic systems, solid-gas separators, and electrical control systems, carbon steel and stainless steel welding and plumbing.

Publications

1. K. Azadkish, M.T. Jafari, H.S. Ghaziaskar, **New Approach Based on Negative Corona Discharge-Ion Mobility Spectrometry for Investigating Oxygen Adsorbents Performance**, Submitted to Anal. Chim. Acta, 2016.
2. H.S. Ghaziaskar, S. Afsari, M. Rezayat and H. Rastegari, **“Quaternary solubility of acetic acid, diacetin and triacetin in supercritical carbon dioxide”**, The Journal of Supercritical Fluids, in press, 2016.
3. Y. Gorji and H. S. Ghaziaskar **“Optimization of Solketalacetin Synthesis as a Green Fuel Additive from Ketalization of Monoacetin with Acetone”** Industrial and Engineering Chemistry Research Journal, 55, 6904–6910, 2016.
4. M. Tangestanifard and H.S. Ghaziaskar **“Methylation of Toluene with Methanol in Sub/Supercritical Toluene with H-beta Zeolite as a Catalyst”**, The Journal of Supercritical Fluids, 113, 80-88, 2016.

5. M.R. Nanda, Y. Zhang, Z. Yuan, W. Qin, H.S. Ghaziaskar, C. Xu “**Catalytic conversion of glycerol for sustainable production of solketal as a fuel additive: A review**” *Renewable & Sustainable Energy Reviews*, 56, 1022-1031, 2016.
6. H.S. Ghaziaskar, J.S. Razavizade and K. Zare, “**Hydrolysis and oxidation of sodium toluene sulfonate in sub-/supercritical water in the presence of CO₂ or H₂O₂**” *The Journal of Supercritical Fluids*, 107, 61-68. 2016.
7. H. Kamali, E. Khodaverdi, F. Hadizadeh, S.H. Ghaziaskar, “**Optimization of phenolic and flavonoid content and antioxidants capacity of pressurized liquid extraction from *Dracocephalum Kotschy* via circumscribed central composite**” *The Journal of Supercritical Fluids*, 107, 307-314, 2016.
8. H. Rastegari and H.S. Ghaziaskar, “**From glycerol as the by-product of biodiesel production to value-added monoacetin by continuous and selective esterification in acetic acid**”, *Journal of industrial and engineering chemistry*, 21, 856-861, 2015.
9. H. Rastegari, H.S. Ghaziaskar, and M. Yalpani “**Valorization of biodiesel derived glycerol to acetins by continuous esterification in acetic acid: focusing on high selectivity to diacetin and triacetin with no by-products**”, *Industrial and Engineering Chemistry Research* 54 (13), 3279–3284, 2015.
10. M.R. Nanda, Z. Yuan, W. Qin, H.S. Ghaziaskar, M.A. Poirier, and C. Xu “**Catalytic conversion of glycerol to oxygenated fuel additive in a continuous flow reactor: Process optimization**”, *Fuel*, 128, 113-119, 2014.
11. M.R. Nanda, Z. Yuan, W. Qin, H.S. Ghaziaskar, M.A. Poirie, and C. Xu “**A new continuous-flow process for catalytic conversion of glycerol to oxygenated fuel additive: Catalyst screening**” *Applied Energy*, 123, 75, 2014.
12. M. Shirani, H.S. Ghaziaskar, and C. Xu, **Optimization of Glycerol Ketalization to Produce Solketal as Biodiesel Additive in a Continuous Reactor with Sub/supercritical Acetone Using Purolite® PD206 as Catalyst**, *Fuel Processing Technology Journal*, 124, 206-211 2014.
13. S.Y. Rahni, N. Mirghaffari, B. Rezaei, H.S. Ghaziaskar, “**Removal of Phosphate from Aqueous Solutions Using a Modified Bentonite-Derived Hydrogel**”, *Water, Air, & Soil Pollution*, 225, 1916, 2014.
14. M.R. Nanda, Z. Yuan, W. Qin, H.S. Ghaziaskar, M.A. Poirier, and C. Xu “**Thermodynamic and kinetic studies of a catalytic process to convert glycerol into solketal as an oxygenated fuel additive**” *Fuel*, 117, Part A, 470-477, 2014.
15. A. Rahmanian and H.S. Ghaziaskar “**Continuous Dehydration of Ethanol to Diethyl Ether over Aluminium-Phosphate-Hydroxyapatite Catalyst under Supercritical Condition**“, *The Journal of Supercritical Fluids*, 2013, 78, 34-41.
16. H.S. Ghaziaskar and C. Xu, “**One-step Continuous Process for the Production of 1-Butanol and 1-Hexanol by Catalytic Conversion of Bioethanol at Its Sub-/Supercritical State**“ *RSC Advances*, 2013, 3, 4271-4280.
17. H. Kamali, H.S. Ghaziaskar, A. Khakshour, and M. Kaboudvand “**ScCO₂ extraction of phthalic anhydride, benzoic acid and maleic acid from petrochemical wastes**” *The Journal of Supercritical Fluids*, 2013, 74, 46-51.
18. A. Rahmanian, H.S. Ghaziaskar, and T. Khayamian “**Direct Coupling of Packed Column Supercritical Fluid Chromatography to Continuous Corona Discharge Ion Mobility Spectrometry**“, *Journal of Chromatography A*, 2013, 1272, 126-131.

19. S.M. Ghoreishi, K. Ansari, H.S. Ghaziaskar **“Supercritical extraction of toxic heavy metals from aqueous waste via Cyanex 301 as chelating agent”** Journal of Supercritical Fluids 2012, 72, 288-297.
20. S.M. Ghoreishi, H. Kamali, H.S. Ghaziaskar, **“Optimization of Supercritical Extraction of Linalyl Acetate from Lavender via Box-Behnkon Design”** Chemical Engineering & Technology, 2012, 35, 1641–1648.
21. M. Arshadi, M. Ghiaci, A. Rahmadian, H.S. Ghaziaskar, A. Gil, **“Oxidation of Ethylbenzene to Acetophenone by a Mn Catalyst Supported on a Modified Nanosized SiO₂/Al₂O₃ Mixed-oxide in ScCO₂”** Applied Catalysis B: Environmental, 2012, 119-120, 81–90.
22. M. Daneshvar, H. Kamali, M. Masoomi, and H.S. Ghaziaskar, **“ScCO₂ grafting of glycidyl methacrylate onto medium density polyethylene and purification of residual monomer and initiator”** The Journal of Supercritical Fluids, 70 (2012) 119–125.
23. S. Mirmahdieh, A. Mardihallaj, Z. Hashemian, J. Razavizadeh, H.S. Ghaziaskar, T. Khayamian, **“Analysis of testosterone in human urine using molecularly imprinted solid-phase extraction and corona discharge ion mobility spectrometry”** Journal of Separation Science, 2011, 34, 107-112.
24. S.M. Ghoreishi, E., Mardani, H.S. Ghaziaskar, **”Separation of γ -Linolenic and other Polyunsaturated Fatty Acids from Boraginaceae via ScCO₂”** Journal of Separation Science, 2011, 34, 233-240.
25. A. Sheibani, M. Tabrizchi, and H. Ghaziaskar, **“Determination of Methadone in Human Hair by Headspace Extraction and Ion Mobility Spectrometry”**, Analytical Letters, 2011, 44, 667-675.
26. M. Rezayat and H.S. Ghaziaskar, **Continuous Extraction of Glycerol Acetates from their Mixture Using ScCO₂**, The Journal of Supercritical Fluids, 2011, 55, 937-943.
27. G. Paniri, H.S. Ghaziaskar, and M. Rezayat, **“Ternary Solubility of Mono- and Di-tert-Butyl Ethers of Glycerol in ScCO₂”** The Journal of Supercritical Fluids, 2010, 55, 43-48.
28. M. Esteki, M. Rezayat, H.S. Ghaziaskar, and T. Khayamian, **“Application of QSPR for Prediction of Conversion Percent of Esterification Reactions in scCO₂ Using Least Squared Support Vector Machine Regression**, The Journal of Supercritical Fluids, 2010, 54, 222-230.
29. H. Kamali, and H.S. Ghaziaskar, **“Pressurized Hot Water Extraction of Benzoic Acid and Phthalic Anhydride from Petrochemical Wastes Using a Modified Supercritical Fluid Extractor and Factorial Design for Optimization”** The Journal of Supercritical Fluids, 2010, 54, 16-21.
30. H. Sahihi, H.S. Ghaziaskar, and M. Hajebrahimi, **“Solubility of Maleic Acid in ScCO₂”**, Journal of Chemical and Engineering Data, 2010, 55, 2596-2599.
31. A.H., Khoshgoftarmanesh, S. Taheri, H. Shariatmadari, H.S. Ghaziaskar, and R.L. Chaney, **“Using Acid-washing Leachates of Ground Tire Rubber and Its Ash as Zinc Source for Hydroponics-grown Tomato**, Journal of Residuals Science & Technology, 2010, 7(1), 69-72.
32. H. Shekarchizadeh, M. Kadivar, H.S. Ghaziaskar, and M. Rezayat, **“Optimization of Enzymatic Synthesis of Cocoa Butter Analog from Camel Hump Fat in scCO₂ by Response Surface Method”**, The Journal of Supercritical Fluids, 2009, 49, 209-215.
33. S.M. Ghoreishi, R.G. Shahrestani, and H.S. Ghaziaskar **“Experimental and Modeling Investigation of SFE of Mannitol from Olive Leaves”** Chemical Engineering & Technology, 2009, 32, 45-54.

34. M. Rezaayat and H.S. Ghaziaskar "**Continuous Synthesis of Triacetin in ScCO₂**", Green Chemistry, 2009, **11**, 710–715.
35. H.S. Ghaziaskar and A. Sheibani, "**Pressurized Fluid Extraction for Quantitative Recovery of Aflatoxins B1 and B2 from Pistachio**" Food Control, 2009, 20, 124-128.
36. A. Sheibani, M. Tabrizchi, and H.S. Ghaziaskar "**Determination of Aflatoxins B1 and B2 Using Ion Mobility Spectrometry**", Talanta, 2008, 75 (1), 233-238.
37. H.S. Ghaziaskar and A. Sheibani "**Pressurized Fluid Extraction of Pistachio Oil Using a Modified Supercritical Fluid Extractor and Factorial Design for Optimization**", LWT – Food Science and Technology, 2008, 41(8), 1472-1477.
38. M. Kaboudvand and H.S. Ghaziaskar "**Solubility of Tridodecylamine in ScCO₂**", Journal of Chemical and Engineering Data, 2008, 53(8), 1841-1845.
39. M. Kaboudvand and H.S. Ghaziaskar "**Solubility of Trioctylamine in ScCO₂**", Journal of Supercritical Fluids, 2008, 44 (2), 148-154.
40. A. Rahmanian and H.S. Ghaziaskar "**Selective Extraction of Maleic Acid and Phthalic Acid by scCO₂ Saturated with Trioctylamine**", Journal of Supercritical Fluids, 2008, 46, 118-122.
41. A. Daneshfar, H.S. Ghaziaskar, and N. Homayoun, "**Solubility of Gallic Acid in Methanol, Ethanol, Water, and Ethyl Acetate**", Journal of Chemical and Engineering Data, 2008, 53, 776-778.
42. A. Daneshfar, H.S. Ghaziaskar, L. Shiri, M.H. Manafi, M. Nikorazm, and S. Abassi, "**Synthesis of 2-Ethylhexyl-2-ethyl Hexanoate Catalyzed by Immobilized Lipase in n-Hexane: A Kinetic Study**" Biochemical Engineering Journal, 2007, 37(3), 279-284.
43. H.S. Ghaziaskar, L. Calvo, and A. Daneshfar, "**Continuous Esterification or Dehydration in ScCO₂**" Green Chemistry, 2006, 8, 576-581.
44. H.S. Ghaziaskar, A. Daneshfar, and M. Rezaayat "**The Co-solubility of 2-Ethylhexanoic Acid and Some Liquid Alcohols in ScCO₂**" Fluid Phase Equilibria, 2005, 238, 106-111.
45. M.D. Romero, L. Calvo, C. Alba, A. Daneshfar, and H.S. Ghaziaskar, "**Enzymatic Synthesis of Isoamyl Acetate with Immobilized *Candida Antarctica* Lipase in n-Hexane**", Enzyme and Microbial Technology, 2005, 37, 42-48.
46. H.S. Ghaziaskar, H. Eskandari, and A. Daneshfar, "**Solubility of 2-Ethyl-1-Hexanol, 2-Ethyl Hexanoic Acid, and their Mixtures in ScCO₂**", Journal of Chemical and Engineering Data, 2003, 48, 236-240.
47. H.S. Ghaziaskar and M. Nikravesh, "**Solubility of Butyl Acetate and Hexanoic Acid in ScCO₂**" Fluid Phase Equilibria, 2003, 206, 215-221.
48. H.S. Ghaziaskar and A. Daneshfar, "**Solubility of 2-Ethyl-1-Hexyl-2-Ethyl Hexanoate in Binary and Quaternary Systems in ScCO₂**" Journal of supercritical Fluids, 2003, 25, 1-6.
49. H. Eskandari, H.S. Ghaziaskar, and A.A. Ensafi, "**Solid-Liquid Separation after Liquid-Liquid Extraction for Determination of Palladium Using alpha-Benzilmonoxime**", Analytical Letters, 2001, 34(14), 2535-2546.
50. H. Eskandari, H.S. Ghaziaskar, and A.A. Ensafi, "**A Sensitive and Simple Extractive-Spectrophotometric Method for the Determination of Microgram Amount of Cobalt by Using alpha-Benzilmonoxime**", Analytical Sciences, 2001, 17(2), 327-331.
51. H.S. Ghaziaskar and Y. Ikushima, "**Continuous Synthesis of Oleyl Oleate in ScCO₂ Using Solid PTSA as Catalyst**", Iran. J. Chem. & Chem. Eng., 2000, 19(2), 79-83.

52. H.S. Ghaziaskar and F. Daneshvar, "Extraction of Safflower Seed Oil by scCO₂", J. Japan Oil Chemists' Society, 1998, 47(11), 1265-1271.
53. E.P.C. Lai and H.S. Ghaziaskar "Noninvasive Spectroscopic Detection of Bulk Polymerization by Stimulated Raman Spectroscopy", Applied Spectroscopy, 1994, 48, 1011-1014.
54. H.S. Ghaziaskar, W.M. Mullet and E.P.C. Lai, "Stimulated Raman Scattering Activity of Organic Compounds", Vibrational Spectroscopy, 1993, 5, 337-344.
55. H.S. Ghaziaskar, and E.P.C. Lai, "Internally Amplified Stimulated Raman Scattering", Spectrochimica Acta, 1993, 49A(7), 1003-1008.
56. L. Kutsera, H.S. Ghaziaskar and E.P.C. Lai, "Flow Injection Analysis for Beryllium Determination with Chrome Azurol S as Chromogenic Agent", Analytical Letters, 1992, 25(12), 2289-2304.
57. H.S. Ghaziaskar and E.P.C. Lai, "Temperature Effect on Stimulated Raman Scattering in Organic Liquids", Canadian Journal of Applied Spectroscopy, 1992, 37(4), 111-115.
58. H.S. Ghaziaskar and E.P.C. Lai, "Stimulated Raman Scattering in Analytical Spectroscopy", Applied Spectroscopy Reviews, 1992, 27(3), 245-288.
59. M.R. Hadgmohammadi and H.S. Ghaziaskar, "Quantitative and Qualitative Determination of Heavy and Toxic Elements in the Fishes Grown in Treated Wastewater and Their comparison with other Fishes", Iranian Journal of Chemistry and Chemical Engineering, 1989, 12, 20-31.

طرح هایی که تا کنون بعنوان مجری و یا همکار انجام شده است:

- (۱) تولید ZnDT و NaDT در مقیاس آزمایشگاهی
- (۲) تولید آزمایشگاهی EGMA و EGDA از ضایعات اتیلن گلیکول
- (۳) تولید آزمایشگاهی SA به عنوان یک افزودنی سبز به سوخت
- (۴) تولید نیمه صنعتی گلوکوزامین از ضایعات میگو
- (۵) تولید خاک گربه در مقیاس صنعتی با هدف جلوگیری از واردات آن از کشورهای کانادا و استرالیا
- (۶) تولید دانه های رنگی مورد استفاده در صنایع شوینده در مقیاس نیمه صنعتی و صنعتی
- (۷) تولید هیدروژل به عنوان داروی ضد اسیدوز گاوها در مقیاس نیمه صنعتی و صنعتی
- (۸) استحصال ترکیبات با ارزش افزوده از شورابه های پلایای خور و بیابانک
- (۹) نرم سازی آب ریجکت آراو در مقیاس نیمه صنعتی بمنظور بازیابی آب و املاح
- (۱۰) تولید PTSA در مقیاس نیمه صنعتی و سپس صنعتی
- (۱۱) تولید STS در مقیاس نیمه صنعتی و سپس صنعتی
- (۱۲) فرآوری بنتونیت با هدف استفاده از آن به عنوان پرکننده و نرم کننده در صنایع شوینده در مقیاس صنعتی
- (۱۳) نرم سازی آب به منظور جلوگیری از گرفتگی کندانسور های صنعتی با استفاده از سختی گیر مغناطیسی

Publications in preparation

1. A. Rahmanian, H.S. Ghaziaskar, and C. Xu, **Continuous Conversion of Ethanol at its Sub-/Supercritical State into 1-Butanol over NiO and Ni Solid-State Catalysts**, submitted to Journal of Applied Catalysis A, 2013.
2. A. Rahmanian, H.S. Ghaziaskar, and C. Xu, **“Catalytic Valorization of Bio-ethanol over CuO/ γ -Al₂O₃ Catalyst under Sub-/Supercritical Condition“**, under preparation for Journal of Applied Catalysis A, 2013.
3. A. Javaheri and H.S. Ghaziaskar, **“Production of Trimethylamine from Ammonia and Ethanol at Sub/Supercritical State Using Solid Catalyst**, The Journal of Supercritical Fluids.
4. G. Paniri and H.S. Ghaziaskar, **“Selective Counter Current Extraction of Mono- and Di-tert-Butyl Ethers of Glycerol by ScCO₂”** The Journal of Supercritical Fluids.

Supervised Ph.D. Thesis

1. **Synthesis of Heavy Compounds from Methanol in Sub and Supercritical Methanol Using Solid Acid Catalysts**, M. Tangestanifard, in progress.
2. **Continuous and Selective Synthesis of Solketal from Monoacetin Using Amberlyst® 15, and some Solid Acid Acatalysts**, Y. Gorji, in progress.
3. **Continuous Reactive Extraction of Fuel Additives and Biodiesel from Animal Fat Using Sub and Supercritical Ethanol**, H. Rastegari, 2016.
4. **Synthesis of n-Butanol from Bioethanol in Sub and Supercritical Ethanol Using Nanocatalysts**, A. Rahmanian, 2013, co-supervised with Prof. T. Khayamian.
5. **Continuous and Selective Synthesis of Triacetin in ScCO₂ Using Amberlyst® 15**, M. Rezayat, 2010.
6. **Pressurized Fluid Extraction of Pistachio Oil and Aflatoxins and Determination of Aflatoxins and Methadone by Ion Mobility Spectrometry**, A. Sheibani, co supervised with Prof. Tabrizchi, July 2008.
7. **Measurement of Solubility of Trioctylamine and Tridodecylamine in ScCO₂ and Feasibility Study of Extraction of Carboxylic Acids from Petrochemical Waste with ScCO₂**, M. Kaboudvand, July 2008.
8. **Continuous Esterification, Etherification, and Dehydration Reactions in ScCO₂”,** A. Daneshfar, November 2004.
9. **Measurement of Nitrite, Periodate, and Iodate by Flow Injection Method and Preparation of Pure PTSA in Pilot Scale**, G. Bagherian, 2001, co-supervised with Prof. A.A. Ensafi.
10. **Extraction and Measurement of Metallic and Non-metallic Species and Binary Solubility of 2-Ethyl Hexanol, 2-Ethyl Hexanoic Acid, and Their Mixtures in ScCO₂**, H. Eskandari, March 2001, co-supervised with Prof. A.A. Ensafi.

Supervised M.Sc. Students

1. **Continuous Reactive Extraction of Acetins as Fuel Additives Using Sub and Supercritical Ethyl Acetate via Transesterification**, A. Shafie, 2015.
2. **Optimization of Continuous Synthesis of some Heavy Esters**, N. S. Fasih, 2015.
3. **Alumina/Ni-Co Oxides, as a Catalyst for Ethanol and the Mixture of Ethanol and Ammonia Conversion to Valuable Products**, Amin Javaheri Koupaei, Feb. 2014.

4. **Synthesis of Alumina, Silica, and Bentonite Aerogels using Supercritical Technology and Feasibility Study of Using them in Bioethanol Conversion Reaction**, Mostafa Safarzadeh, Feb. 2014.
5. **Loading of Zinc(II) Acetate and Essential Oil Drug in Polyethylene Glycol Using Supercritical CO₂**, F. Hashemi, co supervised with Dr. Hadadzade, Jan. 2013
6. **Synthesis of 2-Ethylhexyl 2-ethylhexanoate as a Sample of Heavy Ester in Continuous and Batch Reactors**, H. S. Sajjadizade, Jan. 2013.
7. **Use of Silagel[®] and Bentonite as an Adsorbent for Reduction of Drain Effluents of Crop Silage**, M. Mazaheri, August, 2010, co supervised with Dr. M. Khorvash.
8. **Use of Hydrogel[®] and Bentonite as an Adsorbent for Heavy and Toxic Metal Ions and Electroplating Waste Water Treatment**, S. Azizi, August, 2010.
9. **Use of Hydrogel[®] and Bentonite as an Adsorbent for Phosphate and Nitrate Anions and Waste Water Treatment**, S. Yaghobi, August, 2010, co supervised with Dr. Mirghaffari.
10. **Tosylation-Etherification of Ethanol Using Sub and Supercritical Ethanol**, H. Rastegari, Oct., 2010.
11. **Hydrolysis in the Presence of CO₂ as a Catalyst and Oxidation of STS in Sub and Supercritical Water and Optimization of Conditions Using Partial Factorial Design**, J.S. Razavizadeh, April 7, 2010.
12. **Ternary Solubility Measurement and Selective Extraction of Mono- and Di-tert-Butyl Ethers of Glycerol by ScCO₂**, G. Paniri, March, 2010.
13. **Extraction of Essential Oil from Iranian Lavender by ScCO₂ Using Semicontinuous and Periodic Static-Dynamic Method**, H. Kamali, cosupervised with Dr. S.M Ghoreishi, March, 2009.
14. **Pressurized Fluid Extraction of Rice Bran Oil Using a Modified Supercritical Fluid Extractor and Central Composite Design for Optimization**”, A. Kouchaki, 2008.
15. **Selective Extraction of Maleic and Phthalic Acid by ScCO₂ Saturated with Trioctylamine**, A Rahmanian, January, 2008.
16. **Extraction of Mannitol from Olive Tree Leaf by Using ScCO₂ and Subcritical Water**, R. Gholami Shahrestani, co supervised with Dr. S.M Ghoreishi, October 2007.
17. **Experimental Measurement of Fumaric Acid Solubility in ScCO₂ and Theoretical Model Evaluation for Solubility Prediction**, M. Sahihi, April 2007.
18. **Solubility of Maleic Acid and Phthalic Acid in ScCO₂ at Pressure Range of 8.0-30.0 MPa and Temperature Range of 318.15, 333.15, and 348.15 K**, Majid Haj Ebrahimi, 2005.
19. **Ternary Solubility Measurement of Butanol Structural Isomers in ScCO₂ Systems**, M. Amirabadi, March, 2004.
20. **Solubility Investigation of some Alcohols and Acids in Binary and Ternary ScCO₂ Systems**”, M. Rezayat, April, 2003.
21. **Solubility of Hexanoic Acid and Butyl Acetate in ScCO₂**”, Mohammed Nikravesh, March, 2002.
22. **Extraction of Vincristine and Vinblastine from Vinca Rosea by Solvent and scCO₂ and their Identification by Spectroscopic Methods**” Neda Gassami, co-supervised with M. Yalpani, April, 2001.

23. **Recovery of Aqueous and Organic Waste of Phthalic Anhydride and Dioctyl Phthalate Plant of Farabi Petrochemical Complex**” Taghi Nateghi, co-supervised with M. Yalpani, 2000.
24. **Extraction of Caffeine from Tea Leaves by ScCO₂**”, Farahbakhsh e Moradi Chameh, co-supervised with M. Ghoreishi, October, 2000.
25. **Measurement of Oleic Acid, Co(acacen)(BA)₂.ClO₄, and Co(acacen)(tldn)₂.ClO₄ Solubility in ScCO₂**”, E. Janghorban, co supervised with Mohsen Mohsennia, July, 1998.
26. **“Spectrophotometric Determination of Periodate and Study of Acidic Wastes of PTSA Plant and its Heat of Neutralization”**, Saiid Zakeri, co supervised with A.A. Ensafi, March, 1998.
27. **“Construction of Quartz Crystal Microbalance and its Application in the Determination of Sulphur Dioxide”**, Alireza Shahnoshi, co supervised with Dr. M. Tabrizchi, November, 1998.
28. **“Extraction by ScCO₂, Purification, and Identification of Main Constituents of Pistachio Nut Green Shell”**, Ishagh Shahrak Nadimi, January, 1997.
29. **“Supercritical Fluid Extraction, Purification, and Identification of Main Constituents of Asafoetida”**, Aliasghar Ghorbani, supervised by H.S. Ghaziaskar, and M. Ghiaci, January, 1997.
30. **“Extraction of Safflower Seed Oil by ScCO₂”**, F. Daneshvar, May, 1996.

Presentations at Scientific Meetings

1. Y. Gorji and H. S. Ghaziaskar **“Synthesis of Solketalacetin as a Green Fuel Additive from Ketalization of Monoacetin with Acetone”** 1st Iranian Applied Chemistry Seminar, Tabriz University, Iran, 22-23 Aug., 2016.
2. H. S. Ghaziaskar, N. S. Fasih, H. S. Sajjadizadeh, **“Optimization of Parameters in Esterification Process to Produce 2-Ethylhexyl-2-Ethylhexanoate as an Heavy Ester, Catalyzed with PTSA, in a Continuous System”**, The 1st National Conference of New Technologies in Chemical and Petrochemical Industry, March 2014, Tehran, Iran.
3. H. Rastegari and H.S. Ghaziaskar, **“Continuous and Selective Esterification of Glycerol to Monoacetin in Subcritical Acetic Acid”**, The 8th International Chemical Engineering Congress and Exhibition (IChEC 2014) Feb 24-27, Kish, Iran.
4. M. Shirani, H.S. Ghaziaskar, and C. Xu, **“Acetalization of Glycerol to Produce Solketal as Biodiesel Additive in Sub/Supercritical Acetone Using Purolite® PD206 as Catalyst”** National Conference on New Technologies in Chemical Industries, May 2012, Tehran, Iran.
5. A. Rahmanian and H.S. Ghaziaskar **“Conversion of Bio-ethanol to 1-Butanol by Continuous Flow of Sub and Supercritical Ethanol over the CuO/Alumina Catalyst: A Step Toward Sustainable Transportation Fuels”** 15th Iranian Chemistry Congress, 4-6 Sept. 2011, Bu-Ali Sina University, Hamedan, Iran.
6. A. Rahmanian and H.S. Ghaziaskar **“Catalytic Conversion of Ethanol over the NiO/Alumina Solid Catalyst under Sub and Supercritical Ethanol Condition”** 15th Iranian Chemistry Congress, 4-6 Sept. 2011, Bu-Ali Sina University, Hamedan, Iran.
7. E. Rafiepoor, H. S. Ghaziaskar, and M. Yalpani **“Continuous Synthesis of Triacetin also Useful as a Biodiesel Fuel Additive from Renewable Resources at Pilot Scale”** 15th Iranian Chemistry Congress, 4-6 Sept. 2011, Bu-Ali Sina University, Hamedan, Iran.
8. S. Yaghobi Rahni, N. Mirghaffari, A.H., Khoshgoftarmanesh, H.S. Ghaziaskar, B. Rezaee, and H. Shariatmadari, **“Elimination of Phosphate from Aqueous Solutions Using Modified**

- Bentonite**” The 4th Conference and Exhibition on Environmental Engineering, Tehran University, Tehran, I.R. Iran, Oct. 30-Nov. 2, 2010.
9. M. T. Mazaheri e Tehrani, M. Khorvash, and H.S. Ghaziaskar, **“Use of Processed Bentonite as an Adsorbent for Reduction of Drain Effluents and Preserving Diet Value of Corn Silage”**, The 4th Conference and Exhibition on Environmental Engineering, Tehran University, Tehran, I.R. Iran, Oct. 30-Nov. 2, 2010.
 10. S. Azizi and H.S. Ghaziaskar, **“Use of Processed Bentonite as a Low Cost Adsorbent for Treating Waste Water of Electroplating Industry Containing Some Heavy Metal Ions”**, The 4th Conference and Exhibition on Environmental Engineering, Tehran University, Tehran, I.R. Iran, Oct. 30-Nov. 2, 2010.
 11. A. Moradmand, J.S. Razavizadeh, H.S. Ghaziaskar, and T. Khayamian, **“Evaluation of UV-Vis and ESI-IMS as Detectors in Analysis of a Variety of Pesticides”**, Proceeding of the 17th Iranian Seminar of Analytical Chemistry, Kashan University, Kashan, I.R. Iran, Sept. 12-14, 2010.
 12. J. Razavizadeh, H.S. Ghaziaskar, **“Petrochemical Waste Treatment by Sub and Supercritical Water Oxidation System”** The 4th National on Environmental Engineering, Seminar on Chemistry and Environment, Persian Gulf and Oman Sea Ecological Research Institute, Bandar Abbas, I.R. Iran, 27th-29th, 2010.
 13. H. Kamali. S.M. Ghoreishi, and H.S. Ghaziaskar, **“Extraction of Essential Oil from Lavender by ScCO₂”**, Proceeding of the 6th International Chemical Engineering Congress & Exhibition, Kish, I.R. Iran, 2009.
 14. H. Kamali, H.S. Ghaziaskar, and S.M. Ghoreishi, **“Pressurized Hot Water Extraction of Benzoic Acid and Phthalic Anhydride from Petrochemical Waste Using a Modified Supercritical Fluid Extractor and Factorial Design for Optimization”** Proceedings of the 9th International Symposium on Supercritical Fluids, Arcachon, France, 2009.
 15. H.S. Ghaziaskar and M. Rezayat, **“Optimization of Conditions for Extraction of Glycerol Acetate by ScCO₂”**, Proceedings of the 9th International Symposium on Supercritical Fluids, Arcachon, France, 2009.
 16. M. Daneshvar, H. Kamali, M. Masoumi, and H.S. Ghaziaskar **“Grafting of Glycidyl Methacrylate onto MDPE in ScCO₂ and New Method in Purification using ScCO₂”**, Proceedings of the 9th International Symposium on Supercritical Fluids, Arcachon, France, 2009.
 17. H. Kamali. S.M. Ghoreishi, and H.S. Ghaziaskar, **“Extraction of Essential Oil from Lavender by ScCO₂ and Periodic Static-Dynamic Method”** Proceedings of the 9th International Symposium on Supercritical Fluids, Arcachon, France, 2009.
 18. S. Taheri, H. Shariatmadari, A.H., Khoshgoftarmanesh, H.S. Ghaziaskar, R.L. Chaney, and M. Hejazi Mehrizi, **“Zinc release kinetics in a calcareous soil treated with waste tire ash and powder as alternatives to Zn fertilizers”** Proceedings of the 2nd International Conference on Environmental Management, Engineering, Planning, and Economics, CEMEPE & SeCOTOX Conference, Mykonos, Greece, 2009.
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22. H.S. Ghaziaskar and M. Kaboudvand, "**Solubility of Tridodecylamine in ScCO₂**" Proceedings of the 11th European Meeting on Supercritical Fluids, 2008.
23. M. Rezayat and H.S. Ghaziaskar, "**Continuous and Selective Synthesis of Glycerol Acetates in ScCO₂**" Proceedings of the 11th European Meeting on Supercritical Fluids, 2008.
24. H.S. Ghaziaskar and A. Rahmanian, "**Extraction of Maleic Acid and Phthalic Acid by Ion-pair Formation Using Trioctylamine in ScCO₂**" Proceedings of the 11th European Meeting on Supercritical Fluids, 2008.
25. H.S. Ghaziaskar and A. Sheibani, "**Pressurized Fluid Extraction of Pistachio Oil using a Modified Supercritical Fluid Extractor and Factorial Design for Optimization**", Proceedings of the 1st Iranian Seminar on Processing and Packaging of Pistachio, 2007, p 81.
26. H.S. Ghaziaskar, M. Kadivar, and A. Kouchaki, "**Application of Central composite Design to Optimization of the Accelerated Solvent Extraction of Rice Bran Oil**", Proceedings of the 1st Iranian Seminar of Chemometrics, Zanjan, I.R. Iran, 2006.
27. M. Rezayat, H.S. Ghaziaskar, and T. Khayamian, "**Quantitative Structure Property Relationship for Prediction of Conversion Percentage of Esterification in ScCO₂**", Proceedings of the 1st Iranian Seminar of Chemometrics, Zanjan, I.R. Iran, 2006, P. 74.
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40. H.S. Ghaziaskar, M. Ghiaci, and A.A. Ghorbani, "**Extraction of Asafoetida Main Components by scCO₂ and their Identification by Spectrometric Methods**" The 2nd International Congress of Chemistry and Chemical Engineering of Iran, Aug. 31-Sep. 2, 1997. This work was also presented as poster in 23rd International Symposium on Capillary Chromatography, June 5-10, 2000, Riva del Garda, Italy.
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42. H.S. Ghaziaskar, M. Yalpani, and I. Shahrak Nadimi, "**Extraction of Pistachio Green Shell Main Components by ScCO₂ and their Identification by Spectrometric Methods**" The 2nd International Congress of Chemistry and Chemical Engineering of Iran, Aug. 31-Sep. 2, 1997.
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