

# The Israeli 2024 Magnetic Resonance Meeting

In Memory of  
Prof. Asher Schmidt

Supported by



Technion, Schulich faculty of Chemistry, Hall 1

Program

9/1/2024

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Morning Session

9:15 - 9:40

- Morning Gathering and Coffee

9:45 - 9:55

- Opening Remarks (10 min)

*Nimrod Moiseyev, Technion*

**9:55 - 10:20**

- **Lecture 1 (25 min, discussion included)**

*Ira Ben Shir, Technion*

**Molecular Insights into Biomineralization Through Solid-State NMR:  
Celebrating Prof. Asher Schmidt's Contribution**

**10:20 - 10:45**

- **Lecture 2 (25 min, discussion included)**

*Daniella Goldfarb, Weizmann*

**$^{19}\text{F}$  electron-nuclear double resonance as a tool for structural studies  
biological and chemical systems**

**10:45-11:00**

- **Short Lecture 1 (15 min)**

*Hyla Allouche-Arnon, Weizmann*

**From PET to MRI: *In vivo* Mapping the HSV1-TK Reporter Gene with “hot-spot”  
2H-MRI Using Synthetic Deuterated Thymidine Analog**

**11:00- 11:25**

- **Lecture 3 (25 min, discussion included)**

*Yishay Manassen, BGU*

**STM NMR**

**11:25- 11:40 short Coffee Break (15 min)**

**11:40 - 12:05**

- **Lecture 4 (25 min, discussion included)**

*Moti Freiman, Technion*

**Model-Based Self-Supervised Motion Correction for Robust Cardiac  $T_1$   
Mapping**

**12:05 - 12:30**

- **Lecture 5 (25 min, discussion included)**

*Eike Brunner, TU Dresden Germany (via zoom)*

**Solid-State NMR Investigations of Silica Biomineralisation in Diatoms**

**12:30-12:45**

- **Short Lecture 2 (15 min)**

*Yuval Steinberg, Weizmann*

***The Composition and Structure of the SEI on Na-Ion Anodes Revealed by Exo- and Endogenous Dynamic Nuclear Polarization - NMR Spectroscopy***

**12:45-13:00**

- **Short Lecture 3**

*Shira Haber, BGU*

**Chemical Upcycling of Polymers: Insights from NMR Methodology**

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## **Lunch and Poster Session**

**13:00- 14:00**

- **Lunch and Poster Viewing, 60min**
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## **Afternoon Session**

**14:00 - 14:40**

- **Faculty Colloquium (40 min)**

*Amir Goldbourt, TAU*

**Dynamics averaging of anisotropic NMR interactions reveal different dynamic behaviour in filamentous phage capsids**

**14:40 - 15:05**

- **Lecture 6 (25 min, discussion included)**

*Roni King, former veterinarian at Nature & Parks Authority*

**Wildlife rabies-the disease and the Oral Rabies Vaccination**

**15:05 - 15:10 Short break following the colloquium**

**15:10 - 15:35**

- **Lecture 7 (25 min, discussion included)**

*Lucio Frydman, Weizmann*

**Can NMR Spectroscopy be of Help for Preventing Deaths from Pancreatic Cancer?**

**15:35 - 16:00**

- **Coffee Break (25 min)**

**16:00 - 16:15**

- **Short Lecture 4 (15 min)**

*Eyal Laster, TAU*

**High-field hyperpolarization of  $^{13}\text{C}$  nuclei using NV centers in diamond**

**16:15 - 16:40**

- **Lecture 8 (25 min, discussion included)**

*Or Perelman, TAU*

**AI-Based Interventions Along the Molecular MRI Pipeline: The Quest for Speed, Specificity, and Histological Fidelity**

**16:40 - 17:05**

- **Lecture 9 (25 min, discussion included)**

*Gil Goobes, Bar Ilan*

**Regulation of mineral films on bone apatite crystals and early mineralization events by non-collagenous bone proteins**

**17:05 - 17:20**

- **Closing Remarks (15 min)**