15:15-15:30	**Simon Brandon (Technion)-** Modeling performance and performance stability of anion exchange membrane fuel cells
15:30-15:45	**Gideon Segev (Berkeley, TAU) -**Electronic ratchet based ion pumps for high efficiency water desalination
15:45-16:05	**Coffee Break**
16:05-16:20	**Amram Azulay (Technion) -** Electronic transport mechanisms of La- and Y-doped calcium-manganite compounds for thermoelectric energy harvesting
16:20-16:35	**Ofir Eisenberg (WIS) -** Metallo-organic assemblies for dual-function electrochromic supercapacitors
16:35-17:05	**Yehoshua Kalisky (NRCN) -** Spectroscopy and Solar Energy - A Review
Surface Science – session chair: Shira Yochelis – Hall 1 – 5th Floor	
14:45-15:15	**Alon Hoffman (Technion)** - Interaction of activated nitrogen with diamond surfaces
15:15-15:35	**Hagay Shpaisman (BIU)-** Microbubble assisted photo-thermal directed assembly
15:35-15:55	**Arava Zohar (WIS)-**Direct evidence for in-gap states in bromide perovskites and their effects on devices
15:55-16:15	**Coffee Break**
16:15-16:35	**Ziv Golany (Technion)** - Dewetting of polymer films in non-solvent - solvent environment, new approach for polymer particle patterning
16:35-17:05	**Elad Gross (HUJI) -** Mapping Catalytic Reactions on Single Nanoparticles
Nanoelectronics and Spintronics – session chair: Amos Sharoni – Hall 6 – 5th Floor	
14:45-15:15	**Lior Klein (BIU)-** A route towards magnetic memory with 6 bits per cell
15:15-15:30	**Guy Rahamim (BIU) -** Laser Induced Colloidal Writing of Pd-Ni for Formation of Hydrogen Sensors
15:30-15:45	**Oren Regev (BGU) -** Compression-enhanced thermal conductivity of polymer composites
15:45-16:05	**Coffee Break**
16:05-16:20	**Elihu Anouchi (BIU)** - A 3-terminal VO2-based realization of an artificial synapse
16:20-16:35	**Efrat Shawat Avraham (BIU) -** Low-cost transparent conductors: Making FTO behave like ITO
16:35-17:05	**Elad Koren (Technion) -** Interlayer conduction in graphene based electronics
Soft and Biological Matter – session chair: Ayelet Lesman – Platinum– 4th Floor	
14:45-15:15	**Ulyana Shimanovich (WIS)** - Protein nanofibrils: from pathology to functional materials
15:15-15:30	**Maya Kleiman (Volcani Center)** - Developing synthetic biomimetic surfaces to study biological interactions
15:30-15:45	**Nir Kampf (WIS)-** Liposomes Structure-Function at Different Surfaces
15:45-16:05	**Coffee Break**
16:05-16:20	**Eyal Golub (UC)**- Selective heterobimetallic bridging of distinct protein interfaces via the introduction of metal-specific ligands: A polyhedra case study
16:20-16:35	**Le Saux Guillaume (BGU) -** Nanoscale Mechanosensing of Natural Killer Cells is Revealed by Antigen-Functionalized Nanowires
16:35-17:05	**Nadav Amdursky (Technion)-** Protein-based conductive materials
17:05-17:15	**Gathering to the plenum**
17:15-18:00	**Plenary talk II: Hanoch Daniel Wagner (WIS) -**Recipient of IVS Research Excellence Award -Multiscale nano-bio-composites: Toward stiffer, stronger and tougher materials
18:00-18:30	**Award Ceremony**
18:30-19:30	**IVS General Assembly and Board Meeting**

TECHNION Israel Institute of Technology

IVS Israel Vacuum Society

IVS-IPSTA 2019

The 37th Annual Conference of the Israel Vacuum Society

September 3rd ● Sammy Ofer Stadium, Haifa

Organizing committee:

Yaron Amouyal (Technion) and Sharon Waichman (NRCN)

Igor Rahinov (The Open University of Israel) -the IVS President

08:30-09:00	**Gathering and Registration**
09:00-09:15	**Greetings - Igor Rahinov (OUI) - IVS President**
09:15-10:15	**Plenary talk I: Amy V. Walker (UT Dallas)** - Building a New Materials Toolkit: Using Surface Chemistry to Direct the Morphology and Deposition of Thin Films and Nanoobjects
10:15-10:25	**Division to Parallels Sessions**
Plasma Science session, chair :Zohar Henis – Diamond 4th Floor	
10:25-10:50	**Michael Mond (BGU) -** Quasi Incompressible Growth of Magnetic Fields in Supersonic Turbulence
10:50-11:05	**Marko Cvejic (WIS) -** Ion velocities measurements in Z-pinch with pre-embedded axial magnetic field
11:05-11:20	**Meytal Siman Tov (Technion) -** Generation of space charge self-oscillations in a diode by Over-Injection
11:20-11:35	**Satyajit Chowdhury (Technion) -** Effect of magnetic field on the performance of the inline screw feeding vacuum arc thruster (ISF-VAT)
11:35-12:00	**Coffee Break**
12:00-12:15	**Galia Faingold (Technion) -** Plasma reforming of n-heptane for ignition control of a homogeneous charge compression ignition engine
12:15-12:30	**Itay Gissis (Technion) -** Laboratory Astrophysics – Cold Absorption
12:30-12:55	**Ramy Doron (WIS) -** Magnetized plasma compression: what can we learn from measurements of the compressed magnetic field?
Microscopy and Spectroscopy of Surfaces and Interfaces - session chair: Yaron Kauffmann – Gold North – 4th Floor	
10:25-10:55	**Guido Schmitz (University of Stuttgart) -** Atom probe tomography: Analysis of soft matter, liquids and interfaces at the top of the tip
10:55-11:10	**Ora Bitton (Weizmann) -** Vacuum Rabi splitting in a plasmonic cavity at the single quantum emitter limit
11:10-11:25	**Ehud Almog (Technion) -** Microtube Fabrication by the Sacrificial Salt Whisker Technique
11:25-11:40	**Nina Armon (Bar Ilan) -** Simultaneous synthesis and micro patterning of a metal organic framework by the laser induced microbubble technique
11:40-12:10	**Coffee Break**
12:10-12:25	**Asaf Bolker (NRC) -** 2D-material based foams for space applications
12:25-12:55	**Gil Markovich (TAU) -** Controlling the handedness of chiral nanocrystals by chiral molecules
Nanomechanics of Materials – session chair: Eugen Rabkin – Hall 1 – 5th Floor	
10:25-10:55	**Dan Mordehai (Technion)-** Probabilistic strength of metallic objects at the nanoscale
10:55-11:10	**Israel Kellersztein (WIS) -** The Structure and Mechanical Properties of the Scorpions' Pincers
11:10-11:25	**Yair Cohen (NRCN)-** The Surface and Stress Behavior of Manganese-Oxide Electro-Catalyst during Oxygen Reduction Reaction
11:25-11:40	**Nitzan Shauloff (BGU) -** Elastic Carbon Dot/Polymer Films for Fluorescent Tensile Sensing and Mechano-Optical Tuning
11:40-12:10	**Coffee Break**
12:10-12:25	**Evgeniy Makagon (WIS)-** Design and operation of a room temperature electro-chemo-mechanical actuator
12:25-12:55	**Hanoch Daniel Wagner (WIS) -** Extreme scale-dependent mechanical properties of epoxy
Epitaxial Films: Science & Technology- session chair: Lior Kornblum – Hall 6 – 5th Floor	
10:25-10:55	**Asaf Albo (BIU)-** Towards Room Temperature Operation of Terahertz Quantum Cascade Lasers: Carrier Leakage Engineering as a Novel Design Concept
10:55-11:10	**Noam Sicron (NRC) -** Comparison of GaN on GaN and GaN on sapphire p-i-n diodes
11:10-11:25	**Naor Vardi (Bar-Ilan) -** Glass-like relaxation dynamics following the metal to insulator transition of VO2
11:25-11:40	**Yaron Paz (Technion)-** Orthogonal fractal growth of CsI domains forming a ladder-like structure
11:40-12:10	**Coffee Break**
12:10-12:25	**Yossi Cohen (SCD)-** Investigation of gallium-related defects in III/V epitaxial layers
12:25-12:55	**Yaron Knafo (Gal El)-** GaN high electron mobility transistors for RF applications
Scanning Probe Microscopy – session chair: Ruti Kapon – Platinum– 4th Floor	
10:25-10:55	**Itay Rousso (BGU) -** Unraveling the mechanism of HIV genome release from the capsid using mechanical and morphological analysis
10:55-11:10	**Rakefet Ofek Almog (Azrieli College, TAU) -** Metrology of Self-Assembled Monolayer Barrier for Cu Metallization
11:10-11:25	**Dima Cheskis (Ariel)** - STM Imaging of deposited graphene oxide on Au substrate
11:25-11:40	**Irit Rosenhek-Goldian (WIS)-** Photo-Induced Charge Transfer in Organic Nano-Crystalline Donor-Acceptor Heterojunctions Studied by Scanning Kelvin-Probe Microscopy
11:40-12:10	**Coffee Break**
12:10-12:25	**Abhay Kumar Nayak (WIS) -** Resolving Topological Classification Using Topological Defects
12:25-12:55	**Nurit Avraham (WIS)-** EProbing the robustness of Weyl semimetals Fermi arcs to surface perturbations
12:55-13:45	**Lunch – South Gold 4th Floor**
13:45-14:30/14:45	**Poster Session || Commercial exhibition - South Gold 4th Floor**
Plasma Scienc session chair: Asher Yahalom – Diamond – 4th Floor	
14:30-14:55	**Avraham Gover (TAU)-** Coherent Spontaneous Superradiance and Stimulated-Superradiant Emission of Bunched Electron Beams
14:55-15:10	**Slava Smartsev (WIS)-** Axiparabola: A long focal depth, high resolution mirror for broadband high intensity lasers
15:10-15:25	**Miron Voin (Technion) -** Self-consistent solution for Fowler-Nordheim Current in superimposed DC and RF fields
15:25-15:40	**Moti ben Laish (BGU)-** MMW coherence detection for 5th generation of cellular communication
15:40-16:10	**Coffee Break**
16:10-16:25	**Amit Beer (TAU)-** Iris-assisted Terahertz field-induced second harmonic generation in air
16:25-16:40	**Elhanan Magid (Rafael) -** Microwave pulse compression based on laser-induced breakdown
16:40-17:05	**Yosef Pinhasi (Ariel University)-** Study of radio frequency propagation in plasmas generated in rocket plumes
Energy and Sustainability- session chair: Yaron Cohen – Gold North – 4th Floor	
14:45-15:15	**Yaniv Gelbstein (BGU) -** Advances in the development of thermoelectric materials for power generation