



Moslem Jahani

Personal Information

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Education

- Ph.D: Analytical Chemistry, University of Birjand, Iran. (2008-2013)
- M.Sc: Analytical Chemistry, University of Birjand, Iran. (2004-2007)
- B.Sc: Applied Chemistry, Islamic Azad University, Yazd Branch, Iran. (1999-2003)

Employment

- Assistant Professor, Department of Food Chemistry, Research Institute of Food Science and Technology (RIFST), Mashhad, Iran, 2014- present
- Technical Director of the Central Laboratory, Research Institute of Food Science and Technology, Mashhad, Iran, 2017- present
- Head of Food Chemistry Department, Research Institute of Food Science and Technology (RIFST), Mashhad, Iran, 2020- present

Research Interests

- Molecularly Imprinted Polymers (MIPs)
- Ion Imprinted Polymers (IIPs)
- Solid-Phase Extraction (SPE), new adsorbents and method development
- Biomass and Bio-adsorbents
- Magnetic Nano-particles
- Chemical Sensors
- Modified Quantum Dots
- Carbon and Graphene Quantum Dots (preparation, modification and application)
- Chemical Residues in Food Samples (Metal ions, Drugs and Toxins)
- Paper sensors

Research Projects

- Fabrication of an optical sensor based on molecularly imprinted modified carbon quantum dots for detection and determination of Florfenicol
- Saffron corm starch: Extraction, structural modification and application in model system
- Application of saffron corm tunics and saffron leaves for the removal of heavy metals from food industrial wastewaters
- Fabrication of antifungal cellulose materials based sheets with controlled release of sulfur dioxide to increase fruit shelf life
- Investigating and analyzing the process of formation and current state of HALAL food brand in order to exploit TAYYEB brand design
- Stabilization of anthocyanins extracted from saffron (*Crocus sativus L.*) petals
- Purification of debittering olive fruit wastewater by electrocoagulation to reuse in production process
- The use of graphene based nanoparticle as an adsorbent of aflatoxins from food samples and comparison with immunoaffinity columns

- Development and optimization of analytical methods for the determination of chemical contaminants in saffron (heavy metals and pesticides)
- Effect of different extraction methods on effective compounds of saffron's corm
- Optimization of the candy syrup formulation in order to prevent its crystallization in packaged Kabkab dates

- S. Sadeghi, M. Jahani. "New copper (II) ion-selective membrane electrode based on Erythromycin ethyl succinate as a neutral ionophore", *Analytical Letters*, 42 (2009), 2026-2040.
- S. Sadeghi, M. Jahani, E. Ghiamati. "Selective transport of Cu ions through bulk liquid membrane system mediated by Erythromycin ethyl succinate ", *Separation Science and Technology*, 46 (2011), 215-223.
- S. Sadeghi, M. Jahani. "Selective solid-phase extraction using molecular imprinted polymer sorbent for the analysis of Florfenicol in food samples", *Food Chemistry*, 141 (2013), 1242-1251.
- S. Sadeghi, M. Jahani. "Solid-phase extraction of Florfenicol from meat samples by a newly synthesized surface molecularly imprinted sol-gel polymer", *Food Analytical Methods*, 7 (2014), 2084-2094.
- N. Boosaeidi; A. Pourkhabbaz; M. Jahani. "Removal of chromium (VI) from polluted water using barberry leaf as a cheap absorbent", *Environmental Sciences*, 11 (2014), 81-88.
- S. Sadeghi, M. Jahani, F. Belador. "The development of a new optical sensor based on the Mn doped ZnS quantum dots modified with the molecularly imprinted polymers for sensitive recognition of florfenicol", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 159 (2016), 83-89.
- N. Boosaeidi; A. Pourkhabbaz; M. Jahani. "Biosorption of hexavalent chromium by the agricultural wastes of the cotton and barberry plants", *Advances in Environmental Technology*, 3 (2017), 159-167.
- R. Niazman, S. Naji-Tabasi, A. Modiri, M. Jahani. "Evaluation of physicochemical, textural and cooking characteristics of enriched spaghetti with barley bran and xanthan gum" *Journal of Research and Innovation in Food Science and Technology*, 8 (1) 2018, 91-110 (in Persian).
- M. Yoosefian; M. Jahani. "A molecular study on drug delivery system based on carbon nanotube for the novel norepinephrine prodrug, Droxidopa", *Journal of Molecular Liquids*, 284 (2019), 258-264.
- J. Feizy, M. Jahani, A. Beigbabaei. "Graphene adsorbent-based solid-phase extraction for aflatoxins clean-up in food samples" *Chromatographia*, 82 (2019), 917-926.
- R. Niazmand, M. Jahani, S. Kalantarian. "Treatment of olive processing wastewater by electrocoagulation: An effectiveness and economic assessment" *Journal of Environmental Management*, 248 (2019), doi.org/10.1016/j.jenvman.2019.109262.
- P. Jafarian Asl, R. Niazmand, M. Jahani. "Theoretical and experimental assessment of supercritical CO₂ in the extraction of phytosterols from rapeseed oil deodorizer distillates" *Journal of Food Engineering*, 269 (2020), doi.org/10.1016/j.jfoodeng.2019.109748.
- E. Iranmanesh, M. Jahani, A. Nezhadali, M. Mojarrab. "A new molecularly imprinted polymer for selective extraction and pre-concentration of guaifenesin in different samples: adsorption studies and kinetic modeling" *Journal of Separation Science*, 43 (2020), 1164-1172.
- M. Esmaelian, M. Jahani, S. Einafshar, J. Feizy. "Optimization of experimental parameters in subcritical water extraction of bioactive constituents from the saffron (*Crocus sativus* L.) corm based on response surface methodology" *Journal of Food Measurement and Characterization*, 14 (2020), 1822-1832.
- J. Feizy, M. Jahani, S. Ahmadi. "Antioxidant activity and mineral content of watermelon peel", *Journal of Food and Bioprocess Engineering*, 3 (2020), 35-40.
- J. Feizy; M. Jahani. "A chromatographic method for detection of palm oil in butter", *Journal of Food and Bioprocess Engineering*, 3 (2020), 47-52.
- R. Niazmand, M. Jahani, F. Sabbagh, S. Rezaia. "Optimization of electrocoagulation conditions for the purification of table olive debittering wastewater using response surface methodology", *Water*, 12 (2020), 1687.
- P. Jafarian Asl, R. Niazmand, M. Jahani. "Solid-phase extraction of phytosterols from rapeseed oil deodorizer distillates with magnetic graphene oxide nanocomposite" *Journal of Experimental Nanoscience*, 15 (2020), 307-321.
- E. Aboobakri, M. Jahani. "Graphene oxide/Fe₃O₄/polyaniline nanocomposite as an efficient adsorbent for the extraction and preconcentration of ultra-trace levels of cadmium in rice and tea samples" *Research on Chemical Intermediates*, 46 (2020), 5181-5198.
- M. Esmaelian, M. Jahani, J. Feizy, S. Einafshar. "Effects of ultrasound-assisted and direct solvent extraction methods on the antioxidant and antibacterial properties of saffron (*Crocus sativus* L.) corm extract" *Food Analytical Methods*, 14 (2021), 74-87.
- Cao, D. Wu, M. Yoosefian, S. Sabaei, M. Jahani. "Comprehensive study of the encapsulation of

- Lomustine anticancer drug into single walled carbon nanotubes (SWCNTs): Solvent effects, molecular conformations, electronic properties and intramolecular hydrogen bond strength” *Journal of Molecular Liquids*, 320 (2020), 114285, doi.org/10.1016/j.molliq.2020.114285
- M. Yaghtini, J. Feizy, S. E. Hoseini Taheri, M. Jahani. “Survey of physicochemical, nutritional and antioxidant properties of two cultivars of Iranian black and green lentil”. *Iranian Journal of Food Sciences Technology*, 17(109) 2021, 55-64 (in Persian).
 - M. Esmaeliani, J. Feizy, M. Jahani, S. Einafshar. “Evaluation of different extraction methods on the antioxidant and antibacterial properties of the saffron corm extract”. *Journal of saffron agronomy and technology*, 9(3) 2021, 269-284 (in Persian).
 - P. Jafarian Asl, R. Niazmand, M. Jahani. “Chemical analysis of composition of raw soybean oil deodorized distillates by GC-MS”, *Journal of Research and Innovation in Food Science and Technology*, 10(1) 2021, 1-10 (in Persian).
 - J. Feizy, S. Ahmadi, M. Jahani, R. Lakshmipathy. “Metal Determination in Iranian Saffron”, *Iranian Journal of Analytical Chemistry*, 8(1) 2021, 79-87.
 - Z. Barati, M. Masrounia, Z. Es'haghi, M. Jahani, J. Ebrahimi. “Selective determination of Cr(III) by modified carbon nanotube paste electrode: A potentiometric study”, *Journal of Chemical Technology and Biotechnology*, 2021, <https://doi.org/10.1002/jctb.7015>.

Conferences / Workshops

- “Introduction to infrared spectroscopy” Research Institute of Food Science and Technology, Mashhad, Iran, 2018 (as teacher)
- “Introduction to instrumental analysis methods” Research Institute of Food Science and Technology, Mashhad, Iran, 2018 (as teacher)
- “How to write research papers? use reference manager softwares” Research Institute of Food Science and Technology, Mashhad, Iran, 2018 (as teacher)
- “Introduction to sample preparation methods and stoichiometric calculations to make chemical solutions” Research Institute of Food Science and Technology, Mashhad, Iran, 2019 (as teacher)
- “Introduction to sample preparation methods and stoichiometric calculations to make solutions” Research Institute of Food Science and Technology, Mashhad, Iran, 2021 (as teacher)

Books

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Teaching and other Experiences

- University of Applied Science and Technology, Birjand, Iran.
- Department of Chemistry, Faculty of Science, University of Birjand, Iran.
- Department of Mining and Geology, Faculty of Engineering, University of Birjand, Iran.
- Department of Environmental Science, Faculty of Agriculture, University of Birjand, Iran.
- Department of Chemistry, University of Gonabad, Iran.
- Departments of Chemistry, Islamic Azad University, Mashhad Branch, Iran.
- Departments of Biology, Islamic Azad University, Mashhad Branch, Iran.
- Department of Food Chemistry, Research Institute of Food Science and Technology, Mashhad, Iran.

Courses:

- General Chemistry
- Laboratory of Instrumental Analysis
- Laboratory of Analytical Chemistry (Wet Analysis Methods)
- Laboratory of Analytical Chemistry (Electrochemical Methods)
- Water Quality Control (Laboratory of Instrumental Methods)
- Analysis of Minerals (Laboratory of Instrumental Methods)
- Advanced Extraction Methods
- Advance Instrumental Methods

