Electrochemical Energy | Water Laboratory
Faculty of Mechanical Engineering

Job announcement: seeking a Postdoctoral Fellow for electrochemical water purification

The Technion – Israel Institute of Technology, located along the Mediterranean in Haifa, Israel, is a top 100 university*, houses 3 Nobel laureates, and is a world leader in scientific research and technology development. Technion is recognized as the engine of Israel's "start-up nation", as Technion graduates lead 59 of the 121 Israeli companies listed on NASDAQ. The laboratory of Professor Matthew Suss at the Technion is focused on developing ***novel flow electrochemical systems*** to push the boundaries in energy storage and water desalination. Currently 16 members, we develop high-performance flow batteries, capacitive deionization cells, and study electrochemistry, transport, and nanoscale phenomena in porous electrodes.

We have recently begun a new project with several academic and industrial partners towards developing next-generation water treatment technologies which are ion selective. We are looking for an experienced researcher to lead this effort through *a **two-year postdoctoral position***. Experimental experience with electrochemical systems and water technologies is a plus. Interested candidates should submit their complete application including a CV, and a 1-page motivation letter as soon as possible to Prof. Suss at mesuss@technion.ac.il

Major Duties/Responsibilities

- Design and fabrication of novel desalination cells using CAD software and in-lab rapid prototyping equipment.
- Leading electrode and cell characterization experiments and analysis, using tools such as SEM, titrations, cyclic voltammetry, electrochemical impedance spectroscopy, ICP, and others.
- Implementing electrode surface chemistry modifications.
- Developing transport and flow theory to describe cell performance, or collaborating with theoreticians to validate models.
- To support and mentor graduate students, publish scientific papers resulting from this research and present results at national and international meetings.

Minimum requirements

1. PhD in engineering or science (chemical engineering, mechanical engineering, or chemistry preferred).
2. Ability to excel in a fast-paced team environment and high-level English skills (oral and written).

Information on the Principal Investigator

Prof. Matthew Suss obtained his PhD in Mechanical Engineering in 2013 from Stanford University and from 2013 to 2014 a Postdoctoral Associate in Chemical Engineering at MIT. Matthew has co-authored 50 scientific publications, 13 patent applications, and delivered over a dozen plenary, keynote, or invited lectures at leading international conferences. Matthew is currently an Associate Professor in Mechanical and Chemical Engineering at Technion and is affiliated with the Grand Technion Energy Program (GTEP) and Grand Water Research institute (GWRI).

*Shanghai University ranking.