



NanoVation
Respiratory Monitoring Innovation



Israel Ministry of
Science & Technology
משרד המדע והטכנולוגיה



**The Wolfson Department
of Chemical Engineering**
Technion - Israel Institute of Technology



הכנס השנתי של:

התקנים לבישים לאבחון רפואי

The Annual Conference on:

Wearable Devices for Medical Diagnosis

13-14 May 2019 | Water Research Institute | Technion – Israel Institute of Technology | Haifa, Israel

המכון לחקר המים | הטכניון – מכון טכנולוגי לישראל | חיפה, ישראל

Scientific Program

Monday, May 13, 2019

08:30 – 09:00 Registration, Morning Reception

09:00 – 09:30 Greetings and Welcome Ceremony

Prof. H. Haick

Dr. A. Broisman - *The Ministry of Science*

- 09:30 – 11:00** **Session 1 – Opening Plenary**
Chair: A. Schroeder
- 09:30 – 10:20** Prof. K. S. Suslick *“Colorimetric sensor arrays for biomedical applications”*
- 10:20 – 11:00** Prof. C. Di Natale *“Combinatorial selectivity with ensembles of porphyrinoids-based chemical sensors”*
- 11:00 – 11:30** **Coffee Break and Exhibition Visit**
- 11:30 – 12:50** **Session 2 – Biomarkers & Advances in Sensors**
Chair: G. Shani
- 11:30 – 11:50** Prof. M. Leja *“Single-use electronics for gastrointestinal disease: the current applications and a view toward the perspective”*
- 11:50 – 12:10** Prof. W. Wang *“Recent advances of monolayer MoS₂: applications, preparations, characterizations and simulations”*
- 12:10 – 12:30** Prof. X. Lü *“Progress on advanced sensors devices and sensing materials: conceptualization, methodology and applications”*
- 12:30 – 12:50** Dr. J. Mitrovics *“VOC sensing in exhaled breath for medical diagnosis”*
- 12:50 – 14:00** **Lunch Break + Posters**
- 14:00 – 15:50** **Session 3 – Fabrication of Sensors for Wearable Devices**
Chair: C. Di Natale
- 14:00 – 14:20** Prof. R. Jelinek *“Blood pulse and pressure sensor based on innovative gold nanostructure technology”*
- 14:20 – 14:40** Y. Horev *“Development of electrospun flexible sensing semiconductors”*
- 14:40 – 15:00** Prof. W. Wu *“Free-standing and eco-friendly polyaniline thin films for multifunctional sensing of physical and chemical stimuli”*
- 15:00 – 15:20** Dr. H. Ben-Yoav *“Intelligent redox-responsive film-modified multi-electrode arrays for in-situ analysis of biofluids”*
- 15:20 – 15:50** M. Khatib *“Stretchable and multi-functional transistor with autonomic self-healing capability”*
- 15:50 – 16:10** **Coffee Break and Exhibition & Posters Visit**
- 16:10 – 17:30** **Session 4 - Flash talks**
Chairs: H. Haick, Y. Broza
(Companies speech and 5-minute student presentations)
- 17:30** **Get Together Cocktail + Posters**

Tuesday, May 14, 2019

08:30 – 09:00 Registration, Morning Reception

09:00 – 10:30 Session 5 – Micro- & Nano-technology and Health
Chair: M. Leja

09:00 – 09:50 Prof. I. Steinberg *“Bridging the gap between (bio)chemical sensors and the digital world: towards a wireless RFID/NFC wearable sensing platform”*

09:50 – 10:40 Prof. A. Schroeder *“Barcoded nanoparticles as sensors for personalized cancer medicine”*

10:40 – 11:10 Coffee Break and Exhibition Visit

11:10 – 12:30 Session 6 – Integrated Accessories for Wearable Devices
Chair: W. Wu

11:10 – 11:30 Prof. Y. Shokef *“Taming frustration in mechanical metamaterials”*

11:30 – 11:50 Prof. D. Yunfeng *“Chemically-modified polyaniline for detection of volatile biomarkers with minimal sensitivity to humidity and bending”*

11:50 – 12:10 Prof. X. - M. Tao *“Fiber-based hybrid energy conversion systems for wearable applications”*

12:10 – 12:30 Prof. T. - P. Huynh *“Self-healing materials for medical diagnosis”*

12:30 – 14:00 Lunch Break + Posters Visit

14:00 – 16:00 Session 7 – Applications of Wearable Devices
Chair: Y. Broza

14:00 – 14:20 Prof. Y. Hanein *“Wearable EEG and EMG electronic-skin for neurological applications”*

14:20 – 14:40 Dr. M. Bar-Segev *“Wearables for industrial equipment”*

14:40 – 15:00 Dr. G. Shuster *“Monitoring lung function using non-invasive wearable nano-sensors”*

15:00 – 15:20 Dr. C. Kjellander *“Printed stretchable electronics for wearable plasters with embedded sensor nodes”*

15:20 – 15:40 Dr. P. Mochalski *“Sniffing entrapped humans with portable devices: sensor arrays and ion mobility spectrometer”*

15:40 – 16:00 Dr. P. Agrawal *“Thin film ASICs for wearable platforms”*

16:00 – 16:30 Coffee Break and Exhibition & Posters Visit

16:30 – 17:30 Session 8 - Closing Plenary Session
Chair: H. Haick

16:30 – 16:50 Dr. V. Ikonen *“Responsibility by design – implementing Responsible Research and Innovation (RRI) approach into the research project”*

16:50 – 17:30 Prof. Y. T. Zhang *“Cardiovascular health engineering: the MINDS design of wearable and flexible devices”*

For more information and abstract submission:

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