

13:50-15:10 **THEORETICAL AND COMPUTATIONAL METHODS**
Chair: Oswaldo Dieguez

13:50-14:10 **James Rondinelli**, Northwestern University
Designing Oxides without Inversion for Solar

14:10-14:30 **Ilya Grinberg**, Bar Ilan University
Computational Studies of Fuel Cell Catalyst Materials

14:30-14:50 **Chris Wolverton**, Northwestern University
Materials Design of High-Energy Cation/Anion Redox in Li-rich Cathode Materials: Li_5FeO_4 , $\text{Li}_4\text{Mn}_2\text{O}_5$, and Li_2MO_3

14:50-15:10 **Yang-Kook Sun**, Hanyang University
High-Energy Cathode Material for Next-Generation Li-ion Batteries

15:10-15:30 ☕ Coffee Break

15:30-16:30 **JOINT RESEARCH AND INDUSTRY**
Chair: Brian Rosen

15:30-15:50 **Raanan Rein**, Vice President of Tel Aviv University
International Collaborations: Models & Opportunities

15:50-16:10 **Gideon Friedman**, Chief Scientist of Ministry of Water, Energy and Infrastructures
The Future of the Electricity Market with High Penetration of Renewables

16:10-16:30 **Irvin Gutelmacher**, PO CELLTech
Recent Advancements in Alkaline Exchange Membrane Fuel Cells

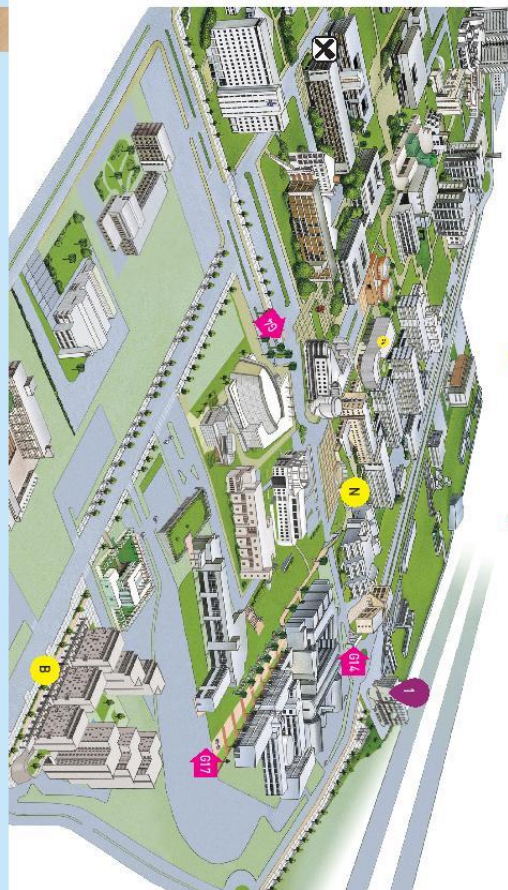
16:10-17:00 **Poster Flash**

17:00-17:10 **Closing Remarks**

17:10 📄 **Poster Session**

17.1.2018

Day Tour to Jerusalem



📍 The Porter School of Environmental Studies – Venue
🍽️ Food Court
N Nano Center
B Broshim Dorms
📍 Gate 4
📍 Gate 14
📍 Gate 17 (to the Train Station)

INTERNATIONAL WINTER SCHOOL 2019 on:

NanoMaterials for Energy Storage and Conversion




January 14th-17th, 2019
Tel Aviv University, ISRAEL

Venue: The Porter School
of Environmental Studies Building, Tel Aviv University

<http://nano.tau.ac.il>



14.1.2018

17:00  Registration is open and Get Together

15.1.2018

09:30-10:00  Morning Coffee

10:00 Opening Session

10:00-10:10 Greeting - **Michael Gozin** (Chemistry)
Brian Rosen (Material Engineering)

10:10-10:20 Greeting - **Yossi Rosenwaks**
(Electrical Engineering),
Dean, Faculty of Engineering

10:20-12:00 **BATTERIES PART 1** | Chair: Alex Schechter

10:20-10:40 **Doron Aurbach**, Bar Ilan University
The Frontier of Advanced Rechargeable Batteries: Reality vs Illusions

10:40-11:00 **Atsuo Yamada**, University of Tokyo
Recent Progress of Electrode and Electrolyte Research for Battery Applications

11:00-11:20 **Yair Ein-Eli**, Technion
Advanced Materials for Li-ion Batteries

11:20-11:40 **Sagar Mitra**, Indian Institute of Technology
Bombay

Developing Sodium-ion Battery to Address the Future Energy Storage Applications

11:40-12:00 **Kisuk Kang**, Seoul National University
New Electrode Chemistry via Nanocomposites for Advanced Rechargeable Batteries

12:00-13:30  Lunch Break

13:30-14:50 **BATTERIES PART 2** | Chair: Michal Leskes

13:30-13:50 **Emanuel Peled**, Tel Aviv University
High Capacity Silicon Nano Structure Anode for Electric Mobility

13:50-14:10 **Jang Wook Choi**, Seoul National University
Supramolecular Chemistries for Advanced Rechargeable Batteries

14:10-14:30 **Amir Natan**, Tel Aviv University
Quantum and Classical Simulations for Metal-Air Batteries

14:30-14:50 **Dina Golodnitsky**, Tel Aviv University
Towards Smart 3D Printable Batteries

14:50-15:10  Coffee Break

15:10-16:30 **FUEL CELLS** | Chair: David Zitoun

15:10-15:30 **Scott A. Barnett**, Northwestern University
The Effect of Catalyst Exsolution on the Electrochemical Properties of Solid Oxide Fuel Cell Anodes

15:30-15:50 **Lior Elbaz**, Bar-Ilan University
Methodological Approach for the Study of Catalyst Durability in Alkaline Fuel Cells

15:50-16:10 **John Irvine**, University St. Andrews
Emergent Materials, a New Dimension in Energy Materials

16:10-16:30 **Fikile Brushett**, MIT
Towards Deterministic Electrode Design: Elucidating the Role of Surface Chemistry and Microstructure on Flow Battery Performance

16:30-17:00  Coffee Break

17:00-19:00  Tour at the Steinhardt Museum of Natural History

16.1.2018

09:30-10:00  Morning Coffee

10:00-10:20 Greeting - **Yael Hanein** (Electrical Engineering)
Head of Tel-Aviv University Center for NanoScience
and Nanotechnology

10:20-12:20 **SYNTHETIC FUELS** | Chair: Yaniv Gelbstein

10:20-10:40 **Dario Deke**, Technion
Anion-Exchange Membrane Fuel Cells-a Promising Alternative Energy Conversion Technology

10:40-11:00 **Matthew Kanan**, Stanford University
Nanoscience for Carbon Dioxide Utilization

11:00-11:20 **Paul Kenis**, University of Illinois at Urbana Champaign
Electrochemical Conversion of Carbon Dioxide to Value Added Intermediates

11:20-11:40 **Kimberly A. Gray**, Northwestern University
The Role of Photo- and Thermal Catalytic Materials in the Conversion of CO₂ to Useful Products

11:40-12:00 **Rajiv Dusane**, Indian Institute of Technology
Bombay (IITB)

Silicon Nanowires for Energy Generation and Storage

12:00-12:20 **Yujing Li**, Beijing Institute of Technology (BIT)

Rational Design of High-Performance Electrocatalysts for Proton Exchange Membrane Fuel Cells

12:20-13:50  Lunch Break