

# Research, Informatics and Graduate Studies

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## Master (MSc) Positions in Dielectric materials and Electrochemical Devices – group of Prof. Daniel Tan (GS-2018008)

The Materials Science and Engineering Program (group of Prof. Daniel Tan) is looking for Master of Science students to conduct research projects in super-dielectrics and energy storage devices.

### 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 MSc 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 at least one semesters. The degrees will be awarded by Technion, Israel.

### Keywords

Dielectric material, electrical insulation and resistance, breakdown strength, nanostructure, particle coating and polymer film processing, electrochemical ultracapacitor, electrolytes.

### Selection Criteria

- Bachelor degree in Material Science, Chemistry or Physics
- Solid background in polymer or ceramics, film processing, electrochemistry or Physics
- High interest in nanomaterials, 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 Master degree:

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

### Program

Materials Science and Engineering

### Research Area

Dielectric materials and Electrochemical Devices

### Contact

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### Application Deadline

immediately open till end of 2018

### Date Posted

22 June 2018

### Location

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

### Fees & Finance

how to apply

