Hamadan University
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CV

Farshid Ghorbani-Shahna (MSc, PhD)

Professor

Contact Information

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PERSONAL INFORMATION

Date of Birth: 1975

Nationality: Iranian

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Academic Rank

Professor, Department of Occupational Hygiene, School of Health, Hamadan University of Medical Sciences

Degrees in Brief

Bsc in Occupational Hygiene Engineering (1999)

Hamadan University of medical sciences

Msc in Occupational Hygiene Engineering (2001)

Tehran University of medical sciences

PhD in Occupational Hygiene Engineering (2009)

Tehran University of medical sciences

Educational and Research Interests:

1- *Design of Industrial Ventilation Systems, Dust Collectors and Gaseous Cleaning Devices.*
2- *Assessment of Chemical and Biological Air Pollutants in Workplaces and Environment.*

Thesis Supervising and consulting:

1- *Supervisor and Consult of the 18 PhD Theses.*

2- *Supervisor and Consult of the 37 MSc & MPH Theses.*

Grants and Contracts

1- *Design and Implementation of 110 industrial Ventilation and collectors projects for 45 stone crushing and mineral processing plants.*

2- *Design and Implementation of 26 industrial Ventilation and collectors projects for industry such as: Payesh Sabze Khoramdasht, Azarakhsh, Lotus, Asafloot, Kavian Silis, Kavehsoda, Carbonat Sodium Kaveh, Iron and Steel Melting, Copper melting, medvar, Pishtazan, Pouya Zarkan, Monalak, Denakaveh, Mehvarsazan, Shahid Bagheri, Gache Gilanegharb, Mehvarsazan, Madankaran, ABASIC, KWC, Abhar Silis, Karoon Petrochemical Co, Simab Rooye Zarin, Pegah Rooy Gharb, Moghavasazi Yazd, Kimiaseram, Ista Sanaat, …*

3- *Evaluation of chemical air pollution and related risks in workplaces and submit of control performances for chemical exposure of employers (for 18 Petrochemical Co in the Mahshahr).*

4- *Evaluation of chemical air pollution and related risks in workplaces and submit of control performances for chemical exposure of employers (for 19 Petrochemical Co in the Assalouyeh).*

5- *Evaluation of distribution volatile organic compounds in Fajr Petrochemical Units and submission of control performances for control of pollutants.*

6- *Evaluation of distribution volatile organic compounds in Mobin Petrochemical Units and submission of control performances for control of pollutants*

7- *Assessment of Air Pollutants Concentration and Workers Exposure in Foamkar Co.*

Workshop Lecturer

Lecturer of the 60 workshop entitled:

1- *Industrial Ventilation (Design, Evaluation and Monitoring)*

2- *Design and Evaluation of Dust Collectors and Gaseous Cleaning Devices.*

3- *Sampling and Evaluation of Chemical Air Pollutants.*

4- *Hospital & Health Care Center Ventilation*

Publication

A) Journal Papers:

1- *Nematullah Kurd, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna, MohammadJavad Assari, Maryam Farhadian. Hollow Polymer Nanospheres and Fe3O4@ TFPA-Bd-COF as a Mixture Adsorbent in Microextraction by Packed Sorbent for Extraction of BTEX Biomarkers in Urine, Analytical and Bioanalytical Chemistry Research, 2023, 10 (2): 237-250.*

2- *Nematullah Kurd, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna, Mohammad Javad Assari, Maryam Farhadian, Hollow polymer nanospheres (HPSs) as the adsorbent in microextraction by packed sorbent (MEPS) for determining BTEXs chief*

metabolites in urine samples, Journal of the Iranian Chemical Society, 2022, 19 (10): 4117-4128.

3- *Zahra Tarin, Abdulrahman Bahrami, Mohsen Goodarzi, Farshid Ghorbani-Shahna, Investigation of the effects of using ribs on cyclone's vortex finder on its performance, Journal of Health and Safety at Work, 2022, 12(2): 324-338.*

4- *Farid Azizi Jalilian, Ali Poormohammadi, Ali Teimoori, Nastaran Ansari, Zahra Tarin, Farshid Ghorbani Shahna, Ghasem Azarian, Mostafa Leili, Mohammadreza Samarghandi, Mahyar Motaghed, Amir Nili Ahmadabadi, Mohammad Sadegh Hassanvand, Evaluation of SARS-CoV-2 in Indoor Air of Sina and Shahid Beheshti Hospitals and Patients' Houses, Food and Environmental Virology, 2022, 14(2): 190-198.*

5- *Nematullah Kurd, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna, Mohammad Javad Assari, Maryam Farhadian, Application of Fe3O4@ TbBd nanobeads in microextraction by packed sorbent (MEPS) for determination of BTEXs biomarkers by HPLC–UV in urine samples, Journal of Chromatography B, 2022, 1197.*

6- *Razzagh Rahimpoor, Abdulrahman Bahrami, Davood Nematollahi, Farshid Ghorbani Shahna, Maryam Farhadian. Sensitive determination of urinary muconic acid using magnetic dispersive-solid-phase extraction by magnetic amino-functionalised UiO-66, International Journal of Environmental Analytical Chemistry, 2022, 102(4): 885-898.*

7- *Reza Aghababaei Talkhonche, Farshid Ghorbani-Shahna*[*], *Alireza Mohammadrezaei, Maryam Farhadian. Catalytic Removal of Nitrogen Dioxide in the Air Stream by Nickel and Nick-el-platinum Supported Multiwall Carbon Nanotube. Iran Occupational Health. 2022, 19 (1): 19-38.*

8- *Farshid Ghorbani Shahna, Maryam Feiz Arefi, Quantitative evaluation of chemical fume hoods performance by CO2 tracer gas, 2022, 71 (3): 771-778.*

9- *Farshid Ghorbani-Shahna, SaberAlizadeh, Abdulrahman Bahrami, Davood Nematollahi, Mohsen Yazdani-aval*[*]*. Co3O4@Zn-BTC MOF as a novel nano-photocatalyst for degradation of toluene from ambient air, International Journal of Environmental Analytical Chemistry (Published online: 28 Feb 2022).*

10- *Pejman Mohammadi, Farshid Ghorbani Shahna, Abdulrahman Bahrami, Amir Abbas Rafati, Maryam Farhadian. Enhanced photocatalytic activity of hydrothermally synthesised $SrTiO_3$/rGO for gaseous toluene degradation in the air: modelling and process optimisation using response surface methodology, International Journal of Environmental Analytical Chemistry, 2022, 102(1):222-242.*

11- *Mohammadreza Bahrami, Abdulrahman Bahrami, Farshid Ghorbani-Shahna, Evaluation of Exposure to Silica and Silicosis Incidence at High-Risk Industries in Iran, Journal of Medicine and Public Health, 2022, 3(5): 107-111.*

12- *Shiva Soury, Abdulrahman Bahrami, Saber Alizadeh, Farshid Ghorbani Shahna, Davood Nematollahi, Development of a Needle Trap Device Packed with HKUST-1 Sorbent for Sampling and Analysis of BTEX in Air, Chemistry & Chemical Technology, 2022, 16(2): 314-327.*

13- *Mohsen Yazdani-aval, SaberAlizadeh, Abdulrahman Bahrami, Davood Nematollahi, Farshid Ghorbani-Shahna*[*]*. Efficient removal of gaseous toluene by the photoreduction of Cu/Zn-BTC metal-organic framework under visible-light, Optik, 2021, 247, 167841*

14- *Zahra Rahimi, Farshid Ghorbani-Shahna*[*]*, Abdulrahman Bahrami. Design, mplementation, and Evaluation of Industrial Ventilation Systems and Filtration for Silica Dust Emissions from a Mineral Processing Company, Indian Journal of Occupational and Environmental Medicine, 2021, 25(4):192 – 197.*

15- *Abdulrahman Bahrami, Nasim Sanaei, Farshid Ghorbani Shahna, Majid Habibi Mohraz, Maryam Farhadian. Development of a Method Based on the Needle-trap Microextraction Filled with Hydroxyapatite and Polyaniline Nanocomposite for Determination of Volatile Organic Compounds in the Air, Analytical and Bioanalytical Chemistry Research, 2021, 8(1): 1–14.*

16- *Sajad Deyhim, Farshid Ghorbani-Shahna, Babak Jaleh, Leili Tapak. Development of scrubber with nano-TiO_2 coated packing for H_2S removal, Process Safety and Environmental Protection, 2021, 149: 158–168.*

17- *Reza Aghababaei Talkhonche, Farshid Ghorbani-Shahna*[*]*, Alireza Mohammadrezaei, Maryam Farhadian. NO_2 catalytic removal by nickel catalyst supported on multi-walled carbon nanotubes, International Journal of Environmental Studies, 2021, 78(3): 427–443.*

18- *Mohammad Javad Assari, Farshid Ghorbani Shahna, Ali Pourmohammadi, Ebrahim Chavoshi, Zohreh Karami. Application of Arc-GIS for Zoning of Occupational Exposure Levels to Respirable Crystalline Silica in Crushing Factories, Journal of Occupational Hygiene Engineering, 2021, 7(4): 53-60.*

19- *Ali Firoozichahak, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Saber Alizadeh, Davood Nematollahi, Maryam Farhadian.UIO-66-NH2 Packed Needle Trap for Accurate and Reliable Sampling and Analysis of the Halogenated Volatile Organic Compounds in Air, International Journal of Environmental Analytical Chemistry, 2021, 101(2): 263–280.*

20- *Rouhollah Parvari, Farshid Ghorbani-Shahna*[*]*, Abdulrahman Bahrami, Saeid Azizian, Mohammad Javad Assari, Maryam Farhadian. A novel core-shell structured α-Fe_2O_3/Cu/g-C_3N_4 nanocomposite for continuous photocatalytic removal of air ethylbenzene under visible light irradiation, Journal of Photochemistry and Photobiology A: Chemistry, 2020, 399, 112643.*

21- *Razzagh Rahimpoor, Abdulrahman Bahrami, Davood Nematollahi, Farshid Ghorbani Shahna, Maryam Farhadian. Application of zirconium-based metal–organic frameworks for micro-extraction by packed sorbent of urinary trans, trans-muconic acid, Journal of the Iranian Chemical Society, 2020, 17(9): 2345-2358.*

22- *Rouhollah Parvari, Farshid Ghorbani-Shahna*[*]*, Abdulrahman Bahrami, Saeid Azizian, Mohammad Javad Assari, Maryam Farhadian. α-Fe_2O_3/Ag/g-C_3N_4 core-discontinuous shell nanocomposite as an indirect Z-scheme photocatalyst for degradation of ethylbenzene in air under white LEDs irradiation, Catalysis Letters, 2020, 150(12): 3455-3469.*

23- *Negar Saedi, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Majid Habibi Mohraz, Maryam Farhadian, Saber Alizadeh. A needle trap device packed with MIL - 100 (Fe) metal*

organic frameworks for efficient headspace sampling and analysis of urinary BTEXs, Biomedical Chromatography, 2020, 34(4): e4800.

24- *Fereshteh Mehri, Ensiyeh Jenabi, Saeed Bashirian, Farshid Ghorbani Shahna, Salman Khazaei. The association between occupational silica exposures as a risk of rheumatoid arthritis: a meta-analysis, Safety and Health at Work, 2020, 11(2): 136-142.*

25- *Pejman Mohammadi, Farshid Ghorbani-Shahna*, Abdulrahman Bahrami, Amir Abbas Rafati, Maryam Farhadian. Plasma-photocatalytic degradation of gaseous toluene using SrTiO3/rGO as an efficient heterojunction for by-products abatement and synergistic effects, Journal of Photochemistry and Photobiology A: Chemistry, 2020, 394, 112460.*

26- *Zahra Pirmohammadi, Abdulrahman Bahrami, Davood Nematollahi, Saber Alizadeh, Farshid Ghorbani Shahna, Razzagh Rahimpoor. Determination of urinary methylhippuric acids using MIL - 53- NH $_2$ (Al) metal–organic framework in microextraction by packed sorbent followed by HPLC –UV analysis, Biomedical Chromatography, 2020;34:e4725.*

27- *Ali Firoozichahak, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Saber Alizadeh, Davood Nematollahi, Maryam Farhadian. Development of a needle trap device packed with titanium based metal organic framework sorbent for extraction of phenolic derivatives in air, Separation Science, 2020, 43(5): 1011-1018.*

28- *Farzaneh Mollabahrami, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna, Esmaeel Soleimani. Developing a Method for Determination of Urinary Delta-Amino-Levulinic Acid using Molecularly Imprinted Polymers, CHEMISTRY & CHEMICAL TECHNOLOGY, 2020, 14(3): 334-342.*

29- *Ali Poormohammadi, Abdulrahman Bahrami, Alireza Ghiasvand, Farshid Ghorbani Shahna, Maryam Farhadian. Preparation of Carbotrap/silica composite for needle trap field sampling of halogenated volatile organic compounds followed by gas chromatography/mass spectrometry determination, Journal of Environmental Health Science and Engineering, 2019, 17: 1045-1053.*

30- *Zahra Ghalichi Zave, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Maryam Farhadian, Application of a needle trap device packed with XAD-2 polyaniline composite for sampling naphthalene and phenanthrene in air, Journal of Chromatography A, 2019, 1062:74-82.*

31- *Ali Firoozichahak, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Saber Alizadeh, Davood Nematollahi, Maryam Farhadian. UIO-66-NH2 Packed Needle Trap for Accurate and Reliable Sampling and Analysis of the Halogenated Volatile Organic Compounds in Air, International Journal of Environmental Analytical Chemistry, 2019.*

32- *Ehsan Partovi, Abdulrahman Bahrami, A AfKhami, Farshid Ghorbani Shahna, Farhad Ghamari. Development of Membrane Hollow Fiber for Determination of Maleic Anhydride in Ambient Air as a Field Sampler, Annals of work exposures and health, 2019, 63(7):797-805.*

33- *Shiva Soury, Abdulrahman Bahrami, Saber Alizadeh, Farshid Ghorbani Shahna, Davood Nematollahi. Development of a needle trap device packed with zinc based metal-organic framework sorbent for the sampling and analysis of polycyclic aromatic hydrocarbons in the air, Microchemical Journal, 2019, 148: 346-354.*

34- *Razzagh Rahimpoor, Abdulrahman Bahrami, Davood Nematollahi, Farshid Ghorbani Shahna, Maryam Farhadian. Facile and sensitive determination of urinary mandelic acid by*

combination of metal organic frameworks with microextraction by packed sorbents. Journal of Chromatography B, 2019, 1114: 45-54.

35- *Maryam Feiz-Arefi, Farshid Ghorbani-Shahna*, Abdulrahman Bahrami, Hossein Ebrahimi, Alireza Mahjub. Photocatalytic removal of methylbenzene vapors by MnO2/Al2O3/Fe2O3 nano composite. Iranian Journal of Health, Safety and Environment, 2019, 6(1): 1158-1166.*

36- *Hamid Reza Samadi, Farshid Ghorbani Shahna*, Abdulrahman Bahrami. Design and Evaluation of Local Ventilation System and Packed Bed Scrubber to Control Hydrogen Sulfide Emitted from the Dryer Machines of a Cardboard Company, Journal of Occupational Hygiene Engineering, 2019, 6(1): 8-16.*

37- *Ali Poormohammadi, Abdulrahman Bahrami, Alireza Ghiasvand, Farshid Ghorbani Shahna, Maryam Farhadian. Application of needle trap device packed with Amberlite XAD-2 resin prepared by sol-gel method for reproducible sampling of aromatic amines in air, Microchemical Journal, 2018, 143: 127-132.*

38- *Saeed Jafari, Farshid Ghorbani-Shahna*, Abdulrahman Bahrami, Hossein Kazemian. Adsorptive removal of toluene and carbon tetrachloride from gas phase using Zeolitic Imidazolate Framework-8: Effects of synthesis method, particle size, and pretreatment of the adsorbent. Microporous and Mesoporous Materials, 2018, 268:58-68.*

39- *Kamal ad-Din Abedi, Farshid Ghorbani-Shahna*, Abdulrahman Bahrami, Hossein Ebrahimi, Afshin Maleki, Faramarz Madjidi, Saeed Musavi, Ebrahim Mohammadi, Omid Giahi. Effect of TiO_2/GAC and water vapor on chloroform decomposition in a hybrid plasma-catalytic system, Environmental technology, 2018, 39(16): 2041-2050.*

40- *Elnaz Taheri, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Maryam Farhadian. Evaluation of a novel hollow fiber membrane technique for collection of 1, 1-dimethylhydrazine in air, Environmental monitoring and assessment, 2018, 190(8): 479.*

41- *Samaneh Salari, Abdulrahman Bahrami, Farhad Ghamari, Farshid Ghorbani Shahna. Multivariate optimization of the hollow fiber-based liquid phase microextraction of lead in human blood and urine samples using graphite furnace atomic absorption spectrometry, Chemical Papers, 2018, 79(8): 1945-1952.*

42- *Saeed Jafari, Farshid Ghorbani-Shahna*, Abdulrahman Bahrami and Hossein Kazemian. Effects of Post-Synthesis Activation and Relative Humidity on Adsorption Performance of ZIF-8 for Capturing Toluene from a Gas Phase in a Continuous Mode. Applied Sciences, 2018, 8 (2): 310.*

43- *Maryam Feiz Arefi, Farshid Ghorbani Shahna*, Azam Karamimosafer. Qualitative Evaluation of the Performance of Chemical Fume Hoods Located in the Laboratories of the University of Medical Sciences in 2017, Journal of Occupational Hygiene Engineering, 2018, 5(1): 1-7.*

44- *Abdulrahman Bahrami, Farhad Ghamari, Yadollah Yamini, Farshid Ghorbani Shahna, Ali Koolivand, Ion-pair-based hollow-fiber liquid-phase microextraction combined with high-performance liquid chromatography for the simultaneous determination of urinary benzene, toluene, and styrene metabolites, Journal of separation science, 2018, 41(2): 501-508.*

45- *Esmaeel Soleimani, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna. Selective determination of mandelic acid in urine using molecularly imprinted polymer in microextraction by packed sorbent. Archives of toxicology, 2018, 92 (1): 213-222.*

46- *Saeed Jafari, Farshid Ghorbani*[*]*, Abdulrahman Bahrami, Hossein Kazemian, Saeed Yousefinejad. Removal of Toluene from Air by Zeolitic Imidazolate Framework-8: Synthesis, Characterization, and Experimental Breakthrough Curve. International Journal of Scientific Study, 2017, 5(4): 1073-1082.*

47- *Abdulrahman Bahrami, Farhad Ghamari, Yadollah Yamini, Farshid Ghorbani Shahna, Ali Koolivand, Ion-pair-based hollow-fiber liquid-phase microextraction combined with high-performance liquid chromatography for the simultaneous determination of urinary benzene, toluene, and styrene metabolites, Journal of separation science, 2018, 41(2): 501-508.*

48- *Farshid Ghorbani Shanh, Samira Rahimnejad, Abdulrahman Bahrami, Maryam Farhadian. Risk Assessment of Workers' Exposure to Volatile Organic Compounds in the Air of a Petrochemical Complex in Iran, Indian Journal of Occupational and Environmental Medicine, 2017, 21(34):121-127.*

49- *Mahdi Jamshidi-Rastani, Farshid Ghorbani Shahna*[*]*, Abdolrahman Bahrami, Somayeh Hosseini, Abdullah Barkhordari. An applied method to check the hoods design parameters of local exhaust ventilation system a steel making company. Health and Safety at Work, 2017, 7(4): 291-306.*

50- *Ali Poormohammadi, Abdulrahman Bahrami, Maryam Farhadian, Farshid Ghorbani Shahna, Alireza Ghiasvand. Development of Carbotrap B-packed needle trap device for determination of volatile organic compounds in air. Journal of Chromatography A. 2017, 1527: 33-42.*

51- *Esmaeel Soleimani, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna. Rapid analysis of trans, trans-muconic acid in urine using microextraction by packed sorbent. Toxicology and Environmental Health Sciences, 2017, 9(5): 317-324.*

52- *Farshid Ghorbani Shahna , Abdulrahman Bahrami , Hossein Ebrahimi , Kamal ad-Din Abedi. The hybrid effect of non-thermal plasma and activated carbon-zinc oxide nanocomposite on the removal of volatile organic compounds in air. Iran Occupational Health. 2017, 14(3): 13-24.*

53- *Hossein Ebrahimi , Abdulrahman Bahrami , Mahmoud Nasrollahzadeh , Iraj Alimohammadi , Babak Jaleh , Kamaleddin Abedi ,Farshid Ghorbani Shahna , Sayed Hosein Tabatabaei. The purfication of chloroform vapors using a novel non-thermal plasma reactor. Iran Occupational Health. 2017, 14(3):75-84.*

54- *Esmaeel Soleimani, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna. Determination of urinary trans,trans-muconic acid using molecularly imprinted polymer in microextraction by packed sorbent followed by liquid chromatography with ultraviolet detection. Journal of Chromatography B, 2017, 1061-1062: 65-71*

55- *Farhad Ghamari, Abdulrahman Bahrami, Yadollah Yamini, Farshid Ghorbani Shahna, Abbas Moghimbeigi. Hollow-fiber liquid-phase microextraction based on carrier-mediated transport for determination of urinary methyl hippuric acids. Toxicological & Environmental Chemistry. 2017, 99 (5-6): 760-771.*

56- *Morteza Babaei, Abdolrahman Bahrami, Farshid Ghorbani Shahna. Control of fugitive dust emitted by combination of water spray and industrial ventilation as an efficient and economical solution at a mining company. Iran Occupational Health. 2017, 14(2): 135-146.*

57- *Farshid Ghorbani Shahna, Mohammad Javad Assari, Javad Farad Mal, Arefe Jafar Zade Kolne Lu, Hosna Hatami. Assessment of Occupational Exposure to Formaldehyde in Hiar Dressers Work in Kermanshah and Hamadan Female Beatuy Salons. Iran Occupational Health. 2017, 14(2):127-134.*

58- *Hossein Ebrahimi, Farshid Ghorbani Shahna, Abdulrahman Bahrami, Babak Jaleh. Photocatalytic degradation of volatile chlorinated organic compounds with ozone addition. Archives of Environmental Protection, 2017, 43(1): 65-72.*

59- *Abdulrahman Bahrami, Farhad Ghamari, Yadollah Yamini, Farshid Ghorbani Shahna, Abbas Moghimbeigi. Hollow Fiber Supported Liquid Membrane Extraction Combined with HPLC-UV for Simultaneous Preconcentration and Determination of Urinary Hippuric Acid and Mandelic Acid. Membrane, 2017, 7(1): 1-13.*

60- *Zahra Moradpour, Farshid Ghorbani Shahna, Abdulrahman Bahrami, Alireza Soltanian, Ghasem Hesam. Evaluation of Volatile Organic Compounds at Petrochemical Complexes in Iran. Health Scope, 2017, 6(4); e62595*

61- *Majid Akbari, Adorahman Bahrami,Farshid GHorbani Shahna. EVALUATING THE EFFECTIVENESS OF PUSH-PULL VENTILATION SYSTEM FOR CONTROLLING LEAD, ZINC AND SULFURIC ACID EMITTED FROM ZINC ELECTROLYSIS UNITS OF A ZINC PRODUCTION INDUSTRY. JOURNAL OF OCCUPATIONAL HYGIENE ENGINEERING, 2017, 4 (1): 56-65.*

62- *Leila Tajik, Abdulrahman Bahramir, Alireza Ghiasvand, Farshid Ghorbani Shahna. Determination of BTEX in urine samples using cooling/heating-assisted headspace solid-phase microextraction. Chemical Papers, 2017, 71 (10): 1829-1838.*

63- *Leila Tajik, Abdulrahman Bahramir, Alireza Ghiasvand, Farshid Ghorbani Shahna. Determination of benzene, toluene, ethylbenzene and xylene in field and laboratory by means of cold fiber SPME equipped with thermoelectric cooler and GC/FID method. Polish Journal of Chemical Technology, 2017, 19 (3), 9-15.*

64- *Farshid Ghorbani Shahna, Abdulrahman Bahrami, Iraj Alimohammadi, Rassuol Yarahmadi, Babak Jaleh, Mastaneh Gandomi, Hossein Ebrahimi, Kamal Ad-Din Abedi. Chlorobenzene degeradation by non-thermal plasma combined with EG-TiO 2/ZnO as a photocatalyst: Effect of photocatalyst on CO_2 selectivity and byproducts reduction. Journal of Hazardous Materials, 2017, 324: 544-553.*

65- *Mahdi Jamshidi Rastani, Farshid Ghorbani Shahna, Abdolrahman Bahrami, Somayeh Hosseini. Study of Venturi scrubber efficiency in collection of Fe_2O_3 airborne dust at an iron making unit. Iran Occupational Health, 13 (3): 33-46.*

66- *Mahdi Jamshidi Rastani, Farshid Ghorbani Shahna, Abdolrahman Bahrami, Somayeh Hosseini. Evaluation of local exhaust ventilation system performance for control of Fe_2O_3 dust at an iron making unit. Health and Safety at Work, 2016, 6 (2): 43-56.*

67- *Ghavameddin Attari, Abdolrahman Bahrami, Farshid Ghorbani Shahna, Mahmoud Heidari. Application of synthesized multi-walled carbon nanotube based on sol-gel technique for*

determination of carbon tetrachloride in the air by solid-phase microextraction. Iran Occupational Health. 2016, 13 (2): 69-78.

68- *Sara karimi zeverdegani, Abdulrahman bahrami, Masoud rismanchian, Farshid ghorbani shahna. Extraction of toluene and methyl ethyl ketone from aquatic samples with NTD technique and nano sorbent. Iran Occupational Health, 13 (2), 10-16.*

69- *Sara Karimi Zeverdegani, Abdulrahman Bahrami, Masoud Rismanchian, Farshid Ghorbani Shahna. Developed a needle trap device with PDMS sorbent for microextraction of toluene and methyl ethyl ketone from aquatic samples using dynamic headspace. Journal of Occupational Hygiene Engineering, 2016, 3 (2): 41-46.*

70- *Morteza Babaei, Farshid Gorbani Shahna, Abdolrahman Bahrami. Comparative study of cost-benefit integrated system of water spary with industrial ventilation and bag filters in a minerals processing company. Journal of Occupational Hygiene Engineering, 2016 3 (1): 41-50.*

71- *Farhad Ghamari, Abdulrahman Bahrami, Yadollah Yamini, Farshid Ghorbani Shahna, Abbas Moghimbeigi. Development of Hollow-Fiber Liquid-Phase Microextraction Method for Determination of Urinary trans, trans-Muconic Acid as a Biomarker of Benzene Exposure. Analytical chemistry insights, 2016, 11: 65-71.*

72- *Mahmoud Heidari, Abdolrahman Bahrami, Ali Reza Ghiasvand, Farshid Ghorbani Shahna, Ali Reza Soltanian, Maryam Rafieiemam. Application of graphene nanoplatelets silica composite, prepared by sol–gel technology, as a novel sorbent in two microextraction techniques. Journal of separation science, 2015, 38 (24): 4225-4232.*

73- *Farshid Ghorbani Shahna, AbdulrahmanBahrami, BabakJaleh, HosseinEbrahimi. Decomposition of gas-phase chloroform using nanophotocatalysit downstream the novel non-thermal plasma reactor: by-product elimination. International journal of environmental science and technology, 2015, 12 (11): 3489-3498.*

74- *Seyed Ghavameddin Attari, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Mahmoud Heidari. Single-walled carbon nanotube/silica composite as a novel coating for solid-phase microextraction fiber based on sol-gel technology. Journal of analytical chemistry, 2015, 70 (10): 1192-1198.*

75- *Abdul-Majid Garkaz, Farshid Ghorbani-Shahna, Mohammad Javad Asari, Javad Faradmal. The designing and assessment of a local exhaust ventilation system coupled with hybrid collectors for air pollution control of an alloy steel company. Iran Occupational Health, 2015, 12(1): 38-46.*

76- *Hossein Ebrahimi, Abdulrahman Bahrami, Babak Jaleh, Farshid Ghorbani Shahna. Gaseous chlorobenzene degradation by a novel non-thermal plasma reactor. Fresenius Environmental Bulletin. 2015, 24(5): 1871-1878.*

77- *Kamaladdin Abedi, Farshid Ghorbani-Shahna, Abdolrahman Bahrami, Babak Jaleh, Rasoul Yarahmadi. Effect of TiO2-ZnO/GAC on by-product distribution of CVOCs decomposition in a NTP-assisted catalysis system. Polish Journal of Chemical Technology, 2015, 17 (1): 32-40.*

78- *Ghasem Hesam, Farshid Ghorbani Shahna, Abdulrahman Bahrami. Survey of air pollutants emitted from rendering plant of poultry slaughterhouse and design of local ventilation system*

and suitable collector for control and treatment.. Iranian Journal of Health and Environment, 2015, 7(4): 469-479.

79- *Mahdi Jamshidi Rastani, Farshid Ghorbani Shahna, Abdolrahman Bahrami, Somayeh Hosseini. Evaluation of local exhaust ventilation efficiency to control emissions of fe2o3 dust in ambient air of the oxide screen unit in steel industry. Knowledge and Health, 2015, 9(4): 68-75.*

80- *Chiman Saeidi, Mohammad Javad Asari, Farshid Ghorbani-Shahna, Zahra Khamverdi. Removal of mercury vapor from ambient air of dental clinics using an air cleaning system based on silver nanoparticles. Journal of Occupational Hygiene Engineering, 2 (1): 1-10.*

81- *Kamaleddin Abedi, Farshid Ghorbani-Shahna,, Babak Jaleh, Abdolrahman Bahrami, Rasoul Yarahmadi, Rouzbeh Haddadi, Mastaneh Gandomi. Decomposition of chlorinated volatile organic compounds (CVOCs) using NTP coupled with TiO2/GAC, ZnO/GAC, and TiO2–ZnO/GAC in a plasma-assisted catalysis system, Journal of Electrostatics, 73: 80-88.*

82- *Mahmoud Heidari, Abdolrahman Bahrami, Ali Reza Ghiasvand, Maryam Rafiei Emam, Farshid Ghorbani Shahna, Ali Reza Soltanian. Graphene packed needle trap device as a novel field sampler for determination of perchloroethylene in the air of dry cleaning establishments. Talanta, 2015, 131: 142-148.*

83- *Mohsen Moradi, Farshid Ghorbani Shahna, Abdulrahman Bahrami, Mansour Reza Zadeh Azeri. Design, Implementation & Assessment of Local Exhaust Ventilation System and dust collectors for crushing unit. Journal of Occupational Hygiene Engineering, 2015, 2(2): 32-42.*

84- *zahra Moradpour, amir reza negahban, Abdolrahman barami, Alireza Sultanian, Farshid Ghorbani Shahna. Seasonal comparison of emissions of volatile organic compounds in the chemical industry based on oil during the years 1391 and 1392. Iran Occupational Health, 2014, 11 (6), 52-60.*

85- *Seyed Ghavameddin Attari, Abdolrahman Bahrami, Farshid Ghorbani Shahna, Mahmoud Heidari. Solid-phase microextraction fiber development for sampling and analysis of volatile organohalogen compounds in air, Journal of Environmental Health Science and Engineering, 2014,12(1):123*

86- *Kamaleddin Abedi, Farshid Ghorbani-Shahna, Babak Jaleh, Abdolrahman Bahrami, Rasoul Yarahmadi. Enhanced performance of non-thermal plasma coupled with TiO 2/GAC for decomposition of chlorinated organic compounds: influence of a hydrogen-rich substance. Journal of Environmental Health Science and Engineering, 2014, 12(1): 119.*

87- *Sara Karimi Zeverdegani, Abdulrahman Bahrami, Farshid Ghorbani Shahna, Masoud Rismanchian, Mahmoud Heidari. Determination of toluene by needle trap micro-extraction with carbon nanotube sol-gel and polydimethylsiloxane sorbents. Analytical Letters, 2014, 47(13): 2165-2172.*

88- *Razagh Rahimpoor , Abdu Rahman Bahrami, Farshid Ghorbani, Mohammad Javad Assari, Amir Reza Negahban, Samira Rahimnejad. Evaluation of Urinary Metabolites of Volatile Organic Compounds and Some Related Factors in Petrochemical Industry Workers. Journal of Mazandaran University Medical Sciences, 2014, 24(116): 119-131.*

89- *Sara Karimi Zeverdegani, Abdulrahman Bahrami, Masoud Rismanchian, Farshid Ghorbani Shahna. Analysis of xylene in aqueous media using needle-trap microextraction with a carbon nanotube sorbent. Journal of separation science, 2014, 37(14): 1850-1855.*

90- *Mohammad Reza Samarghandi, Seyed Alireza Babaee, Mohammad Ahmadian, Ghorban Asgari, Farshid Ghorbani Shahna, Ali Poormohammadi. Performance Catalytic Ozonation over the Carbosieve in the Removal of Toluene from Waste Air Stream. Journal of Research in Health Sciences, 2014, 14(3): 227-232.*

91- *Mohamadreza Samarghandi, Alireza Babaee, Ghorban Asgari, Farshid Ghorbani Shahna. Survey the Efficiency of Catalytic Ozonation Process with Carbosieve in the Removal of Benzene from Polluted Air Stream. Scientific Journal of Hamadan University of Medical Sciences. 2014, 20(4), 303-311.*

92- *Samira Rahimnejad , Abdorrahman Bahrami, Mohammadjavad Asari, Alireza Soltaniyeh, Razagh Rahimpoor, Seyyed Amirreza Negahban, Farshid Ghorbani shahna* . Quantitative risk assessment of occupational exposure to Volatile Organic Compounds in the oil-dependent chemical industry, Quarterly Journal of Sabzevar University of Medical Science, 2014, 21(5), 829-841.*

93- *Nematullah Kurd, Abdulrahman Bahrami, Mahmoud Heidari. Application of Solid Phase Microextraction followed by chromatograph-Flame Ionization Detector for Sampling and Analysis of Acetonitrile in Air. International Journal of Occupational Hygiene, 2013, 5(4): 177-183.*

94- *Mahmoud Heidari, Abdolrahman Bahrami*, Ali Reza Ghiasvand, Farshid Ghorbani Shahna, Ali Reza Soltanian. A needle trap device packed with a sol-gel derived, multi-walled carbon nanotubes/silica composite for sampling and analysis of volatile organohalogen compounds in air. Analytica Chemica Acta,2013, 758: 67-74.*

95- *Farshid Ghorbani –Shahna, Rostam Golmohamadi, Reza Shahidi. Study on the performance of wet electroscrubber in purifying airborne particles. Journal of Research in Health Science. 2013, 13(2):*

96- *Edris Hoseinzadeh, Mohammad Reza Samarghandi, Farshid Ghorbani Shahna & Ebrahim Chavoshi. Isoconcentration mapping of particulate matter in Hamedan intercity bus stations. Water and Environ Journal, 2013, 27(3): 418-424.*

97- *Rohollah Maghsoodi Moghadam, Abdulrahman Bahrami, Farshid Ghorbani, Hossein Mahjub, Dariush Malaki. Investigation of Qualitative and Quantitative of Volatile Organic Compounds of Ambient Air in the Mahshahr Petrochemical Complex In 2009. Journal of Research in Health Science. 2013, 13(1): 69-74.*

98- *Hossein Amjadsoroudi, Farshid Ghormani shahna*, Abdorahman Bahrami , Javad Fardmal. Assessing Electrocyclone Performance in Collecting Smaller than 1 µm Silica Airborne Particles. Iranian Journal of Health and Environment. 2013, 6(1), 45-54.*

99- *Iraj Mohammadfam, eidar. Mohamadi, Farshid Ghorbani Shahna, Alireza Soltanian. Introducing a Framework for competency based Selection of Health, Safety and Environment (HSE) Managers. Journal of Health and Safety at Work. 2013, 3(1), 1-10.*

100- *Farshid Ghorbani Shahna, Abdulrahman Bahrami, Farhad Farasati. Application of Local Exhaust Ventilation System and Integrated Collectors for Control of Air Pollutants in Mining Company. Industrial Health, 2012, 50: 450-57.*

101- *Mahmoud Heidari, Abdulrahman Bahrami, AliReza Ghiasvand, FarshidGhorbaniShahna, Ali RezaSoltanian. A novel needle trap device with single wall carbon nanotubes sol–gel sorbent packed for sampling and analysis of volatile organohalogen compounds in air. Talanta, 2012, 101: 314–321.*

102- *Athena Rafieepour, Farshid Ghorbani Shahna, Zahra Hashemi, Farhad Ghamari. Measurement of Benzene in Air by Iranian Single-Wall Carbon Nanotubes. Iranian Journal of Toxicology, 2012, 5(15): 535-40.*

103- *Iraj Mohammadfam, Farshid Ghorbani Shahna, Alireza. Soltanian, Mojgan Ardestani. . Journal of Health and Safety at Work. 2012, 2(4), 1-10.*

104- *Edris Hoseinzadeh, Mohammad Reza Samarghandy, Farshid Ghorbani Shahna, Ghodratollah Roshanaei, Javad Jafari. Rate of Suspended Particulate Distribution (PM2.5, PM10 and TSP) in Hamadan Main Intercity Bus Stations and Its Exposure Rate. Health System Research. 2012 ,8 (7),1245-1254.*

105- *Farshid Ghorbani Shahna, Faride Golbabaei, Javad Hamedi, Hossein Mahjub, Hossein Reza Darabi and Seyed Jamaladdin Shahtaheri. Treatment of Benzene, Toluene and Xylene Contaminated Air in a Bioactive Foam Emulsion Reactor. Chinese Journal of Chemical Engineering, 2010, 18(1): 113-121.*

106- *Rostam Golmohammadi, Farshid Ghorbani, Hosein Mahjub, Zohreh Daneshmehr. STUDY OF SCHOOL NOISE IN THE CAPITAL CITY OF TEHRAN, IRAN. Iran. Journal of Environ. Health. Sci. Eng, 2010, 7(4): 361-66.*

107- *Farshid Ghorbani Shahna, Faride Golbabaei, Javad Hamedi, Hossein Mahjub, Hossein Reza Darabi and Seyed Jamaladdin Shahtaheri. Bioactive foamed emulsion reactor for the treatment of benzene-contaminated air stream. Bioprocess and Biosystems Engineering. 2010, 33(2): 219-226.*

108- *Abdulrahman Bahrami, Farshid Ghorbani, Hossien Mahjub, Farideh Golbabaei, Mohsan Aliabadi. Application of Traditional Cyclone with Spray Scrubber to Remove Airborne silica Particles Emitted from Stone-crushing Factories. Industrial Health, 2009, 47(4): 436-42.*

109- *AbdulRahman bahrami, faridah golbabai, Hossein mahjub,Farshid Ghorbani, Mohsan aliabadi and Mohamadali barqi. Determination of Exposure to Respirable Quartz in the stone Crushing Units at Azandarian-West of Iran. Industrial Health, 2008, 46(4):404-408.*

110- *Bahrami A, Ghorbani F, Mahjub H, Aliabadi M. Effects of Velocity and Particles Load on Efficiency of Cyclone in the Stone Crushing Units at Azendarian Area. Journal of Research in Health Science. 2008, 8(1): 12-17.*

111- *Farshid Ghorbani Shahna, Mahboobeh Eshaghi, Zohre Karami. Assessment of Extremely Low Frequency (ELF) Electric and Magnetic Fields in Hamedan High Electrical Power Stations and their Effects on Workers. Iranian Journal of Medical Physics. 2011, 8 (32), 61-71.*

112- *Majid Bayatian, Abdolrahman Bahrami, Rostam Golmohammadi, Farshid Ghorbani Shahna. Study of water droplets on the electrical Charging Effect on Spray Tower Scrubber Efficiency for Feldspar Particles removal. Iran Occupational Health. 2012, 8(4), 61-69.*

113- *R MAGHSOODI, A BAHRAMI, H MAHJOOB, F GHORBANI. EVALUATION OF BENZENE, TOLUENEAND P, M&O-XYLENE CONTAMINANTS AT MAHSHAHR PETROCHEMICAL COMPLEX DURING 2008-9. JOURNAL OF ILAM UNIVERSITY OF MEDICAL SCIENCES. 2011, 19(2), 49-59.*

114- *Majid Bayatian; Abdolrahman Bahrami; Rostam Golmohammadi; Farshid Ghorbani Shahna. The Comparison of Electrical Charging Effect on Efficiency of Spray Tower Scrubber in Removal of Silica Particles. Journal of Environmental Science and Technology. 2012, 13(4), 15-26.*

115- *Farshid Ghorbani Shahna, Farideh Golbabaei, J Hamedi. Bioactive Foamed Emulsion Reactor: A New Technology for Biotreatment of Airborne Volatile Organic Compound. Scientific Journal of Hamadan University of Medical Sciences. 2010 17 (1), 5-16.*

116- *Rostam Golmohammadi, Farshid ghorbani, Hossein Mahjoub, Zohreh Daneshmehr. Study of noise pollution and acoustic condition of the Tehran schools. Journal of Environmental Science and Technology. 2010, 12(1), 29-38.*

117- *Mohsen Aliabadi, Abdorrahman Bahrami, Farideh Golbabae, Farshid Ghorbani. Comparative Study of Efficiency using of Cyclone, Spray Scrubber and integrated system of cyclone- spray scrubber to collect Silica Particles in stone Crushing Workshops. Journal of Environmental Science and Technology. 2010, 12(2), 71-77.*

118- *Farshid Ghorbani Shahna, Mohsen Rahimnejad. Influence of a temperature gradient and fluid inertia on acoustic streaming in a standing wave and application for thermoacoustic engine and refrigerators. Journal of Environmental Science and Technology. 2008, 10(1), 113-125.*

119- *Farshid Ghorbani Shahna. Noise induced hearing loss and its relationship with dose and exposure length. The Journal of Qazivin University of Medical Science, 2006, 10(1), 84-88.*

120- *Farshid Ghorbani Shahna, Ahmad Joneidi Jafari, Rasoul Yousefi Mashouf, Mohamad Mohseni, Javad Shirazi. Type and Concentration of Bioaerosols in the Operating Room of Educational Hospitals of Hamadan University of Medical Sciences and Effectiveness of Ventilation Systems, in Year 2004, Scientific Journal of Hamadan University of Medical Sciences. 2006, 13(2), 64-71.*

121- *Farshid Ghorbani Shahna, Faride Golbabaei. Presenting of Local Exhaust Ventilation System for Control of Air Pollution in Press Workshop of Rubber Pieces Industry. The Journal of Shahid Sadoughi University of Medical Science, 2004, 12(1), 57-66*

122- *Farshid Ghorbani Shahna, Iraj Mohamadfam, Faride Ghalavand. Assessment of Electromagnetic Field around the Computers in Hamadan University of Medical Science and Its Effect on Operators Health in 2004. Scientific Journal of Kurdistan University of Medical Science. 2004, 9(1), 13-22.*

123- *Abdolrahman Bahrami, Farshid Ghorbani. Study of the Respiratory Capacities in the Workers of Stone-Crushing and Grinding Centers and the Distribution of Silica Compounds in the Ambient Air. Journal of Sabzevar School of Medical Sciences, 2001,7(4),*

124- *Farshid Ghorbani, Abdulrahman Behrami. Evaluation of factories accidents in hamedan in 1376. Pajouhan Scientific Journal. 1997, 1(3), 1-5.*

B) Books:

1- *Farshid Ghorbani-Shahna, Design and Application of Scrubbers for Air Pollution Control. Tehran: Fanavaran, 2013.*

2- *Farshid Ghorbani-Shahna, A Guide to Proper Disposal of Chemicals, Tehran: Institute for Environmental Research, 2013.*

3- *Farshid Ghorbani-Shahna, A Guide to Selection and Application of Personal Protective Equipment at Workplace, Tehran: Institute for Environmental Research, 2014.*

4- *Farshid Ghorbani-Shahna, A Guide to Pesticide Exposure Control. Tehran: Institute for Environmental Research, 2014.*

5- *Farshid Ghorbani-Shahna, OEL Assessment Guideline for Mixture of Chemical Agents (OEL-MC-9502), Tehran: Environmental and Occupational Health Center, 2017.*

6- *Farshid Ghorbani-Shahna, OEL Assessment Guideline Adjustment for Chemical Agents in Unusual Work schedules (OEL-MC-9501), Tehran: Environmental and Occupational Health Center, 2017.*