

## ISEL2021 Scientific Program

**16.06.2021**

**17:00-18:00: Online Keynote Lecture: Prof. Stanley Whittingham**

Nobel Lecture perspective on Lithium Battery Origins & Future Challenges/Opportunities

<https://us02web.zoom.us/j/87846150662?pwd=M2p0T1UyN0dnR2VQaTlMNUpsWVpSU>  
[T09](#)

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08:30-9:00	Gathering and registration Floor 0, Nanotechnology - building 206
09:00-11:00	Morning Session, Session Chair: Prof. Yair Ein Eli, Auditorium, Nanotechnology - building 206 <a href="https://us02web.zoom.us/j/5727969276">https://us02web.zoom.us/j/5727969276</a>
09:00-09:10	Greetings- President of ISEL – Prof. Diana Golodnitsky
09:10-09:45	Plenary lecture: Prof. Itamar Willner - <i>Redox-Active Hydrogels - En Route to an Artificial Pancreas (HUJI)</i>
09:45-10:20	Plenary lecture: Prof. Emanuel Peled – <i>Lithium Batteries for EVs and Renewable Energy Storage (TAU)</i>
10:20-10:45	Invited Lecture: Prof. Noam Eliaz – <i>Electrodeposition of Functional Metals and Alloys (TAU)</i>
10:45-11:30	Coffee Break and 1 <sup>st</sup> Poster session
11:30-13:00	Session A: Electrochemistry for Energy and Environment Session Chair: Prof. Idan Hod. (Nanotechnology - building 206, Auditorium) <a href="https://us02web.zoom.us/j/5727969276">https://us02web.zoom.us/j/5727969276</a>
11:30-11:55	Invited: Dr. Daniel Sharon - <i>Intrinsic Properties of Polymeric Nanostructured Solid Electrolytes (HUJI)</i>
11:55-12:10	Alon Herman - <i>Ratchet-Based Ion Pumps (TAU)</i>
12:10-12:25	Atanu Roy - <i>Single-Step Electrochemical Deposition of CoMn-LDH on 3D Graphite Current Collector for Supercapacitive Applications (HUJI)</i>

12:25-12:40	<b>Dr. Netanel Shpigel</b> - <i>On the Use of Highly Concentrated Aqueous Solutions for High Voltage Li-ion And Beyond Lithium Batteries</i> (BIU)
12:40-13:00	<b>Gold sponsor -Dr. Nir Pour:</b> <i>Driving the zero emission revolution: StoreDot's EV extreme fast charging technology Presenter</i> (Storedot)
11:30-13:10	<b>Session B: When Electrochemistry meets Spectroscopic tools (New chemistry building 211, Auditorium, 1<sup>st</sup> floor) Session Chair: Dr. Michal Leskes (WIS)</b>
11:30-11:55	<b>Invited: Prof. Sharly Fleischer</b> - <i>In-operando Terahertz Spectroscopy of Solid Electrolyte Interphase Evolution on Silicon Anodes</i> (TAU)
11:55-12:10	<b>Dr. Svetlana Menkin</b> - <i>Interface Dynamics and Metal Plating in Lithium Anode-Free Batteries</i> (University of Cambridge)
12:10-12:25	<b>Dr. Chandar pratap Singh</b> - <i>Metal-Organic Framework Derived Amorphous Iron Sulphide for Efficient Nitrogen to Ammonia Conversion Under Ambient Condition</i> (BGU)
12:25-12:40	<b>Dr. Vivek Ramakrishnan</b> - <i>Surface States in Water Photo-Oxidation on Hematite – Photoelectrochemical Coupled Operando Raman Spectroscopic Studies</i> (BGU)
12:40-12:55	<b>Shira Haber</b> - <i>Following Lithium-Ion Transport across Artificial Cathode Electrolyte Interphases on High Voltage Cathodes with solid state NMR Spectroscopy</i> (WIS)
12:55-13:10	<b>Jonathan Tzadikov</b> - <i>Heteroatom Incorporated Carbon Materials</i> (BGU)
11:30-12:55	<b>Session C: Electrochemistry and Theoretical methods (Nanotechnology - building 206, 9<sup>th</sup> floor) Session Chair: Prof. Brian Rosen (TAU)</b>
11:30-11:55	<b>Invited: Prof. Ilya Grinberg</b> - <i>Studies of Molecular Corrole Electrocatalysts Using First-principles Calculations</i> (BIU)
11:55-12:10	<b>Yael Avni</b> - <i>Charge Oscillations in Ionic Liquids: A Microscopic Cluster Model</i> (TAU)
12:10-12:25	<b>Oles Dubrovsky</b> - <i>Convective Mitigation of Dendrite Growth</i> (Technion)
12:25-12:40	<b>Arup Chakaraborty</b> - <i>Improving the Structural Stability and Electrochemical Performance of Ni-Rich <math>\text{LiNi}_{0.85}\text{Co}_{0.10}\text{Mn}_{0.05}\text{O}_2</math> Cathode Material via B-Doping</i> (BIU)
12:40-12:55	<b>Matan Aroosh</b> - <i>Intelligent Microelectrode Array for Hydroxyurea Prediction in Blood</i> (BGU)
11:30-12:55	<b>Sessions D: Sensors and Electrocatalysis (The Harry Carpel Chemistry building 207, Room 1) Chair: Prof. David Eisenberg (Technion)</b>
11:30-11:55	<b>Invited: Dr. Rakefet Ofek Almog</b> - <i>Electrochemically Decoration of ZnO Nanostructures with Noble Metal for Bio-Sensing Applications</i> (TAU)
11:55-12:10	<b>Amit Kumar</b> - <i>Terminal Metal-oxo Complexes for Electrocatalysis</i> (Technion)
12:10-12:25	<b>Ran Shimoni</b> - <i>Design of ElectroCatalytic Systems Based on the Immobilization of Molecular Catalysts Within Metal-Organic Frameworks</i> (BGU)
12:25-12:40	<b>Melina Zysler</b> - <i>Carbon Supported Pt-Ni Octahedral Electrocatalyst as a Model to Follow Nickel Corrosion and Particle Detachment</i> (BIU)
12:40-12:55	<b>Annie Cleetus</b> - <i>CuCr Catalysts for Ammonia Electro-Oxidation: A Study on Activity and Selectivity</i> (Ariel)
12:55-13:10	<b>Roy Cohen</b> - <i>Utilization of Fad-Glucose Dehydrogenase from <i>Aspergillus Sp.</i> And <i>T. Emersonii</i> for Glucose Amperometric Biosensing and Biofuel Cell Devices</i> (Technion)

13:00-14:00	Lunch (please look at your vouchers for exact starting time)
14:00 – 17:30 - Afternoon Session I, Session chair: Prof. David Zitoun (BIU) Auditorium, Nanotechnology - building 206 <a href="https://us02web.zoom.us/j/5727969276">https://us02web.zoom.us/j/5727969276</a>	
14:00-14:35	<b>Plenary – Prof. Doron Aurbach</b> - <i>Composite Electrodes Comprising Room Temperature Solid State Mercury Nano-Particles and Their Electrocatalytic Activity (BIU)</i>
14:35-15:00	<b>Invited - Prof. Daniel Mandler</b> - <i>From Nano to Nano: Electrochemical Deposition Using Nanomaterials as Building Blocks (HUJI)</i>
15:00-15:45	<b>2<sup>nd</sup> poster session + coffee + desserts (2<sup>nd</sup> floor)</b>
15:45 – 17:30 –Afternoon Session II, Session chair: Dr. Hadar Ben-Yoav (BGU) Auditorium, Nanotechnology - building 206 <a href="https://us02web.zoom.us/j/5727969276">https://us02web.zoom.us/j/5727969276</a>	
15:45-16:10	<b>Invited - Prof. Omer Yehezkeli</b> - <i>Biotic/Abiotic Interfaced Systems for Biosensing and Enhanced (Bio)Catalysis (Technion)</i>
16:10-16:35	<b>Invited – Prof. James Becker</b> - <i>Anodic Oxidation of Metal-Centered 9,9'-Spiro-Bifluorenes (BGU)</i>
16:35-17:00	<b>Invited - Dr. Arie Borenstein</b> - <i>Laser Carbonization: Beyond Graphene Oxide (Ariel)</i>
17:00-17:30	<b>Closing remarks, awards announcement</b>