

CURRICULUM VITAE

MAHDI HASHEMI

Personal Information:

Name: Mahdi
Surname: Hashemi
Date and place of Birth: 22/08/1964-Tehran
Domicile: Iran
Marital status: Married, Two Children

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Educations:

Ph.D.: 2000, Analytical chemistry, Ferdowsi University, Mashhad, Iran
Title of thesis: Development and Evaluation of Electrochemical Hydride Generation for Spectroscopic Determination of Arsenic and Antimony
Supervisors: Dr. M.H. Arbabe-Zavar and Dr. A. Sarafraz-Yazdi

M.Sc.: 1991, Analytical Chemistry, Ferdowsi University, Mashhad, Iran
Title of thesis: A New Potentiometric System for Determination of Arsenic Using Hydride generation
Supervisor: Dr. M.H. Arbabe-Zavar

B.Sc.: 1987, Chemistry, Bu-Ali Sina University, Hamedan, Iran

Positions:

- Associated Professor: 2011- Up to now, Bu-Ali Sina University, Hamedan, Iran.
- Managing Director of RAC Analytical Chemistry Lab (Accredited Laboratory of Environmental Protection Organization of Iran and National Standards Organization of Iran), 2011 up to Now, Hamedan, Iran (www.racl.ir).
- Member of Editorial Board of International Journal of Bioanalytical Methods & Bioequivalence Studies (IJBMS), 2014 Up to now.
- Visiting Scholar: 2010-2011, Sam Houston State University, Huntsville, Texas, USA.
- Assistant Professor: 2000-2011, Bu-Ali Sina University, Hamedan, Iran.
- Instructor : 1992-1995, Bu-Ali Sina University, Hamedan, Iran.

Teaching Experiences:

Graduate:

Physicochemical Methods of Separation
Modern Instrumental Methods in Analytical Chemistry

Advanced Analytical Chemistry
Chromatography
Trace Analysis

Undergraduate:

Instrumental Analysis
Analytical Chemistry I& II
Environmental Chemistry
General Chemistry

Current Research Interests:

Development of Microextraction Methods
Development of Preconcentration Methods for Trace Analysis
Hydride Generation
Environmental Chemistry
Food and Pharmaceutical Analysis
Biomass as a Resource of Energy

Publications

- 1- M.H. Arbab-Zavar, **M. Hashemi**, A new ion selective system for arsenic determination using hydride generation, J. SCI. I. R. Iran, 1993, 4, 255.
- 2- M.H. Arbab-Zavar, **M. Hashemi**, Evaluation of electrochemical hydride generation for spectrophotometric determination of As(III) by silver diethyldithiocarbamate, Talanta, 2000, 52, 1007-1014.
- 3- **M. Hashemi**, M.H. Arbab-Zavar, A. Sarafraz-Yazdi, Effect of cathodic electrolyte on the performance of electrochemical hydride generation from graphite cathode, Talanta, 2004, 64, 644-649.
- 4- **M. Hashemi**, P. Modasser, Sequential spectrophotometric determination of inorganic arsenic species by hydride generation from selective medium reactions and colour bleaching of permanganate, Talanta 2007,73, 166–171.
- 5- S. Salehzadeh, M. Bayat, **M. Hashemi**, Complete Gas-Phase Proton Microaffinity Analysis of Two Bulky Polyamine Molecules, J. Phys. Chem. A, 207,111, 8188-8192.
- 6- B. Rafiei, A. Khodaei, S. Khodabakhsh, **M. Hashemi**, M. Bakhtiari-Nejad, Contamination assessment of lead, zink, copper, cadmium, arsenic and antimony in Ahangaran mine soils, Malayer, West of Iran, Soil and Sediment Contamination, 2010, 19, 573- 586.
- 7- B. Rafiei, M. Bakhtiari Nejad, **M. Hashemi**, A. S. Khodaei, Distribution of Heavy Metals around the Dashkasan Au Mine, Int. J. Environ. Res., 2010, 4 ,647-654.
- 8- **M. Hashemi**, T. G. Chasteen, Hofmeister effect challenge, Anal. Bioanal. Chem., 2011, 400:643–644.

- 9- **M. Hashemi**, T. G. Chasteen, Solution to Hofmeister effect challenge, *Anal. Bioanal. Chem.*, 2011, 401:1093.
- 10- **M. Hashemi**, T. G. Chasteen, Molality–molarity challenge, *Anal. Bioanal. Chem.*, 2011, 401:1091–1092
- 11- **M. Hashemi**, T. G. Chasteen, Solution to the molality–molarity challenge, *Anal. Bioanal. Chem.*, 2012, 402:32.
- 12- **M. Hashemi**, A. Habibi, N. Jahanshahi, Determination of cyclamate in artificial sweeteners and beverages using headspace single-drop microextraction and gas chromatography flame-ionization detection, *Food Chemistry*, 2011, 124, 1258–1263.
- 13- **M. Hashemi**, R. A. Montes, T. G. Chasteen, Determination of volatile organochalcogens using liquid phase microextraction and gas chromatography with fluorine-induced chemiluminescence detection, *Environmental Biotechnology*, 2012, 8(2) 55-62.
- 14- **M. Hashemi**, A. Habibi, N. Jahanshahi Application of Ultrasound-assisted dispersive liquid-liquid micro-extraction for determination of BTEX compounds by gas chromatography, *Desalination*, 2012, 288, 93–97.
- 15- **M. Hashemi**, S.M. Daryanavard, Ultrasound-assisted cloud point extraction for speciation and indirect spectrophotometric determination of chromium(III) and (VI) in water samples, *Spectrochimica Acta Part A*, 2012, 92, 189– 193.
- 16- **M. Hashemi**, S. M.Daryanavard, S. Abdolhosseini, Development of ultrasound-assisted emulsification microextraction for determination of thiocyanate ion in human urine and saliva samples, *Journal of Chromatography B*, 2013, 917– 918, 5– 10.
- 17- **M. Hashemi**, S. M. Daryanavard, S. Abdolhosseini, Application of ultrasound-assisted emulsification microextraction for spectrophotometric determination of trace amounts of antimony(V) in drinking water samples using rhodamine B, *Anal. Methods*, 2013, 5, 6848.
- 18- S. Daryanavard, A. Jeppsson-Dadouna, L. I. Andersson, **M. Hashemi**, A. Colmjsöa and M. Abdel-Rehim, Molecularly imprinted polymer inmicroextraction by packed sorbent for the simultaneous determination of local anesthetics: lidocaine, ropivacaine, mepivacaine and bupivacaine in plasma and urine samples, *Biomedical Chromatography*, 2013, (wileyonlinelibrary.com) DOI 10.1002/bmc.2946.
- 19- **M. Hashemi**, Z. Taherymaslak, S. Rashidi, Application of magnetic solid microextraction for separation and determination of aflatoxine B₁ and B₂ in cereal products by high performance liquid chromatography- fluorescence detection. *Journal of Chromatography B.*, 2014, 960, 200-208.
- 20- **M. Hashemi**, Z. Taherymaslak, S. Rashidi, Enhanced spectrofluorimetric determination of aflatoxin M1 in liquid milk after magnetic solid phase extraction, *Spectrochimica Acta, part B*, 2014, 128, 538-590.

- 21- **M. Hashemi**, Z. Taherymaslak ,Determination of aflatoxin M₁ in liquid milk using high performance liquid chromatography with fluorescence detection after magnetic solid phase extraction, RSC Advances, 2014, 4, 33497.
- 22- **M. Hashemi**, Z. Taherymaslak ,Separation and determination of aflatoxins B₁, B₂, G₁ and G₂ in pistachio samples based on magnetic solid phase extraction followed by high performance liquid chromatography with fluorescence detection, Anal. Methods, 2014, 6, 7663-7673.
- 23- **M. Hashemi**, Z. Taherimaslak, S. Parvizi, M. Torkejokar, Spectrofluorimetric determination of zearalenone using dispersive liquid–liquid microextraction coupled to micro-solid phase extraction onto magnetic nanoparticles, RSC Advances, 2014, 4, 45065.
- 24- D. Bigdelifam, M. Mirzaei, **M. Hashemi**, M. Amoli-Diva, O. Rahmani, P. Zohrabi, Z. Taherimaslak, M. Turkjokarb, Sensitive spectrophotometric determination of fluoxetine from urine samples using charge transfer complex formation after solid phase extraction by magnetic multiwalled carbon nanotubes, Anal. Methods, 2014, 6, 8633-8639.
- 25- Riahikhoram M., Khoshshoar M., **Hashemi M.**, Chemical and microbiological properties of bottled water in Hamedan province, Journal of Food Hygiene, 2014 , V. 4, N. 1 (13), 69-80.
- 26- Saki AA, Aliarabi H, Hosseini Siyar SA, Salari J, **Hashemi M.**, Effect of a phytogetic feed additive on performance, ovarian morphology, serum lipid parameters and egg sensory quality in laying hen., Vet Res Forum. 2014, 5(4), 287-93.
- 27- **Mahdi Hashemi**, Parvin Zohrabia, Sana Abdolhosseini, Spectrophotometric determination of cyclamate in artificial sweeteners and beverages after ultrasound-assisted emulsification microextraction, Anal. Methods, 2015, 7, 2594-2602.
- 28- S. Sobhanardakani, F. Einabadi, **M. Hashemi**, Determination of PAHs Concentrations in Water Samples Exploited from Wells in Vicinity of Gas Stations in Hamedan, J Mazandaran Univ Med Sci, 2015,25 (121),227-238.
- 29- M. Shamsipur, P. Zohrabi, **M. Hashemi**, Application of supramolecular solvent as carrier for ferrofluid based liquid-phase microextraction for spectrofluorimetric determination of levofloxacin in biological samples. Anal Methods, 2015, 7, 9609-9614.
- 30- P. Zohrabi, M Shamsipur, **M. Hashemi**, B Hashemi, Liquid-phase microextraction of organophosphorus pesticides using supramolecular solvent as a carrier for ferrofluid, Talanta, 2016, 160, 340-346.

Seminars:

- 1- M.H. Arbab-Zavar, A. Sarafraz-Yazdi and M. Hashemi, Electrochemical hydride generation for colorimetric determination of arsenic with silver diethyldithiocarbamate, 8th Iranian Seminar of Analytical Chemistry, Feb. 1998, Shahid Chamran University, Ahwaz, Iran.
- 2- M.H. Arbab-Zavar, A. Sarafraz-Yazdi and M. Hashemi, Evaluation of electrochemical hydride generation for the spectrophotometric determination of Sb(III) by silver diethyldithiocarbamate, 10th Iranian Seminar of Analytical Chemistry, February 2001, Sharif University of Technology, Tehran, Iran.
- 3- M. Hashemi, Spectrophotometric determination of arsenic based on hydride generation and reduction of Fe(III) in the presence of Ferrozine, 13th Iran's Seminar of Analytical Chemistry, May 2004, Ferdowsi University of Mashhad, Mashhad, Iran.
- 4- M. Hashemi, M.H. Arbab-Zavar, A. Sarafraz-Yazdi, Electrochemical hydride generation for determination of arsenic by atomic absorption spectrometry, 13th Iran's Seminar of Analytical Chemistry, May 2004, Ferdowsi University of Mashhad, Mashhad, Iran.
- 5- M. Hashemi, F. Hajhosieni, First derivative spectrophotometric determination of cadmium with dithizon in micellar medium, 13th Iran's Seminar of Analytical Chemistry, May 2004, Ferdowsi University of Mashhad, Mashhad, Iran.
- 6- M. Hashemi, A. Shams, Flow electrochemical preconcentration of cadmium by flame atomic absorption spectrometry, 6th Biennial Electrochemistry Seminar of Iran (6BESI), Sep. 2005, Bu-Ali Sina University, Hamadan, Iran.
- 7- M. Hashemi, E. Arefian, M. Bayat, Simultaneous spectrophotometric determination of Hg(II) and Zn(II) with dithizone using first derivative ratio spectra, 3rd Iranian Seminar of Chemistry and Environment, Sep. 2006, Kurdistan University, Sanandag, Iran.
- 8- M. Hashemi, S.M. Daryanavard, Ultrasonic assisted cloud point extraction for indirect spectrophotometric determination of Chromium (VI), 6th Aegean Analytical Chemistry Days (AACD 2008 Conference), October 2008, Pamukkale University, Denizli, Turkiye.
- 9- M. Hashemi, F. Soltani, Adaptive neuro-fuzzy inference system (ANFIS) as a new approach for simultaneous analysis, 2th mathematical chemistry conference, Apr 2008, Kashan University, Kashan, Iran.
- 10- M. Hashemi, F. Soltani, Adaptive neuro-fuzzy inference system (ANFIS) as a new approach for the estimation of the partition coefficient of organic compounds between n-octanol and water. 16th Iranian Seminar of Analytical Chemistry, July 2009, Bu-Ali Sina University, Hamedan, Iran.

11- M. Hashemi, S. M. Daryanavard, Spectrophotometric speciation and determination of Chromium (III) and (IV) after cloud point extraction. 16th Iranian Seminar of Analytical Chemistry, July 2009, Bu-Ali Sina University, Hamedan, Iran.

12- M. Hashemi, A. Habibi, Determination of cyclamate using headspace single-drop microextraction and gas chromatography. 16th Iranian Seminar of Analytical Chemistry, July 2009, Bu-Ali Sina University, Hamedan, Iran.

13- M. Hashemi, N. Gahanshahi, Ultrasound-assisted dispersive liquid-liquid extraction for determination of BTEX by gas chromatography flame ionization detection. 16th Iranian Seminar of Analytical Chemistry, July 2009, Bu-Ali Sina University, Hamedan, Iran.

14- M. Hashemi, Z. Nazary, Simple regression model and partial least squares regression for simultaneous spectrophotometric determination of arsenic (III) and antimony (III). 15th Iranian Chemistry Congress, September 2011, Bu-Ali Sina University, Hamedan, Iran.

15- M. Hashemi, Z. Nazary, Continuous cloud point extraction for sequential spectrophotometric determination of arsenic (III) and antimony (III) using silver diethyldithiocarbamate procedure, 15th Iranian Chemistry Congress, September 2011, Bu-Ali Sina University, Hamedan, Iran.

16- M. Hashemi, P. Zohrabi, M. Tork joker, Solid-phase microextraction based on cetyltrimethylammonium bromide-coated magnetic nanoparticles for spectrofluorimetric determination of dexamethasone from biological samples, 20th Iranian Seminar of Analytical Chemistry, March 2013, Isfahan University of Technology, Isfahan, Iran.

17- M. Hashemi, D. Bigdeli Fam, M. Tork joker, Solid phase extraction using MWCNT/Fe₃O₄ nanocomposite modified by coupling agent APTES for preconcentration and determination of cadmium and lead in real samples, 20th Iranian Seminar of Analytical Chemistry, March 2013, Isfahan University of Technology, Isfahan, Iran.

18- F. Einabadi, M. Hashemi, S. Sobhan Ardakani, Environmental Impact Assessment of Naphthalene Hydrocarbon Concentration Level in Water Wells Adjacent to Refueling Stations in the City of Hamadan, The 3rd Environmental planning and management, October 2013, Tehran, Iran.

Other Activities:

Chairman of the standard designating committees for following national standard:

1- ISIRI:7092-4: Paints and varnishes - Determination of "soluble" metal content - Part 4: Determination of total cadmium content -Flame atomic absorption spectrometric method and polarographic method.

2- ISIRI:7092- 7092-5:Paints and varnishes - Determination of "soluble" metal content -Part 5: Determination of hexavalent chromium content of the pigment

portion of the liquid paint or in powder form – Diphenylcarbazide spectrophotometric method.

3- **ISIRI:7092- 7092-6:**Paints and varnishes - Determination of "soluble" metal content - Part 6: Determination of total chromium content of the liquid portion of the paint - Flame atomic absorption spectrometric method.

4- **ISIRI:7092- 7092-7:**Paints and varnishes - Determination of "soluble" metal content - Part 7: Determination of mercury content of the pigment portion of the paint and of the liquid portion of water dilutable paints - Flameless atomic absorption spectrometric method.

5- **ISIRI:8466:** Soil quality – Determination of cyanide – Test method.

6- **ISIRI:8655:** Binder for paints and varnishes - Raw tung oil - Requirements and methods of test.

7- **ISIRI: 8656:** Binder for paints and varnishes - Amino resins - General methods of test.

8- **ISIRI: 8657:** Binder for paints and varnishes – Polyisocyanate resins - General methods of test.

9- **ISIRI:8764:** Petroleum products - Determination of sulfur content of automotive fuels – Ultraviolet fluorescence method.

ISIRI:8765 :Petroleum and related products – Determination of the flammability characteristics of fluids in contact with hot surfaces - Mainfold ignition test.

10- **ISIRI: 12921:**Plastics - Phenolic moulding materials - Determination of acetone-soluble matter (apparent resin content of material in the un moulded state) - Test method.

11- **ISIRI: 12919:** Plastics — Polymer dispersions — Determination of free formaldehyde – Test method.

12- **ISIRI: 12920:** Plastics - Phenolic resins – Determination of electrical conductivity of resin extracts-Test method.

13- Strontium chromate pigments for paints- Spicification and test method (Iso 2040, In preparation step.)

14- Pigments and extenders - Methods of assessment of dispersion characteristics - Part 3: Assessment from the change in gloss (Iso8781-3-1990, In preparation step).