

OASIS 7 – 1-2 April, 2019

Posters Exhibition

Monday, April 1, 2019

Micro and Nano Optics (10:55 – 11:25)

1. All-Dielectric Waveguide-Overlay System For Optical Trapping Of Atoms
Mr. Angeleene Ang, *Ben-Gurion University*
2. Utilization Of Time-Resolved Leakage Microscopy For Direct Measurement Of Plasmonic Group Velocity And Refractive Index Of Thin Graphene Layer
Mr. Ori Azulay, *Ariel University*
3. Lightning-Fast Solution Of Scattering Problems In Nanophotonics: An Effortless Modal Approach
Mr. Parry Chen, *Ben-Gurion University*
4. Fano Interference Probing By Spin-Orbit Interaction
Dr. Dima Cheskis, *Ariel University*
5. Plasmonic Enhancement Of Molecular Overtone Transitions In The Near-Infrared Region
Mr. Daler Dadadzhanov, *Ben-Gurion University*
6. Wide Range Binary Two-Dimensional Amplitude Sinusoidal Grating
Mr. Eran Daniel, *Soreq NRC*
7. Near-Ir Wide Field-Of-View Huygens Metalens For Outdoor Imaging Applications
Dr. Jacob Engelberg, *Hebrew University of Jerusalem*
8. Metasurface Assisted Mode Converters Based On Soi Technology
Mr. Yakov Greenberg, *Ben-Gurion University*
9. Detuning Modulated Composite Pulses For Integrated Photonics
Ms. Hader Greener, *Tel Aviv University*
10. Printed Waveguides In Porous Silicon
Dr. Alexander Kellarev, *Tel Aviv University*
11. Exciton-Polariton Nanofocusing
Mr. Nadav Landau, *Technion - Israel Institute of Technology*
12. Optical Properties Of Single Visible Peptide Nanodots
Mr. Nadezda Lapshina, *Tel Aviv University*
13. Phase Manipulation By Use Of A Chiral Plasmonic Metasurface
Ms. Leeju Leeju, *Ariel University*
14. Spectrally Tunable Diffractive Induced Transparency And Slow Light In Plasmonic Nanoparticle Arrays
Dr. Lior Michaeli, *Tel Aviv University*
15. Curved Space Plasmonic Optical Elements

Ms. Danveer Singh, Tel Aviv University

16. Non-Linear Light Amplification In Superconductor-Semiconductor Plasmonic Waveguides

Mr. Nir Strugo, Technion - Israel Institute of Technology

17. Dynamic Control Of Plasmonic Beams

Mr. Dror Weisman, Tel Aviv University

18. Vectorial Physical-Optics Modeling Of The Interaction Of A Tightly Focused Beam With A Nanoparticle

Ms. Huiying Zhong, LightTrans International

19. Modeling Of Diffractive/Meta-Lenses Using Fast Physical Optics

Ms. Huiying Zhong, LightTrans International

IFLA – International Fiber Lasers and Applications (10:55 – 11:25)

20. New Approaches in Microfiber and Nanofiber Tapering and Packaging

Mr. Netanel Malka, Israel Center for Advanced Photonics

21. Ultrasound Detection Via Low-Noise Pulse Interferometry Using A Free-Space Fabry-Pérot

Mr. Oleg Volodarsky, Technion - Israel Institute of Technology

Electro Optics in Industry (13:30 – 14:00)

22. Efficient Diffraction Method For 2D Orifices Using Contour Integral

Mr. Eitam Luz, Tel Aviv University

Medicine and Biology (13:30 – 14:00)

23. Enhanced Entangled-Photon-Pair Interaction With Metallic Nanoparticles

Mr. Ariel Ashkenazy, Bar-Ilan University

24. Development of a Miniaturized Bio-Barcode Sensor Array for Detection of Biological Events

Mrs. Marriana Beiderman, Bar-Ilan University

25. Surface Chemistry Controls The Uptake Of Gold Nanorods By Macrophages

Mrs. Ruchira Chakraborty, Bar-Ilan University

26. Absorption Based Physiological Parameter Determination From IPL Point

Mrs. Idit Feder, Bar-Ilan University

27. Non-Invasive Detection of Congenital Heart Diseases in Newborns by Electro-Optical Measurement in the Hand and Foot

Mr. Yohai Nitzan, Jerusalem College of Technology

28. Magnetic Resonance Imaging Of Microstructured Optical Fibers
Dr. Roman Noskov, *Tel Aviv University*
29. Holographic Display For Optical Retinal Prosthesis: Design And Validation
Mrs. Shani Rosen, *Technion - Israel Institute of Technology*
30. Acousto-Optic Tomography Beyond The Acoustic Diffraction-Limit Using Speckle Decorrelation
Mrs. Moriya Rosenfeld, *Hebrew University of Jerusalem*
31. Extended Depth-Of-Field Super-Resolution Micro-Endoscopy Via Speckle Fluctuations
Mr. Noam Shekel, *Hebrew University of Jerusalem*
32. Diffusion Reflection, A Novel Non-Invasive Nanophotonic Method For Early In Vivo Detection Of Oral Cancer
Dr. Shiran Sudri, *Tel Aviv University*
33. An Optical Method To Detect Tissue Scattering: Theory, Experiments And Biomedical Applications
Mrs. Inbar Yariv, *Bar-Ilan University*

- Non-Linear Optics (15:30 – 16:00)**
34. Second Harmonic Generation In Geometric-Phase Resonant Dielectric Metasurfaces
Mr. Jonathan Bar-David, *Hebrew University of Jerusalem*
35. Dynamics Of Coupled Degenerate Parametric Oscillators Beyond Coupled Ising Spins
Mr. Leon Bello, *Bar-Ilan University*
36. Point Measurements Of Opto-Mechanical Interactions In Multi-Core Fibers
Dr. Arik Bergman, *Bar-Ilan University*
37. Direct And Cascaded Collective Third Harmonic Generation In Plasmonic Metasurfaces
Mr. Ofer Doron, *Tel Aviv University*
38. Ultrafast Measurement Of The Entire Electric Field
Mr. Avi Klein, *Bar-Ilan University*
39. Distributed Mapping Of Nonlinear Wave Mixing Due To Opto-Mechanics And Kerr Effect
Mr. Yosef London, *Bar Ilan University*
40. Observation Of Branched Flow Of Light
Mr. Anatoly Patsyk, *Technion - Israel Institute of Technology*
41. Comprehensive Theory Of Frequency Conversion From Nanoparticles
Dr. K. Nireekshan Reddy, *Ben-Gurion University*
42. Thz Emission From Nonlinear Metasurfaces In Free Space And Waveguide Platforms
Mr. Symeon Sideris, *Tel Aviv University*

Lasers and Applications (15:30 – 16:00)

43. Yellow LASER For Eye Surgery
Mr. Kobi Aflalo, *Ben-Gurion University*
44. Beyond the Dispersion Limit of Standard Polymeric Fiber Transmission Systems
Dr. Matthias Haupt, *Harz University of Applied Sciences*
45. Emittance Reduction By Density Tapering In Laser-Plasma Electron Acceleration
Mr. Eitan Y. Levine, *Weizmann Institute of Science*
46. Efficient Laser Drilling With Temporal Laser Pulse Shaping
Mr. John Linden, *Orbotech*
47. Topologically Controlled Intra-Cavity Laser Modes By Geometric Phase Metasurface
Dr. Elhanan Maguid, *Technion - Israel Institute of Technology*
48. Plasma Fiber Using Prior Laguerre-Gaussian Laser Pulse
Mr. Omri Seemann, *Weizmann Institute of Science*
49. Low Intensity Lidar Using Depth Aware Compressive Sensing And A Photon Number Resolving Detector
Mr. Yoni Sher, *Hebrew University of Jerusalem*
50. Low-Loss Fused Silica Waveguides For High-Power Photonic Devices
Dr. Maya Yevnin, *Soreq NRC*
51. Carrier To Envelope Phase (CEP) Stable, 2.37 μ m, Ultrashort Pulses From A Hybrid Parametric – Cr:Znse Laser Amplifier
Mr. Pavel Komm, *Hebrew University of Jerusalem*
52. Observation Of Optical Backflow
Mr. Thomas Zacharias, *Tel Aviv University*

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Posters Exhibition

Tuesday, April 2, 2019

Atomic and Quantum Optics (11:30 – 11:50)

- 53. Miniaturized Continuous Dispersive NIR Spectrometer Based On MEMS
Dr. Sebastian Meyer, *Fraunhofer IPMS*
- 54. A Quasi-Static MEMS-Scanning-Grating Enabled Tunable Micro External Cavity Quantum Cascade Laser ($\mu\text{ec-Qcl}$) For Th MIR
Dr. Jan Grahmann, *Fraunhofer Institute for Photonic Microsystems (IPMS)*
- 55. Multiplicative Bell Inequalities
Mr. Bar Peled, *Ben-Gurion University*
- 56. Power Narrowing: Cancellation Of Doppler Broadening In Two-Photon Transitions
Mr. Ran Finkelstein, *Weizman Institute of Science*
- 57. Spontaneous Emission From A Wide Quantum Electron
Mr. Aviv Karnieli, *Tel Aviv University*

Photonics in Defense (11:30 – 11:50)

- 58. Wildfire Fighting Is An Environmental As Well As A Homeland Security Issue
Mr. Daniel Leigh, *Fighting Treetop Fire*

Electro Optics Devices (11:30 – 11:50)

- 59. Spatial Mode Mixing Device 3D Printed On Fiber Facet
Ms. Miri Blau, *Hebrew University of Jerusalem*
- 60. Polarization Dependence Of SPP Coupling In Au Nanowires
Dr. Rajesh Desapogu, *Ariel University*
- 61. Dual-Mode NSOM-AFM Silicon-Based Photodetector For Advanced Surface Scanning
Mr. Emanuel Lozitsky, *Jerusalem College of Technology*
- 62. NSOM Nanoscale Si-Based Advanced Photodetector For Several Scanning Configurations
Mr. Matityahu Karelits, *Lev Academic Center - Jerusalem College of Technology (JCT)*
- 63. On The Chip Enhanced Raman Imager
Mr. Yaakov Mandelbaum, *Lev Academic Center - Jerusalem College of Technology (JCT)*

64. Surface Acoustic Wave-Photonic Devices In Silicon-On-Insulator
Mr. Dvir Munk, *Bar-Ilan University*
65. New Modes' Analysis In Linbo3 Split Y-Junction Wave-Guide Sharing Very Low Index Difference
Mr. Eyal Terkieltaub, *Jerusalem College of Technology*
66. Surface Plasmon Resonance Phase Extraction Technique Using A Liquid Crystal Waveplate And A Diverging Beam Approach
Mr. Ibrahim Watad, *Ben-Gurion University*

Optical Engineering (13:50 – 14:20)

67. Interferometric Metrology Of Freeform Surfaces
Mr. Jean Pierre Lormeau, *QED Technologies International Inc.*
68. Absolute Optimization Method For Vertical Grating Coupling
Prof. Shlomo Ruschin, *Tel Aviv University*
69. Simultaneous Multi-Channel Ultrasound Detection Via Optical Resonators
Mr. Yoav Hazan, *Technion - Israel Institute of Technology*
70. Passive Interferometric Detection Of Ultrasound With A Large Dynamic Range
Mr. Yoav Hazan, *Technion - Israel Institute of Technology*
71. Embedding Metasurfaces Into Contact Lenses – More Than Refractive-Error Correction
Mrs. Sharon Karepov, *Tel Aviv University*
72. Compact Lidar System For The Automotive Industry
Dr. Boaz Nemet, *Innoviz Technologies*
73. Speckle Reduction Using Ultrasound In Interferometric Phase Microscopy
Mrs. Shira Shinar, *Tel Aviv University*
74. Analysis Of Process Induced Changes In Optical Properties Of Precision Glass Molded Lenses
Mr. Jan-Helge Staasmeyer, *Fraunhofer Institute for Production Technology IPT*
75. Influence Of Dressing Strategies And Balancing Parameters On The Surface Quality In Ultra-Precision Grinding Of Transparent Polycrystalline Spinel
Mr. Thomas Bletek, *Fraunhofer Institute for Production Technology IPT*

Ultrafast Phenomena (13:50 – 14:20)

76. Coherent Control Of The Non-Instantaneous Response Of Plasmonic Nanostructures
Mr. Eyal Bahar, *Tel Aviv University*
77. Towards Ultrafast Phase Spectroscopy: Femtosecond Rabi Oscillations In Coupled Lsprs
Mr. Uri Arieli, *Tel Aviv University*
78. Ultrafast Rogue Waves In Fiber Lasers
Dr. Moti Fridman, *Bar-Ilan University*

79. Towards Remote Lightning Manipulation By Meters-Long Plasma Channels Generated By Ultra-Short-Pulse High-Intensity Lasers
Dr. Jenya Papeer, *Hebrew University of Jerusalem*
80. Self-Compressed Polarization Controlled Red Shifted Soliton from Supercontinuum for 1 μm CPA Systems
Prof. Zaharit Rafaeli, *Soreq NRC*
81. Multi-Mode Time Lens
Ms. Inbar Sibony, *Bar-Ilan University*
82. Experimental Demonstration Of Time-Resolved Imaging By Multiplexed Ptychography (TIMP)
Mr. Omri Wengrowicz, *Technion - Israel Institute of Technology*

Solar Energy (15:50 – 16:20)

83. Thin Solar Cells Light Management Integrating Metasurfaces
Mr. Evyatar Rimon, *Ben Gurion University*
84. Synthesis And Characterization Of Few Unit Cell Cs-Based Perovskite Nanowires And Novel Rubidium Lead Chloride Nanocrystals
Mrs. Daniel Amgar, *Weizmann Institute of Science*
85. Microcavity Enhanced Low-Frequency Raman Scattering From CsPbI_3 At Room Temperature
Mrs. Tal Ben Uliel, *Bar-Ilan University*
86. Structural Characterization And Room Temperature Low Frequency Raman Scattering From MAPbI_3 Halide Perovskite Films Rigidized By Cesium Incorporation
Mr. Vinayaka Harshothama Damle, *Bar-Ilan University*
87. Strain Controlling Catalytic Efficiency Of Water Oxidation For NiFeOOH Alloy
Mrs. Ester Korkus Hamal, *Technion - Israel Institute of Technology*
88. A New Two-Step Method Towards MAPbI_3 Perovskite Films
Ms. Maayan Perez, *Ben Gurion University*

Spectroscopic and Optical Sensing (15:50 – 16:20)

89. New Method For Light Meter Calibration
Mr. Arie Amitzi, *QCC Hazorea Calibration Technologies*
90. Multi-Purpose Hyperspectral Imaging System For Sampling Of Crop From A Moving Platform
Mr. Or Arad, *Ben Gurion University*
91. Biomineral Vaterite Nanoparticles as a Platform for Targeted Drug Delivery Applications
Mr. Hani Barhum, *Tel Aviv University*

92. The Measurement Of Large And Fast Strains Using Rayleigh Backscattering In Optical Fibers
Mr. Hari Datta Bhatta, *Tel Aviv University*
93. Fiber Optics For Biomedical Diagnostics
Dr. Olga Bibikova, *art photonics GmbH*
94. Passive Optical Time-Of-Flight For Non Line-Of-Sight Localization
Mr. Jeremy Boger-Lombard, *Hebrew University of Jerusalem*
95. Diagnosis Of Oral Cancer Based On FTIR-ATR Spectra Of Salivary Exosomes – Preliminary Study
Dr. Ben Zion Dekel, *Ruppin Academic Center*
96. Optofluidics By The Use Of Gradient Metal Nanoislands
Dr. Dimitra Gkogkou, *Leibniz-Institut für Analytische Wissenschaften – ISAS – e. V.*
97. High Speed Fiber Bragg Grating Interrogator Enabling Ultrasonic Nondestructive Testing And Machine Condition Monitoring
Dr. Ziv Glasser, *Ariel University*
98. Novel Fiber-Only UHQ Micro-Resonators For Sensing Application
Mr. Gabriel Guendelman, *Weizmann Institute of Science*
99. Deflected Talbot Effect In Weakly Absorbing Medium On Waveguide With Perturbation Of Cylindrical Shape
Mr. Aviad Katiyi, *Ben Gurion University*
100. Spectral Superresolution In A Compact FT-IR Spectrometer
Ms. Erga Lifshitz, *Tel Aviv University*
101. Phase-Shift-Amplified Interferometry
Mr. Egor Liokumovitch, *Ariel University*
102. Revealing Non-Mie Resonances Via Dark-Field Spectroscopy In Biomineral Vaterite Nanoparticles
Mr. Andrey Machnev, *Tel Aviv University*
103. Enhanced Sensitivity Of Silicon-Photonics-Based Ultrasound Detection Via BCB Coating
Ms. Resmi Ravi Kumar, *Technion - Israel Institute of Technology*
104. Echo Spectroscopy in Multilevel Quantum-Mechanical Molecular Rotors
Ms. Dina Rosenberg, *Tel Aviv University*
105. Sequence-Coded Coherent Laser Range-Finder
Mrs. Keren Shemer, *Bar-Ilan University*
106. Plasma Dispersion Effect Based Super-Resolved Imaging In Silicon
Prof. Moshe Sinvani, *Bar-Ilan University*
107. High-Tc Superconductor Nanowire Single Photon Detector
Mr. Xinxi Xing, *Technion - Israel Institute of Technology*
108. Pathogen Detection Using Frequency Domain Fluorescent Lifetime Measurements
Mr. Gilad Yahav, *Bar-Ilan University*