Siavash Bakhtiarnia, Ph.D.

(+98) 912 521 5427 | bakhtiarnia@ut.ac.ir | Iran, Tehran

Summary

Highly motivated Ph.D. in Nanotechnology Engineering with expertise in nanomaterial development, photocatalysis, and thin film deposition. Proven ability to design and conduct research projects, analyze data, and achieve impactful results (e.g., 99% photoactivity in water treatment). Skilled in various characterization techniques (SEM, EDS, XRD) and software (Python, Adobe Suite). Fluent in English and French. Achieved Top 10 Ranking in National Entrance Exams for both Master's and Doctoral Degrees in Nanotechnology Engineering (2014 & 2016).

Key Skills

- Nanomaterial Synthesis | Photocatalysis Experiments | Material Characterization
- Data Analysis & Scientific Writing
- Project Management & Research Communication

Experience

Aug 2020 - Sep 2022
Extractive Metallurgy Lab, University of Tehran, Iran - *Research Assistant*

- Assisted professor with research projects on photocatalytic thin films for water treatment.
- Achieved 99% photoactivity under visible light and studied photodegradation kinetics.

Apr 2019 - Jul 2020
FEMTO-ST Institute, University of Bourgogne Franche-Comté, France - *Researcher*

- Conducted research on physical vapor deposition of novel photocatalysts and achieved nanoporous structures with 52% porosity.
- Characterized over 80 $BiVO_4$ thin film samples using SEM, EDS, UV-Vis and XRD to identify optimal deposition conditions and doping concentration for photoactivity enhancement.

Education

University of Tehran, Iran - Ph.D. | *Nanotechnology Engineering - Nanomaterials* (2022)

Thesis: Investigation on $BiVO_4$ Nano Photocatalyst Performance in Photodegradation of Organic Pollutants (GPA: 4.38/5)

Sharif University of Technology, Iran - M.Sc. | *Nanotechnology Engineering* (2016)

Karaj Islamic Azad University, Iran - B.Sc. | *Metallurgy and Materials Engineering* (2013)

Publications & Conferences

- Bakhtiarnia et al. (2023). Preparation of Cu-doped $BiVO_4$ nanoporous thin films for enhanced photocatalysis. Applied Surface Science, 608.
- Bakhtiarnia et al. (2022). One-step preparation of Ag-incorporated $BiVO_4$ thin films for photocatalysis enhancement. Applied Surface Science, 580.
- Bakhtiarnia et al. (2021). Enhanced photocatalytic activity of sputter-deposited nanoporous $BiVO_4$ thin films by controlling film thickness. Journal of Alloys and Compounds, 879.
- Presented research on nanoporous $BiVO_4$ thin film deposition at UFGNSM2021 (Tehran, Iran).

See full publication list available upon request. (ORCID) | (Google Scholar)