



# مرکز علوم و فنسازوری نانو



Center for Nanoscience & Nanotechnology  
Sharif University of Technology

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## Education

### BSc.

University: Zanjan

Major: Pure chemistry

Thesis: Synthesis and identification of new substituted polyoxometalates (POMs) in the removal of environmental pollutants

Supervisor: Dr. Mohammad Ali Rezvani

### Msc.

University: Zanjan

Major: Nanochemistry

Thesis: Investigating of Water Oxidation Process using Manganese Nanoparticles Supported on Periodic Mesoporous Organosilicate Catalyst

Supervisor: Dr. Farhad Kabiri Esfahani - Dr. Babak Karimi

### PhD

Thesis:

Supervisors:

## Research Experience:

- A) Synthesis of new nanocomposites based on Mn nanoparticles to investigate the oxygen evolution reaction (OER) in the water oxidation process.
- B) Synthesis and characterization of polyoxometalate-based nanocomposites for the preparation of high-performance catalysts for oxidative desulfurization process.
- C) Synthesis of new nanocomposites to investigate electrochemical hydrogen storage capacity.

## Publications:

- 1- Synthesis, characterization, and electrochemical evaluation of SnFe<sub>2</sub>O<sub>4</sub>@MWCNTs nanocomposite as a potential hydrogen storage material. *Heliyon*, 9(6).
- 2- Extractive–Oxidative Desulfurization of Real and Model Gasoline Using (gly)<sub>3</sub>H[SiW<sub>12</sub>O<sub>40</sub>]·CoFe<sub>2</sub>O<sub>4</sub> as a Recoverable and Efficient Nanocatalyst. *Energy & Fuels*, 37(3), 2245-2254.
- 3- Synthesis, characterization, and investigation of electrochemical hydrogen storage capacity in barium hexaferrite nanocomposite. *Journal of Alloys and Compounds*, 915, 165350.
- 4- High oxidation desulfurization of fuels catalyzed by vanadium-substituted phosphomolybdate@ polyaniline@ chitosan as an inorganic–organic hybrid nanocatalyst. *Inorganic Chemistry*, 62(14), 5468-5478.