

Research, Informatics and Graduate Studies

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PhD Positions in Tunable Nanocomposites and Electrochemical Devices – group of Prof. Daniel Tan (GS-2018007)

The Materials Science and Engineering Program (group of Prof. Daniel Tan) is looking for two PhD students to conduct research projects in field tunable nanocomposites and electrochemical materials related to super-dielectric and energy storage devices. Contract duration: 3 + 1 years.

Project Details

The Tan group pursues dielectric film processing, electrochemical ultracapacitor research and analytical techniques with advanced microanalysis and spectroscopy tools to enhance energy density and voltage rating. The group extensively leverages know-how in atomic layer deposition tool, electrode and composite material processing, dielectric characterization, and electrical impedance spectroscopy to investigate dielectric phenomena and device performance. By collaborating with other labs and universities worldwide, we will understand the relationship between process, structure and properties of polymer nanocomposites, high performance electrodes, and build up superior dielectric and high voltage energy storage technologies.

The research will be carried out mostly at the GTIIT campus in Shantou, China. The graduate students for PhD degrees will be part of the Technion Graduate School. They will have to attend graduate classes and research facilities at the Technion campus in Haifa for two semesters. The degrees will be awarded by Technion, Israel.

Keywords

Nanocomposite synthesis, electrical insulation and resistance, dielectric strength, nanostructure, particle coating and polymer film processing, electrochemical double layer capacitor, electrolytes.

Selection Criteria

- Master degree (or equivalent) in Material Science or Chemistry
- Solid background in polymer, film and/or powder processing and electrical insulation (Position 1)
- Strong background in electrochemistry and energy storage (Position 2)
- High interest in nanomaterials, thin film processing and build-up of hands on experience
- High interest in structural/dielectric/electrical tests and characterization of film devices
- Strong passion and persistence for scientific researches
- Ability in good English speaking and scientific article writing
- The candidates must fulfill the requirements for the admission to the Technion Graduate School and comply with its regulations toward the PhD degree:

Program

Materials Science and Engineering

Research Area

Tunable Nanocomposites and Electrochemical Devices

Contact

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Application Deadline

31 July 2018

Date Posted

20 April 2018

Location

Guangdong Technion – Israel Institute of Technology (GTIIT), China & Technion-Israel Institute of Technology, Haifa

[Fees & Finance](#)

how to apply

<https://graduate.technion.ac.il/en/prospective-students/>