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|  |  |  הטכניון - מכון טכנולוגי לישראל TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY  |
| הפקולטה להנדסה כימיתע"ש וולפסון |  |  |
| The Wolfson Department of Chemical Engineering |  |  |

**Wolfson Department of Chemical Engineering Seminar**

**Wednesday, January 19th, 2022 at 13:30**

**Via Zoom** [**https://technion.zoom.us/j/97577956516**](https://technion.zoom.us/j/97577956516)

**First characterization methodology of anion exchange membrane**

 **at elevated temperature for high-temperature fuel cells**

**Songlin Li**

**M.Sc. Seminar**

Advisor: Prof. Dario Dekel

Department of Chemical Engineering, Technion-Israel Institute for Technology

Intense effort around AEMFCs has led to the development of several highly conducting, stable AEMs and characterization of those membranes, yielding great improvements in the performance of AEMFCs at low operating temperatures, usually around 40-80 °C. Unlike the HT-PEMFC field which has drawn wide attention from researchers, characterization of AEMs for HT-AEMFCs was never done until now, as the HT-AEMFC is a brand-new field that was just initiated via recent research which proves the viability of operating AEMFCs at high temperature. In this study we chose an UHDPE AEM, a family of our previous reported LDPE AEM for HT-AEMFC, as an example to be characterized in elevated temperatures to reveal its properties and potential for HT-AEMFC. This is the first characterization of anion exchange membrane at such elevated temperature, and we hope that this study could provide our colleges a reliable and reproducible methodology for further characterization above 95°C.