

Mohammadreza Mahdavijalal



Current position: Postdoctoral researcher at the Research Group of Pharmacotoxicological Analysis (PTA Lab), Department of Pharmacy and Biotechnology (FaBiT), Alma Mater Studiorum - University of Bologna with a project entitled "Development of new separation methods coupled to mass spectrometry for the analysis of bioactive compounds of natural or synthetic origin subject to potential misuse" under supervision of Prof. Laura Mecolini.

Education

Ph.D in Analytical Chemistry (2016-2022) from Islamic Azad University (IAU), Central Tehran Branch with a project entitled "The Efficiency of Grafting on Tungsten Disulfide Nano-Adsorbent for Adsorption and Extraction of Anti-Cancer Drugs in Biological Fluids" under supervision on Prof, Homayon Ahmad Panahi. The focus of the research was on designing new smart nanoparticles for the solid-phase extraction of anti-cancer drugs from biological samples. The study also involved evaluating the potential use of these nanoparticles in smart drug delivery systems.

Master in Marine Chemistry (2008-2011) from Islamic Azad University (IAU), North Tehran Branch with a project entitled "Modification of chromatographic adsorbents by polymer grafting technique for adsorption of samarium from sea water samples" under supervision on Prof. Elham Moniri. The concentrate of the research was on the new methods of extraction of materials from sea water.

Bachelor in Applied Chemistry (1996-2001) from Islamic Azad University (IAU), Central Tehran Branch.

Teaching background:

- University Lecture at IAU University (since 2020)
- University Lecture at UAST University (since 2014)
- Teaching to Student of Technical Vocational Training (since 2014)
- Teaching to Student of independent science institutes (since 2007)

Scientific production:

Publication of three articles in peer-reviewed international journals and one article in an IAU university publication.

Publications

- 2023 M. Mahdavijalal, H. A. Panahi E. Moniri, Synthesis of PAMAM dendrimers anchored to WS2 nano-sheets for controlled delivery of docetaxel: Design, characterization and in vitro drug release, Journal of Drug Delivery Science and Technology. 104066
- 2022 Mahdavijalal,M., Ahmad Panahi, H., Niazi, A., Tamaddon, A., Moniri, E.,“Application of near-infrared responsive nano-carrier for controlled drug delivery: synthesis, isotherm and kinetic studies”. International journal of biophotonics and biomedical optics, Tabriz, Iran
- 2022 M. Mahdavijalal, H. A. Panahi, A. Niazi A. Tamaddon, Preparation of responsive nano-adsorbent to near-infrared laser based on tungsten disulfide for bicalutamide extraction in human biological fluids, Journal of Pharmaceutical and Biomedical Analysis, 114759.
- 2021 M. Mahdavijalal, H. Ahmad Panahi, A. Niazi A. Tamaddon, Near-infrared light responsive dendrimers facilitate the extraction of bicalutamide from human plasma and urine, Biotechnology Journal.16 (2021) 2100299.

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