



# Hossein Molavi

**Assistant Professor**

**IASBS, Department of Chemistry**

## Publications

### Journals

---

- Tajahmadi, Shima and Molavi, Hossein and Ahmadijokani, Farhad and Shamloo, Amir and Shojaei, Akbar and Sharifzadeh, Mohammad and Rezakazemi, Mashallah and Fatehizadeh, Ali and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Metal-organic frameworks: A promising option for the diagnosis and treatment of Alzheimer's disease.", Journal of Controlled Release: Official Journal of the Controlled Release Society, Vol. 61, NO. 32, 2023
- Abdi, Babak and Shojaei, Akbar and Molavi, Hossein, "Superior fatigue and mechanical properties of ethylene-propylene diene monomer rubber incorporated with Zr-based metal-organic framework", Journal of Polymer Research, Vol. 30, NO. 1, 2023
- Ahmadijokani, Farhad and Molavi, Hossein and Rezakazemi, Mashallah and Tajahmadi, Shima and Bahi, Addie and Ko, Frank and Aminabhavi, Tejraj M and Li, Jian-Rong and Arjmand, Mohammad, "UiO-66 Metal-Organic Frameworks in Water Treatment: A Critical Review", Progress in Materials Science, Vol. 176, NO. 4, 2022
- Ahmadijokani, Farhad and Molavi, Hossein and Tajahmadi, Shima and Rezakazemi, Mashallah and Amini, Majed and Kamkar, Milad and Rojas, Orlando J and Arjmand, Mohammad, "Coordination chemistry of metal-organic frameworks: Detection, adsorption, and photodegradation of tetracycline



antibiotics and beyond", Coordination Chemistry Reviews, Vol. 464, NO. 4, 2022

- Ahmadijokani, Farhad and Molavi, Hossein and Peyghambari, Ali and Shojaei, Akbar and Rezakazemi, Mashallah and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Efficient removal of heavy metal ions from aqueous media by unmodified and modified nanodiamonds", Journal of Environmental Management, Vol. 316, NO. 4, 2022
- Mirzaei, Kamyar and Jafarpour, Erfan and Shojaei, Akbar and Molavi, Hossein, "Facile synthesis of polyaniline@ UiO-66 Nanohybrids for efficient and rapid adsorption of methyl orange from aqueous media", Industrial & Engineering Chemistry Research, Vol. 61, NO. 32, 2022
- Ahmadijokani, Farhad and Molavi, Hossein and Bahi, Addie and Fernandez, Roberto and Alaei, Parvin and Wu, Siying and Wuttke, Stefan and Ko, Frank and Arjmand, Mohammad, "Metal-Organic Frameworks and Electrospinning: A Happy Marriage for Wastewater Treatment", Advanced Functional Materials, Vol. 61, NO. 32, 2022
- Ahmadijokani, Farhad and Molavi, Hossein and Bahi, Addie and Wuttke, Stefan and Kamkar, Milad and Rojas, Orlando J and Ko, Frank and Arjmand, Mohammad, "Electrospun Nanofibers of Chitosan/Polyvinyl Alcohol/UiO-66/Nanodiamond: Versatile Adsorbents for Wastewater Remediation and Organic Dye Removal", Chemical Engineering Journal, Vol. 30, NO. 1, 2022
- Ahmadijokani, Farhad and Tajahmadi, Shima and Bahi, Addie and Molavi, Hossein and Rezakazemi, Mashallah and Ko, Frank and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Ethylenediamine-functionalized Zr-based MOF for efficient removal of heavy metal ions from water", Chemosphere, Vol. 264, NO. 4, 2021
- Mousavi, Danial Vaghar and Ahmadipouya, Salman and Shokrgozar, Atefeh and Molavi, Hossein and Rezakazemi,



- Mashallah and Ahmadijokani, Farhad and Arjmand, Mohammad, "Adsorption performance of UiO-66 towards organic dyes: Effect of activation conditions", *Journal of Molecular Liquids*, Vol. 321, NO. 4, 2021
- Ahmadijokani, Farhad and Tajahmadi, Shima and Reza kazemi, Mashallah and Sehat, Ali Akbari and Molavi, Hossein and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Aluminum-based metal-organic frameworks for adsorptive removal of anti-cancer (methotrexate) drug from aqueous solutions", *Journal of Environmental Management*, Vol. 277, NO. 4, 2021
  - Ahmadipouya, Salman and Haris, Mahdi Heidarian and Ahmadijokani, Farhad and Jarahiyan, Atefeh and Molavi, Hossein and Moghaddam, Firouz Matloubi and Reza kazemi, Mashallah and Arjmand, Mohammad, "Magnetic Fe<sub>3</sub>O<sub>4</sub>@UiO-66 nanocomposite for rapid adsorption of organic dyes from aqueous solution", *Journal of Molecular Liquids*, Vol. 322, NO. 4, 2021
  - Ahmadijokani, Farhad and Tajahmadi, Shima and Haris, Mahdi Heidarian and Bahi, Addie and Reza kazemi, Mashallah and Molavi, Hossein and Ko, Frank and Arjmand, Mohammad, "Fe<sub>3</sub>O<sub>4</sub>@ PAA@ UiO-66-NH<sub>2</sub> magnetic nanocomposite for selective adsorption of Quercetin", *Chemosphere*, Vol. 275, NO. 4, 2021
  - Ahmadijokani, Farhad and Molavi, Hossein and Reza kazemi, Mashallah and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Simultaneous detection and removal of fluoride from water using smart metal-organic framework-based adsorbents", *Coordination Chemistry Reviews*, Vol. 445, NO. 4, 2021
  - Ahmadipouya, Salman and Ahmadijokani, Farhad and Molavi, Hossein and Reza kazemi, Mashallah and Arjmand, Mohammad, "CO<sub>2</sub>/CH<sub>4</sub> separation by mixed-matrix membranes holding functionalized NH<sub>2</sub>-MIL-101 (Al) nanoparticles: Effect of amino-silane functionalization", *Chemical Engineering Research and Design*, Vol. 176, NO. 4, 2021



- Molavi, Hossein and Shojaei, Akbar and Mousavi, Seyyed Abbas and Ahmadi, Seyyed Ahmad, "Effect of reactive diluent on gas separation behavior of photocurable acrylated polyurethane composite membranes", *Journal of Applied Polymer Science*, Vol. 137, NO. 3, 2020
- Neshastehgar, Milad and Rahmani, Pooria and Shojaei, Akbar and Molavi, Hossein, "Enhanced adsorption removal performance of UiO-66 by rational hybridization with nanodiamond", *Microporous and Mesoporous Materials*, Vol. 296, NO. 3, 2020
- Molavi, Hossein and Neshastehgar, Milad and Shojaei, Akbar and Ghashghaeinejad, Hossein, "Ultrafast and simultaneous removal of anionic and cationic dyes by nanodiamond/UiO-66 hybrid nanocomposite", *Chemosphere*, Vol. 247, NO. 3, 2020
- Molavi, Hossein and Moghimi, Hamid and Taheri, Ramezan Ali, "Zr-based MOFs with high drug loading for adsorption removal of anti-cancer drugs: a potential drug storage", *Applied Organometallic Chemistry*, Vol. 34, NO. 4, 2020
- Ahmadijokani, Farhad and Mohammadkhani, Rahman and Ahmadipouya, Salman and Shokrgozar, Atefeh and Rezakazemi, Mashallah and Molavi, Hossein and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Superior chemical stability of UiO-66 metal-organic frameworks (MOFs) for selective dye adsorption", *Chemical Engineering Journal*, Vol. 399, NO. 4, 2020
- Ahmadijokani, Farhad and Ahmadipouya, Salman and Molavi, Hossein and Rezakazemi, Mashallah and Aminabhavi, Tejraj M and Arjmand, Mohammad, "Impact of scale, activation solvents, and aged conditions on gas adsorption properties of UiO-66", *Journal of Environmental Management*, Vol. 274, NO. 4, 2020
- Zamani, Mostafa and Aghajanzadeh, Mozhgan and Molavi, Hossein and Danafar, Hossein and Shojaei, Akbar, "Thermally



- oxidized nanodiamond: an effective sorbent for separation of methotrexate from aqueous media: synthesis, characterization, in vivo and in vitro biocompatibility study", *Journal of Inorganic and Organometallic Polymers and Materials*, Vol. 29, NO. 3, 2019
- Molavi, Hossein and Shojaei, Akbar, "Mixed-matrix composite membranes based on UiO-66-derived MOFs for CO<sub>2</sub> separation", *ACS applied materials & interfaces*, Vol. 11, NO. 9, 2019
  - Molavi, Hossein and Pourghaderi, Alireza and Shojaei, Akbar, "Experimental study on the influence of initial pH, ionic strength, and temperature on the selective adsorption of dyes onto nanodiamonds", *Journal of Chemical & Engineering Data*, Vol. 64, NO. 4, 2019
  - Ahmadijokani, Farhad and Ahmadipouya, Salman and Molavi, Hossein and Arjmand, Mohammad, "Amino-silane-grafted NH<sub>2</sub>-MIL-53 (Al)/polyethersulfone mixed matrix membranes for CO<sub>2</sub>/CH<sub>4</sub> separation", *Dalton Transactions*, Vol. 48, NO. 36, 2019
  - Molavi, Hossein and Eskandari, Alireza and Shojaei, Akbar and Mousavi, Seyyed Abbas, "Enhancing CO<sub>2</sub>/N<sub>2</sub> adsorption selectivity via post-synthetic modification of NH<sub>2</sub>-UiO-66 (Zr)", *Microporous and Mesoporous Materials*, Vol. 257, 2018
  - Aghajanzadeh, Mozhgan and Zamani, Mostafa and Molavi, Hossein and Khieri Manjili, Hamidreza and Danafar, Hossein and Shojaei, Akbar, "Preparation of metal-organic frameworks UiO-66 for adsorptive removal of methotrexate from aqueous solution", *Journal of Inorganic and Organometallic Polymers and Materials*, Vol. 28, NO. 1, 2018
  - Molavi, Hossein and Zamani, Mostafa and Aghajanzadeh, Mozhgan and Kheiri Manjili, Hamidreza and Danafar, Hossein and Shojaei, Akbar, "Evaluation of UiO-66 metal organic framework as an effective sorbent for Curcumin's overdose", *Applied Organometallic Chemistry*, Vol. 32, NO. 4, 2018





- Molavi, Hossein and Shojaei, Akbar and Mousavi, Seyyed Abbas, "Improving mixed-matrix membrane performance via PMMA grafting from functionalized NH<sub>2</sub>-UiO-66", Journal of Materials Chemistry A, Vol. 6, NO. 6, 2018
- Feijani, Elahe Ahmadi and Tavassoli, Ahmad and Mahdavi, Hossein and Molavi, Hossein, "Effective gas separation through graphene oxide containing mixed matrix membranes", Journal of applied polymer science, Vol. 135, NO. 21, 2018
- Molavi, Hossein and Shojaei, Akbar and Pourghaderi, Alireza, "Rapid and tunable selective adsorption of dyes using thermally oxidized nanodiamond", Journal of colloid and interface science, Vol. 524, NO. 21, 2018
- Molavi, Hossein and Hakimian, Alireza and Shojaei, Akbar and Raeiszadeh, Milad, "Selective dye adsorption by highly water stable metal-organic framework: Long term stability analysis in aqueous media", Applied Surface Science, Vol. 445, NO. 21, 2018
- Molavi, Hossein and Ahmadi Joukani, Farhad and Shojaei, Akbar, "Ethylenediamine grafting to functionalized NH<sub>2</sub>-UiO-66 using green aza-Michael addition reaction to improve CO<sub>2</sub>/CH<sub>4</sub> adsorption selectivity", Industrial & Engineering Chemistry Research, Vol. 445, NO. 21, 2018
- Raeiszadeh, Milad and Hakimian, Alireza and Shojaei, Akbar and Molavi, Hossein, "Nanodiamond-filled chitosan as an efficient adsorbent for anionic dye removal from aqueous solutions", Journal of Environmental Chemical Engineering, Vol. 6, NO. 2, 2018
- Molavi, Hossein and Shojaei, Akbar and Mousavi, Seyyed Abbas, "Photo-curable acrylate polyurethane as efficient composite membrane for CO<sub>2</sub> separation", Polymer, Vol. 149, NO. 2, 2018
- Mahdavi, Hossein and Ahmadian-Alam, Leila and Molavi,



Hossein, "Grafting of sulfonated monomer onto an amino-silane functionalized 2-aminoterephthalate metal- organic framework via surface-initiated redox polymerization: proton-conducting solid electrolytes", Polymer International, Vol. 64, NO. 11, 2015