

# KASRA ASKARI



Isfahan University of Technology, Isfahan, Iran, 8415683111 | +98 (31) 33919016 | k.askari@ch.iut.ac.ir

## Senior Electrochemist

### Objective

Evaluation of Primary and Secondary Lithium Batteries - Lithium Battery Manufacturing Process and Recycling Materials Issues - Design, Construction and Evaluation of Low Temperature Fuel cells - Design, Construction and Evaluation of Metal/Air Batteries - Synthesis of New Electrocatalysts for Lithium Based Batteries

### Work experience

#### Danesh Novin Hydrogen Asia

Isfahan, Iran

02/2015 - current

R&D Manager - Lithium Battery

- Feasibility study to manufacturing lithium thionyl chloride battery for EK220 volume conversion device in Iran
- Synthesis and evaluation of new graphene based electrocatalysts for lithium thionyl chloride batteries
- Computational fluid dynamics modeling of a lithium thionyl chloride battery

#### Isfahan University of Technology

Isfahan, Iran

02/2015 - 06/2017

Teaching Assistant

- Responsible for grading assignments, class participation, and exams
- Managed course content through online Learning Management Systems
- Lead, supervised, and planned undergraduate laboratory experience
- Guided the development and training of the new graduate assistants
- Provided assistance to professors and students in laboratory exercises and laboratory experiments

#### Isfahan University of Technology

Isfahan, Iran

10/2015 - 12/2016

Research Assistant

- Performance analysis of new materials for polymer electrolyte membranes in low temperature fuel cells
- Hydrogen Production by Water Electrolysis

#### Guilan University

Rasht, Iran

10/2014 - 10/2015

Research Assistant

- Design and construction of bench-scale system for ketene manufacturing using acetone

### Education

#### Isfahan University of Technology

Isfahan, Iran

09/2014 - 06/2017

Chemistry Master of Science

- Thesis: "Preparation and Evaluation of a Novel Cathode Support by Graphene-Based Cobalt Nanoparticles for Lithium Thionyl Chloride Battery" Under supervision of Dr. Mohammad Zhiani (Defended on June 15th 2017)

**Guilan University**

**Rasht, Iran**

**09/2010 - 09/2014**

Chemistry Bachelor of Science

- Thesis: "An Investigation on Mechanism of Catalytic and Electrocatalytic Carbon Dioxide Reduction" Under supervision of Dr. Morteza Mehrdad (Defended on June 20th 2014)

## Skills

- **Lab** : Analyzing the Images and Interpreting the Size of the Particles and Their Distribution by SEM & TEM - Acquiring the Peaks, Find the Degree of Crystallinity and Find the Best Match of the Phase by XRD - Find the Peaks and Find Their Perfect Chemical Match by FTIR - Ability to Interpret the Data and Determine the Reaction Temperature by TGA/DSC - Optical Characterization of Nanomaterials - Electrochemical Impedance Spectroscopy for Battery Research - Preparation and Characterization of Membrane Electrode Assembly for PEMFC - Design and Construction of new Equipments for Electrochemistry Research
- **Computer** : Modeling and Simulation of Lithium Ion Batteries by Comsol - Modeling and Simulation of PEMFC by Matlab Simulink - MD simulation of Electrochemical Processes by Lammps - Ab initio Quantum Calculation by GAMESS - Microsoft Word - Microsoft Excel - Microsoft PowerPoint - Origin lab - Chemdraw

## References

- **Dr. Mohammad Zhiani [Associate professor of Physical Chemistry]**  
Department of Chemistry, Isfahan University of Technology / email: m\_zhiani@cc.iut.ac.ir
- **Dr. Mohammad Mohsen Momeni [Assistant Professor of Physical Chemistry]**  
Department of Chemistry, Isfahan University of Technology / email: mm.momeni@cc.iut.ac.ir
- **Dr. Behzad Rezaei [Professor of analytical chemistry]**  
Department of Chemistry, Isfahan University of Technology / email: rezaei@cc.iut.ac.ir
- **Dr. Hasan Hadadzadeh [Professor of Inorganic Chemistry]**  
Department of Chemistry, Isfahan University of Technology / email: hadad@cc.iut.ac.ir
- **Dr. Amir Abdolmaleki [Associate professor of Organic Chemistry]**  
Department of Chemistry, College of Sciences, Shiraz University / email: abdolmaleki@cc.iut.ac.ir
- **Dr. Soheila Javadian [Associate professor of Physical Chemistry]**  
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