Curriculum Vitae

Dr. Ali Mehdinia

Iranian National Institute for Oceanography and Atmospheric Science (INIOAS)

Associate Professor in **Chemistry**

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Academic Background

- Ph.D in Chemistry, Tarbiat Modares University (TMU), Tehran, Iran
- M.Sc in Analytical Chemistry, Shahid Beheshti University (SBU), Tehran, Iran
- B.Sc in Chemistry, Zanjan University (ZU), Tehran, Iran

Positions & Work Experiences & Memberships

- Faculty Member, Faculty of Marine Science, Iranian National Institute for Oceanography and Atmospheric Science, Since 2008
- Director of Marine Chemistry Lab., Iranian National Institute for Oceanography and Atmospheric Science, 2009-2013
- Director of Marine Living Science group, Iranian National Institute for Oceanography and Atmospheric Science, 2013-2015.

Teaching Experiences

- "Sampling and Analysis of Environmental pollutants", Ph.D. Course, Iranian National Institute for Oceanography and Atmospheric Science.
- "Special Topics in Analytical Chemistry", M.Sc. Course, Payam Noor University, Tehran, Iran.
- "Physical and Chemical Separation methods", M.Sc. Course, Payam Noor University, Tehran, Iran.
- "Analytical Spectroscopy", M.Sc. Course, Payam Noor University, Tehran, Iran.
- "Advance Analytical Chemistry", M.Sc. Course, Payam Noor University, Tehran, Iran.
- "Principles of Industrial water and wastewater treatment", B.Sc. Course, Azad University, Tehran, Iran.
- "Instrumental Analytical Chemistry", B.Sc. Course, Azad University, Tehran, Iran.
- "Environmental Chemistry", B.Sc. Course, Azad University, Tehran, Iran.

Research Activities

Research Interest

- Chemical Oceanography
- Marine pollution
- Environmental Analytical Chemistry

Full Papers

2016:

1. Shegefti, S., **Mehdinia, A.**, Shemirani, F. (2016) Preconcentration of cobalt (II) using polythionine-coated Fe_3O_4 nanocomposite prior its determination by AAS, Microchimica Acta, 183:1963–1970.

2. Ziyaadini, M., **Mehdinia, A.**, Khaleghi, L., Nasiri, M. (2016) Assessment of concentration, bioaccumulation and sources of polycyclic aromatic hydrocarbons in zooplankton of Chabahar Bay, Marine Pollution Bulletin, 107: 408–412.

3. Dadkhah, S., Ziaei, E **Mehdinia, A.**, Baradaran Kayyal, T., Jabbari, A (2016) A glassy carbon electrode modified with amino-functionalized graphene oxide and molecularly imprinted polymer for electrochemical sensing of bisphenol A, Microchimica Acta, doi: 10.1007/s00604-016-1824-5.

4. **Mehdinia, A.**, Rouhani, S., Mozaffari, S. (2016) Microwave-assisted synthesis of reduced graphene oxide decorated with magnetite and gold nanoparticles, and its application to solid-phase extraction of organochlorine pesticides, Microchimica Acta, 183:1177–1185

5. Khodaee, N., **Mehdinia, A.**, Esfandiarnejad, R., Jabbari, A. (2016) Ultra trace analysis of PAHs by designing simple injection of large amounts of analytes through the sample preconcentration on SPME fiber after magnetic solid phase extraction, Talanta 147, 59–62.

6. Ghanea, M., Moradi, M., Kabiri, K., **Mehdinia, A.**, (2016) Investigation and validation of MODIS SST in the northern Persian Gulf, Advances in Space Research 57 127–136.

2015:

7. **Mehdinia, A.**, Esfandiarnejad, R., Jabbari, A., (2015) Magnetic nanocomposite of self-doped polyaniline–graphene as a novel sorbent for solid-phase extraction, J. Sep. Sci., 38 (1), 141–147.

8. **Mehdinia, A.**, Khodaee, N., Jabbari, A., (2015) Fabrication of graphene/Fe_3O_4@polythiophene nanocomposite and its application in the magnetic solid-phase extraction of polycyclic aromatic hydrocarbons from environmental water samples, Anal. Chim. Acta, 868, 1–9.

9. **Mehdinia, A.**., Aghadadashi, V., Sheijooni Fumani, N. (2015) Origin, distribution and toxicological potential of polycyclic aromatic hydrocarbons in surface sediments from the Bushehr coast, Marine Poll Bull., 90 334–338.

10. **Mehdinia, A.**, Akbari, M., Baradaran Kayyal, T., Azad, M. (2015) High-efficient mercury removal from environmental water samples using di-thio grafted on magnetic mesoporous silica nanoparticles, Environ Sci Pollut Res., 22(3), 2155-65 .

11. **Mehdinia, A.**, Bahrami, M., Mozaffari, S. (2015) A comparative study on different functionalized mesoporous silica nanomagnetic sorbents for efficient extraction of parabens, J Iran Chem Soc. 12:1543–1552.

12. Asiabi, M., **Mehdinia, A.**, Jabbari, A. (2015) Preparation of water stable methyl-modified metal–organic framework-5/polyacrylonitrile composite nanofibers via electrospinning and their application for solid-phase extraction of two estrogenic drugs in urine samples, J Chromatogr. A, 1426 (2015) 24–32.

13. **Mehdinia, A.**, Shegefti, S., Shemirani, F. (2015) A novel nanomagnetic task specific ionic liquid as a selective sorbent for the trace determination of cadmium in water and fruit samples, Talanta, 144 (2015) 1266–1272.

14. **Mehdinia, A.**, Shegefti, S., Shemirani, F. (2015) Removal of Lead(II), Copper(II) and Zinc(II) Ions from Aqueous Solutions Using Magnetic Amine-Functionalized Mesoporous Silica Nanocomposites, J. Braz. Chem. Soc., Vol.

26, No. 11, 2249-2257.

15. **Mehdinia, A.**, Asiabi, M., Jabbari, A (2015) Trace analysis of Pt (IV) metal ions in roadside soil and water samples by Fe_3O_4/graphene/ polypyrrole nanocomposite as a solid-phase extraction sorbent followed by atomic absorption spectrometry, Intern. J. Environ. Anal. Chem., 95, 1099–1111.

16. Vajed Samiei, J., Saleh, A., **Mehdinia, A.**, Shirvani, A., (2015) Photosynthetic response of Persian Gulf acroporid corals to summer versus winter temperature deviations, Peer J., DOI 10.7717/peerj.1062.

2014:

17. **Mehdinia, A.**, Khani, H., Mozaffari, S. (2014) Fibers coated with a graphene-polyaniline nanocomposite for the headspace solid-phase microextraction of organochlorine pesticides from seawater samples, Microchim Acta, 181, 1-2, 89-95.

18. **Mehdinia, A.**, Dadkhah, S., Baradaran Kayyal, T., Jabbari, A. (2014) Design of a surface-immobilized 4-nitrophenol molecularly imprinted polymer via pre-grafting amino functional materials on magnetic nanoparticles, J. Chromatogr. A, 1364, 12–19.

19. Tavakoly Sany B., Hashim R., Salleh A., Safari O., **Mehdinia, A.**, Rezayi M. (2014) Risk assessment of polycyclic aromatic hydrocarbons in the West Port semi-enclosed basin (Malaysia), Environ Earth Sci, 71(10) 4319-4332.

20. **Mehdinia, A.**, Khojasteh, E., Baradaran Kayyal, T., Jabbari, A. (2014) Magnetic solid phase extraction using gold immobilized magnetic mesoporous silica nanoparticles coupled with dispersive liquid–liquid microextraction for determination of polycyclic aromatic hydrocarbons, J. Chromatogr. A, 1364, 20–27.

21. Ziaei, E., **Mehdinia, A.**, Jabbari, A. (2014) A novel hierarchical nanobiocomposite of graphene oxide–magnetic chitosan grafted with mercapto as a solid phase extraction sorbent for the determination of mercury ions in environmental water samples, Anal. Chim. Acta 850, 49–56.

22. Aminifar, M., Hamedi, M., Emam-Djomeh, Z., **Mehdinia, A.**(2014) Investigation on proteolysis and formation of volatile compounds of Lighvan cheese during ripening, J Food Sci Technol. 51(10), 2454-2462 .

23. **Mehdinia, A.**, Sheijooni Fumani, N, Rezaei, H. (2014) Essential Oils of a Soft Coral (Sinulariasp) from Chabahar Bay of Iran, J. Persian Gulf, 5, 51-58.

24. Tavakoly Sany B., Hashim R., Salleh A., **Mehdinia, A.**, Rezayi M., Safari O. (2014) Polycyclic Aromatic Hydrocarbons in Coastal Sediment of Klang Strait, Malaysia: Distribution Pattern, Risk Assessment and Sources, PLOS One; 9(4): e94907.

25. **Mehdinia, A.**, Ziaei, E., Jabbari, A., (2014) Facile microwave-assisted synthesized reduced graphene oxide/tin oxide nanocomposite and using as anode material of microbial fuel cell to improve power generation, Int. J. Hydrogen Energy, 39, 10724-10730.

26. **Mehdinia, A.**, (2014) Preconcentration and Determination of Organochlorine Pesticides in Seawater Samples Using Polyaniline/Polypyrrole-Cellulose Nanocomposite-Based Solid Phase Extraction and Gas Chromatography-Electron Capture Detection, J. Braz. Chem. Soc., Vol. 25, No. 11, 2048-2053.

27. **Mehdinia, A.**, Ziaei, E., Jabbari, (2014) Multi-walled carbon nanotube/SnO_2 nanocomposite: A novel anode material for microbial fuel cells, Electrochim. Acta 130, 512–518.

28. Ovais Aziz-Zanjani, M, **Mehdinia, A.** (2014) A review on procedures for the preparation of coatings for solid phase microextraction, Microchim Acta,181:1169–1190.

29. Khoeini Sharifabadi, M., Waqif Husain, S., Saber Tehrani, M., **Mehdinia, A.**, Aberoomand Azar, P., (2014)

Magnetite molecularly imprinted nanoparticles for selective detection of phenol in wastewater samples followed by high performance liquid chromatography, Indian J. Sci. Res. 5 (1) 362-368.

30. Khoeini Sharifabadi, M., Waqif Husain, S., Saber Tehrani, M., **Mehdinia, A.**, Aberoomand Azar, P. (2014) Determination of Residual Nonsteroidal Anti-Inflammatory Drugs in Aqueous Sample Using Magnetic Nanoparticles Modified with Cetyltrimethylammonium Bromide by High Performance Liquid Chromatography, The Scientific World Journal, doi.org/10.1155/2014/127835.

31. Samavati, V., Emam-Djomeh, Z., **Mehdinia, A.**(2014) Thermodynamic and kinetic study of volatile compounds in biopolymer based dispersions, Carbohydrate Polymers 99, 556– 562.

32. Vajed Samiei, J., Saleh, A., **Mehdinia, A.**, Shirvani, A., Sharifi, H., (2014). Specific Thermal Regime and Coral Bleaching Pattern in Hengam Island, the Estern Persian Gulf, Journal of the Persian Gulf, Vol. 5, No. 17, 15-26.

2013:

33. **Mehdinia, A.**, Aziz-zanjani, M.O., 2013, Recent advances in nanomaterials utilized in fiber coatings for solid-phase microextraction, TRAC-Trend Anal. Chem., 42, 205-215 (Hot paper)

34. **Mehdinia**, **A**, Baradaran Kayyal, T, Jabbari, A, Aziz-Zanjani, M.O., Ziaei, E., 2013, Magnetic molecularly imprinted nanoparticles based on grafting polymerization for selective detection of 4-nitrophenol in aqueous samples, **J.** Chromatogr. A, 1283, 82– 88.

35. **Mehdinia**, **A**, Dejaloud, M., Jabbari, A, 2013, Nanostructured polyaniline-coated anode for improving microbial fuel cell power output, Chem. Pap., 67 (8) 1096–1102.

36. Aziz-zanjani, M.O, **Mehdinia, A**., 2013, Electrochemically prepared solid-phase microextraction coatings—A review, Anal. Chim. Acta, 781, 1– 13.

37. **Mehdinia, A.**, Aziz-zanjani, M.O., 2013, Advances for sensitive, rapid and selective extraction in different configuration of solid phase microextraction, TRAC-Trend Anal. Chem , 51, 13–22.

38. **Mehdinia, A.**, Aziz-zanjani, M.O., Ahmadifar, M., Jabbari, A. 2013, Design and synthesis of molecularly imprinted polypyrrole based on nanoreactor SBA-15 for recognition of ascorbic acid, Biosen. Bioelectron. 39, 88-93 (Hot paper).

2012:

39. **Mehdinia, A.**, Bashour, F., Roohi, F.,Jabbari, A., Saleh, A., 2012: Preparation and evaluation of thermally stable nano–structured self–doped polythiophene coating for solid-phase microextraction of phthalate esters, J. Sep. Sci., 35, 563–570.

40. Sarkhosh, M., **Mehdinia, A.**, Jabbari, A.,Yamini, Y., 2012: Determination of biphenyl and biphenyl oxide in aqueous samples by headspace single drop microextraction coupled to gas chromatography, J. Brez. Chem. Soc. (2012) Vol. 23, No. 4, 602-609.

41. **Mehdinia, A.**, Bashour, F., Rouhi, F.,Jabbari, A., 2012: A strategy to enhance thermal stability of nanostructured polypyrrole-based SPME coating for soild-phase microextraction, Microchim. Acta, 177:301–308.

42. Samavati, V., Emam-Djomeh, Z., Mohammadifar, M.A., Omid, M., **Mehdinia, A.**, 2012: Stability and rheology of dispersions containing polysaccharide, Oleic Acid and Whey protein isolate, J. Text. Stud., 43, 63–76.

43. **Mehdinia, A.**, Ahmadifar, M., Aziz-Zanjani, M.O., Jabbari, A.,Hashtroudi, M.S., 2012: Selective adsorption of 2,4-dinitrophenol on molecularly imprinted nanocomposites of mesoporous silica SBA-15/polyaniline, Analyst,

137, 4368–4374.

44. Samavati, V.,Emam-Djomeh, Z., Mohammadifar, M.A., Omid, M., **Mehdinia, A.**, 2012: Application of Rheological Modeling in Food Emulsions, Iran. J. Chem. Chem. Eng., Vol. 31, No. 2.

45. Tahmasebi, E., Yamini, Y., **Mehdinia, A.**, Rouhi, F., 2012: Polyaniline-coated Fe3O4 nanoparticles: An anion exchange magnetic sorbent for solid-phase extraction, J. Sep. Sci. 2012, *35*, 2256–2265.

46. Aminifar, M.,Hamedi, M.,Emam-Djomeh, Z., **Mehdinia, A.**, 2012: The effect of ovine and bovine milk on the textural properties of Lighvan cheese during ripening, Int. J. Dairy Technol., 65, 1-9.

47. Nikbakhtzadeh MR., Vahedi M., Vatandoost H., **Mehdinia A.**, 2012: Origin, transfer and distribution of cantharidin-related compounds in the blister beetle *Hycleus scabiosae,* The Journal of Venomous Animals and Toxins including Tropical Diseases, 18:1, 88-96.

2011:

48. **Mehdinia A.,** Asiabi M., Jabbari A., Abtahi S. M., 2011: Analysis of cantharidin in false blister beetles (Coleoptera: Oedemeridae) by headspace solid-phase microextraction and gas chromatography–mass spectrometry, J. Chromatogr. B, 879: 2897– 2901.

49. **Mehdinia, A.**, Roohi, F.,Jabbari, A.,Manafi, M.R., 2011: Self-doped polyaniline as new polyaniline substitute for solid-phase microextraction, Anal. Chim. Acta 683, 206–211.

50. Banitaba M.H., Hosseiny Davarani S.S., **Mehdinia A.**, 2011: Study of interactions between DNA and aflatoxin B1 using electrochemical and fluorescence methods, Anal. Biochem. 411: 218–222.

51. Amini, R., Rouhollahi, A., Adibi, M., **Mehdinia, A.**, 2011: A new disposable ionic liquid based coating for headspace solid-phase microextraction of methyl tert-butylether in a gasoline sample followed by gas chromatography-flame ionization detection, Talanta, 84, 1–6.

52. Amini, R., Rouhollahi, A., Adibi, M., **Mehdinia, A.**, 2011: A novel reusable ionic liquid chemically bonded fused-silica fiber for headspace solid-phase microextraction/gas chromatography-flame ionization detection of methyl tert-butyl ether in a gasoline sample, J. Chromatogr. A, 1218, 130–136.

53. **Mehdinia, A.**, Roohi, F.,Jabbari, A., 2011: Rapid magnetic solid phase extraction with in situ derivatization of methylmercury in seawater by Fe3O4/polyaniline nanoparticle, J. Chromatogr. A, 1218, 4269– 4274.

54. **Mehdinia, A.**,Mohammadi, A.A., Hosseiny Davarani, S.S.,Banitaba, M.H., 2011, Application of Self-Assembled Monolayers in the Preparation of Solid-Phase Microextraction Coatings, Chromatographia, 74:421–427.

55. Hosseiny Davarani, S.S.,Kalate BojDi, M., **Mehdinia, A.**, 2011: A New Way for Synthesis of Phenoxazine and Diphenoxazine Derivatives via Electrochemical Method, Chem. Pharm. Bull., 59 (10) 1209—1213.

56. Banitaba, M.H., Mohammadi, A.A., Hosseiny Davarani, S.S., **Mehdinia, A.**, 2011: Preparation and evaluation of a novel solid-phase microextraction fiber based on poly(3,4-ethylenedioxythiophene) for the analysis of OCPs in water, Anal. Method 3, 2061-2067.

57. Bashiri Juybari, M., **Mehdinia, A.**, Jabbari, A., Yamini, Y., 2011: Determination of amitraz in honey samples by dispersive liquid-liquid microextraction followed by gas chromatography-flame ionization detection, Am. J. Anal. Chem., 2, 632-637.

58. Bashiri Juybari, M.,**Mehdinia, A.**, Jabbari, A., Yamini, Y., 2011:Dispersive liquid – liquid microextraction based on solidification of floating organic drop followed by gas chromatography- electron capture detector for determination of some pesticides in water samples, Chromatogr. Res. Intern., 1-8.

59. Sarkhosh, M., **Mehdinia, A.**, Jabbari; A., Yamini, Y., 2011: Single drop microextraction of biphenyl and biphenyl oxide in aqueous samples by gas chromatography-flame ionization detection, Am. J. Anal. Chem., 2, 689-696.

60. Abtahi, S.M.,Nikbakhtzadeh, S.M.R., Vatandoost, H., **Mehdinia, A.**, Rahimi-Foroshani, A., Shayeghi, M. 2011: Quantitative characterization of cantharidin in false blister beetles, Oedemera (s.str.) podagrariae, of Mount Elborz, Iran, J. Insect Sci., 12, 1-5.

61. Samavati, V., Emam-Djomeh, Z., Mohammadifar, M.A., Omid, M., **Mehdinia, A.**, 2011: Influence of tragacanth gum exudates from specie of Astragalusgossypinus on rheological and physical properties of whey protein isolate stabilised emulsions, Int. J. Food Sci. Technol., 46, 1636–1645.

62. Tavakoly Sany B., Salleh A., Sulaiman A.H, **Mehdinia A.**, Monazami GH., 2011, Geochemical Assessment of Heavy Metals Concentration in Surface Sediment of West Port, Malaysia, World Academy of Science, Engineering and Technology 56, 83-87.

2010:

63. **Mehdinia, A.,** Asiabi, M., Jabbari, A., Kalaee, M.R., Preparation and evaluation of solid-phase microextraction fiber based on nano-structured copolymer of aniline and m-amino benzoic acid coating for the analysis of fatty acids in zooplanktons, J. .Chromatogr. A, 1217 (2010) 7642–7647.

64. Ebrahimzadeh, H., **Mehdinia, A.**,Kasraee, S.,Yamini, Y., Ahmadi, A., 2010: Analysis of mono-nitrotoluenes in water samples by using nano-structured polypyrrol as a sorbent of solid-phase microextraction, Int. J. Environ. Anal. Chem., 90 (13), 963–975.

65. Aminifar, M., Hamedi, M.,Emam-DJomeh, Z., **Mehdinia, A.**, 2010: Microstructural, compositional and texturalproperties during ripening of Lighvan Cheese, atraditional raw sheep cheese, J. Texture. Stud. 41, 579–593.

Projects

As Project Manager:

- Seasonal variation of Fatty acid composition of Zooplankton of Chabahar Bay, 2010, INIOAS.
- Identification of some chemicals extracted from soft corals of Chabahar Bay, 2010, INIOAS.
- Validity check of various extraction methods for polycyclic aromatic hydrocarbons in marine sediments, 2011, INIOAS.
- Feasibility study of existence of Homotaurine with Alzheimer treatment property in some domestic marine algae of Iran, 2011, INIOAS.
- Application of nanostructures in microbial fuel cells (MFCs) for enhancing power output of cells, 2013, INSF.
- Seasonal assessment of the physiological performance of the dominant reef builder of the coral reef of Hengam Island based on measurements of related chemical parameters, 2014, INIOAS
- Removal of toxic metal of mercury from aqueous media by Fe_3O_4 nanoparticles modified with masoporous silica, 2014, INSF.
- Environmental Data Collection and Processing of Persian Gulf, 2014, INIOAS.

- Identification of Iranian native algae with the highest amount of bioactive compound of homotaurine as a potential treatment for Alzheimer's disease, Running, INIOAS.
- Persian Gulf and Gulf of Oman Oceanographic Study, Running, INIOAS.
- Biomonitoring of Bioavailable Fractions of Some Heavy Metals in Surface Sediments of Bushehr Coasts, using the dominant mollusk species, Running, INIOAS.
- Investigation of contamination of sediments of Bushehr coastal area to the Polybrominated Diphenyl Ethers (PBDEs). Running, INIOAS.

As Project Contributor:

- Feasibility study of Marine laboratory of Iranian National Center for Oceanography in determination of PCBs and PAHs in marine sediments, 2006, INIOAS.
- Access to technical knowledge and technology of electricity production from marine sediments, 2009.
- Determination of polycyclic aromatic hydrocarbons (PAHs) in sediment of Anzali Lagoon and their toxicity effects on the Angel Fish, 2009, INIOAS.
- Technical - economic investigation of production of sodium hypochlorite and replacing it with calcium hypochlorite in Desalinization plant of Kish Island, 2010, INIOAS.
- Study of macro algae oil in the Persian Gulf and the determination of its major constituents, 2011, INIOAS.
- Assessment of the environmental impact of algal bloom occurrence in sediments of the Kish and Garzeh using measure of organic carbon and organic matter in the above areas, 2011, INIOAS.
- Environmental Data Collection and Processing of Gulf of Oman, 2014, INIOAS.
- Data collection and processing of petroleum hydrocarbon contaminants in water, sediments and biota of Persian Gulf, 2012, INIOAS.
- Determination of polycyclic aromatic hydrocarbons in sediments of the intertidal zone of North Pars Special Economic Zone, 2012, INIOAS.