

## مشخصات و سوابق

### ۱- مشخصات فردی

نام و نام خانوادگی: فرشید قربانی شهنا  
مرتبۀ علمی: استاد  
شغل: عضو هیئت علمی دانشکده بهداشت دانشگاه علوم پزشکی همدان از سال ۱۳۸۱ تا کنون  
زمینه تخصصی کاری: عوامل شیمیایی، تهویه صنعتی، ارزیابی و کنترل آلودگی هوا  
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### ۲- سوابق علمی و تحصیلی:

- فارغ التحصیل دوره دکتری مهندسی بهداشت حرفه ای در سال ۱۳۸۸ از دانشگاه علوم پزشکی تهران
- فارغ التحصیل دوره کارشناسی ارشد مهندسی بهداشت حرفه ای در سال ۱۳۸۰ از دانشگاه علوم پزشکی تهران
- فارغ التحصیل دوره کارشناسی مهندسی بهداشت حرفه ای در سال ۱۳۷۷ از دانشگاه علوم پزشکی همدان

### ۳- سوابق آموزشی

- الف- عضو هیئت علمی دانشکده بهداشت دانشگاه علوم پزشکی همدان به مدت بیش از ۱۹ سال و مدرس دروس تهویه صنعتی، کنترل آلودگی شیمیایی محیط کار، کنترل آلودگی هوا، بهداشت پرتوها، تنشهای حرارتی در محیط کار، نمونه برداری از آلاینده های هوا، سم شناسی نوین، نظریه های پلایش هوا و ... در مقاطع کارشناسی، کارشناسی ارشد و دکتری رشته های مهندسی بهداشت حرفه ای، مدیریت *HSE* و مهندسی بهداشت محیط در طی مدت کاری
- ب- استاد راهنما و مشاور ۱۸ دانشجوی دکتری و ۳۷ دانشجوی کارشناسی ارشد رشته های مهندسی بهداشت حرفه ای، مهندسی بهداشت محیط، مهندسی محیط زیست و *HSE*
- ج - مدرس حدود ۶۰ کارگاه و دوره آموزشی در زمینه های تهویه صنعتی (مقدماتی و پیشرفته)، بازرسی، آزمون و پایش سیستمهای تهویه، تصفیه کننده های هوا و روشهای پایش عملکرد آنها (عمومی و تخصصی)، روشهای نمونه برداری از آلاینده های هوا، ارزیابی آلاینده های هوا، ارزیابی ریسک، تهویه بیمارستانها، بهداشت صنعتی، مسائل و مشکلات مشاورین بهداشت حرفه ای در کارخانجات و ... در صنایع و سازمانهای مختلف

### ۴- رتبه ها و جوایز:

- رتبه اول آزمونهای کشوری دوره کارشناسی ارشد وزارت بهداشت و دانشگاه تربیت مدرس (سال ۱۳۷۸) و آزمون دکتری وزارت بهداشت (۱۳۸۳)
- رتبه اول کلیه مقاطع تحصیلی کارشناسی تا دکتری تخصصی
- کسب رتبه اول کشوری در حوزه طرح های ارتباط با صنعت وزارت بهداشت و درمان در سال ۱۳۹۶
- منتخب طرح برتر کشوری دومین نمایشگاه و جشنواره علم تا عمل، فناوری و تجاری سازی معاونت علمی ریاست جمهوری در سال ۹۰

- برگزیده چندین دوره پژوهشگر برتر دانشگاه علوم پزشکی همدان در حوزه های فناوری، ارتباط با صنعت و پژوهش
- برگزیده ۳ دوره فناور برتر استان همدان
- مدرس برتر چندین دوره دانشگاه علوم پزشکی همدان

#### ۵- سوابق اجرایی و مدیریتی

- رئیس دانشکده بهداشت همدان از سال ۱۳۹۶ تا کنون
- معاون تحصیلات تکمیلی دانشکده بهداشت از سال ۱۳۹۳ تا ۱۳۹۶
- رئیس مرکز تحقیقات بهداشت و ایمنی شغلی از سال ۱۳۹۷ تا کنون
- سردبیر مجله مهندسی بهداشت حرفه ای از سال ۱۳۹۳ تا کنون
- دبیر مرکز ارتباط با صنعت و جامعه دانشگاه علوم پزشکی همدان به مدت ۴ سال
- رئیس هیأت مدیره هسته فناور بهین نفس پالایه پورسینا
- Section Editor مجله Journal of Research in Health Sciences
- دبیر کارگروه کشوری عوامل شیمیایی کمیته فنی کشوری تدوین حدود مجاز مواجهه شغلی ایران در سال ۱۳۹۳
- دبیر اجرایی دوازدهمین همایش سراسری بهداشت و ایمنی کار
- عضویت در کمیته های علمی و اجرایی چهارمین، ششمین، هفتمین، هشتمین و یازدهمین همایش کشوری بهداشت حرفه ای ایران
- عضویت در کمیته های علمی کنگره ملی ارگونومی ۱۳۹۳
- مسئول کارگاه تهویه صنعتی و کنترل آلاینده های هوای دانشکده بهداشت همدان
- مسئول آزمایشگاه عوامل شیمیایی دانشکده بهداشت همدان و مسئول فنی آزمایشگاه تست ماسک های تنفسی
- عضویت در انجمن متخصصان بهداشت صنعتی ایران
- عضو کمیته فنی کشوری تدوین حدود مجاز مواجهه شغلی ایران در سال ۱۳۹۰
- عضویت در کمیته های کشوری کنترل سیلیس، کنترل عوامل زیان آور شیمیایی ریخته گری ها در وزارت بهداشت درمان و آموزش پزشکی
- معاون علمی و عضو کمیته راهبردی قطب علمی بهداشت حرفه ای کشور

۶- سوابق پژوهشی:

چاپ ۱۲۴ مقاله انگلیسی و فارسی در مجلات داخلی و خارجی

فهرست مقالات چاپ شده در مجلات معتبر:

- 1- Nematullah Kurd, Abdulrahman Bahrami, Abbas Afkhami, Farshid Ghorbani Shahna, Mohammad Javad Assari, Maryam Farhadian. *Hollow Polymer Nanospheres and Fe<sub>3</sub>O<sub>4</sub>@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 (HPs) 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 Motaghd, 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 Fe<sub>3</sub>O<sub>4</sub>@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 Rahimpour, 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 Nickel-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 CO<sub>2</sub> tracer gas, 2022, 71 (3): 771-778.
- 9- Farshid Ghorbani-Shahna, Saber Alizadeh, Abdulrahman Bahrami, Davood Nematollahi, Mohsen Yazdani-aval\*. Co<sub>3</sub>O<sub>4</sub>@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<sub>3</sub>/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, Saber Alizadeh, 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<sub>2</sub> coated packing for H<sub>2</sub>S removal, *Process Safety and Environmental Protection*, 2021, 149: 158–168.
- 17- Reza Aghababaei Talkhonche, Farshid Ghorbani-Shahna\*, Alireza Mohammadrezaei, Maryam Farhadian. NO<sub>2</sub> 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-NH<sub>2</sub> 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  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>/Cu/g-C<sub>3</sub>N<sub>4</sub> nanocomposite for continuous photocatalytic removal of air ethylbenzene under visible light irradiation, *Journal of Photochemistry and Photobiology A: Chemistry*, 2020, 399, 112643.
- 21- Razzagh Rahimpour, 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.  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>/Ag/g-C<sub>3</sub>N<sub>4</sub> 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 SrTiO<sub>3</sub>/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 Rahimpour. Determination of urinary methylhippuric acids using MIL -53-NH<sub>2</sub> (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-NH<sub>2</sub> 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 Rahimpour, 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 MnO<sub>2</sub>/Al<sub>2</sub>O<sub>3</sub>/Fe<sub>2</sub>O<sub>3</sub> 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<sub>2</sub>/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 Karamimosaefer. 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 Shan, 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\*, Abdulrahman 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 , Iraq Alimohammadi , Babak Jaleh , Kamaledin Abedi , Farshid Ghorbani Shahna , Sayed Hosein Tabatabaei. *The purification 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<sub>2</sub>/ZnO as a photocatalyst: Effect of photocatalyst on CO<sub>2</sub> 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<sub>2</sub>O<sub>3</sub> 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<sub>2</sub>O<sub>3</sub> 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, Abdulrahman Bahrami, Babak Jaleh, Hossein Ebrahimi. Decomposition of gas-phase chloroform using nanophotocatalysis 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 Yaradadi. Effect of TiO<sub>2</sub>-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 Fe<sub>2</sub>O<sub>3</sub> 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- Kamaledin 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 TiO<sub>2</sub>/GAC, ZnO/GAC, and TiO<sub>2</sub>-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, Abdolrahman 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- Kamaledin Abedi, Farshid Ghorbani-Shahna, Babak Jaleh, Abdolrahman Bahrami, Rasoul Yarahmadi. Enhanced performance of non-thermal plasma coupled with TiO<sub>2</sub>/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, Abdolrahman 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 Rahimpour , 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 Babae, 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 Babae, 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  $\mu$ m 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 (PM<sub>2.5</sub>, PM<sub>10</sub> 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 Hamed, 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 Hamed, 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, TOLUENE AND 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 Qazvin 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, Abdolrahman Behrami. Evaluation of factories accidents in hamedan in 1376. *Pajouhan Scientific Journal*. 1997, 1(3), 1-5.

ب- ارائه ۶۸ مقاله در همایش های داخلی و خارجی



## ج- تألیف و تدوین ۶ جلد کتاب

### فهرست کتب چاپ شده

- ۱- فرشید قربانی شهنا. طراحی و کاربرد اسکرابرها در کنترل آلودگی هوا. ۱۳۹۲. انتشارات فن آوران، تهران.
- ۲- فرشید قربانی شهنا. راهنمای امحاء مواد شیمیائی. ۱۳۹۱. مرکز سلامت محیط و کار وزارت بهداشت، پژوهشکده محیط زیست. تهران.
- ۳- فرشید قربانی شهنا. راهنمای انتخاب و استفاده صحیح از وسایل حفاظت فردی. ۱۳۹۲. مرکز سلامت محیط و کار وزارت بهداشت، پژوهشکده محیط زیست. تهران.
- ۴- فرشید قربانی شهنا. راهنمای کنترل مواجهه با آفت کش ها. ۱۳۹۲. مرکز سلامت محیط و کار وزارت بهداشت، پژوهشکده محیط زیست. تهران.
- ۵- فرشید قربانی شهنا. راهنمای تصحیح حدود مجاز مواجهه با عوامل شیمیایی برای برنامه های کاری غیرمعارف. ۱۳۹۵. مرکز سلامت محیط و کار وزارت بهداشت، انتشارات دانشجو.
- ۶- فرشید قربانی شهنا. راهنمای تصحیح حدود مجاز برای مخلوط ترکیبات شیمیایی. ۱۳۹۵. مرکز سلامت محیط و کار وزارت بهداشت، انتشارات دانشجو.

### د- مجری و همکار ۱۲ طرح پژوهشی و فناورانه

### ۷- سوابق پروژه های صنعتی

الف- مجری و همکار بیش از ۱۱۰ سیستم تهویه صنعتی و غبارگیرهای سیکلون، اسکرابر و بگ فیلتردر ۴۴ کارخانه سیلیس کوبی و فرآوری مواد معدنی دولومیت، فلدسپار، آهک، میکا، کک و کربنات در استان همدان شامل کارخانجات جهان سنگ، سخت کوبان، امید ازندریان، راهیان ایثار، شبکه پودر، بهمن سیلیس، محک سیلیس، ایلیا، شهاب سنگ ازندریان، رضوان ملایر، خانه میکا، سیلیس ایران، نگین ملایر، نارین سنگ باختر، موج سفید، آسیا سیلیس، مروارید سیلیس (۲ مجتمع)، مرجان سیلیس، آذر پودر، گستر پودر، ممتاز سیلیس، الوند سیلیس، شهاب پودر، برادران حاجی، برادران میرزایی ازندریان، ازندریان پودر، میهن سیلیس، کریستال سیلیس، سیلیس همدان، آراسنگ الوند، ملایر سیلیس، سهیل پودر، ازندریان سیلیس، تولیدی ابراهیمی، پارس کانی، درین سنگ، سیناکوب ملایر، برف سنگ، شهاب سنگ شوشاب، برادران میرزایی ملایر، تابان پودر، تولیدات معدنی نوشیجان، سلسیس نسوز پارس و ... از سال ۱۳۸۴ تا ۱۳۹۹.

- پروژه مذکور مورد تشویق معاونت سلامت وقت وزارت بهداشت قرار گرفته و به عنوان یکی از ۳۰ طرح برتر کشوری دومین نمایشگاه و جشنواره علم تا عمل، فناوری و تجاری سازی در سال ۹۰ انتخاب شده است.

### ب- مجری سیستم های تهویه و پالایشگرهای صنایع مختلف معدنی، شیمیایی، فلزی و ... شامل:

- صنایع مس سرچشمه (۳ پروژه در مجموع ۹ سیستم تهویه و غبارگیر خطوط مولیدن، تعمیرات برق، سنگ شکن ثانویه آهک، تغلیظ، ذوب و ...)
- کارخانه نهبوند پلاست

- کارخانه دنا کاوه (ساوه)
- صنایع شهید باقری (۲ کارگاه)
- شرکت تولیدی معدنی مدوار کرمان جهت کوره های دوار
- شرکت پیشتازان فناوری طلا (تکاب) برای ۲ واحد اتاق طلا و فیلترپرس
- مونا لاک (ساوه)
- کارخانه گچ گیلانغرب
- محور سازان زاگرس (کرمانشاه)
- شرکت ذوب آهن آلیاژی ملایر
- شرکت بهکاران ورق توس
- مجتمع تولید کربور سیلیسیوم و اکسید آلومینیم آبادان (۳ خط تولید در قالب دو پروژه)
- معدنکاران نسوز (۲ خط تولید)
- فرآوری طلای زرشوران (اتاق طلا)
- شرکت تولید طلای پویازرکان
- معدن سرمک (مجتمع مهندس فروزنده) در قالب ۲ پروژه و مجموعاً ۶ غبارگیر و پالایشگر برای خطوط سنگ شکن و کوره های ولز
- تولیدات معدنی فلزات غیرآهنی سیماب (تولید روی)
- شرکت ایستاصنعت فولاد غرب
- شرکت پگاه روی غرب
- شرکت دیرین پودر
- پتروگاز پارسا
- شرکت برادران میرزایی
- شرکت سیمان غرب
- شرکت تولید روی شمش سازان رنجان
- شرکت ابهر سیلیس (در قالب ۳ پروژه و در مجموع ۴ سیستم برای خطوط تولید خشک، درایر و انبار)
- شرکت فلوت کاویان مشهد (۲ سیستم تهویه و غبارگیرهای ۲ خط تولید سیلیس و آهک-دولومیت)
- شرکت کاوه سودا مراغه (شامل ۳ سیستم تهویه و غبارگیرهای واحد ۲۰۰)
- شرکت آسافلوت مراغه (۳ سیستم تهویه و غبارگیرهای خطوط سیلیس، دولومیت و آهک)
- شرکت فولاد هرمزگان (سیستم تهویه و غبارگیر ۵۰۰ واحد احیا)
- مشاوره و ارزیابی عملکرد سیستم تهویه و غبارگیرهای واحد فولادسازی فولاد هرمزگان
- مشاوره و ارزیابی عملکرد سیستم تهویه و غبارگیرهای واحد احیا فولاد هرمزگان
- مشاوره طرح کنترل آلاینده های منتشره در پتروشیمی کارون (۲ واحد)
- شرکت تولید کربنات سدیم کاوه فیروزآباد شیراز (شامل ۳ سیستم تهویه و غبارگیرهای واحد ۲۰۰ و سرد)

- شرکت فجر انرژی خلیج فارس
- شرکت پایش سبز خرمدشت (شامل ۲ سیستم تهویه و غبارگیر واحد خشک)
- شرکت های فروسیلیس آذرخش و لوتوس
- مشاور کنترل آلودگی هوا صنایع ملی پتروشیمی در پایش طرح های کنترل آلاینده های کلیه صنایع پتروشیمی کشور
- مجری طرح تدوین ۴ دستورالعمل صنایع ملی پتروشیمی ایران
- مشاوره اصلاح سیستم تهویه بیمارستان نفت ماهشهر - علی ابن ابیطالب رفسنجان و بیمارستان های تابعه دانشگاه علوم پزشکی همدان

#### ج- مجری و همکاری در پروژه های ارزیابی آلاینده های هوا

- شرکت عملیات غیر صنعتی بازارگاد - عسلویه (در ۱۸ مجتمع پتروشیمی)
- شرکت پتروشیمی مبین
- پتروشیمی فجر
- منطقه ویژه اقتصادی پتروشیمی ماهشهر (۲ پروژه)
- فوم کار ساوه
- پتروشیمی لاله
- پالایشگاه هفتم گاز منطقه ویژه اقتصادی پارس (۲ پروژه)
- پالایشگاه چهارم گاز منطقه ویژه اقتصادی پارس
- پالایشگاه سوم گاز منطقه ویژه اقتصادی پارس
- پتروشیمی جم