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סמינר

"Highly Efficient Few-Layer Metasurfaces for Terahertz Wave Manipulation and Refractory Nanophotonics"

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Abstract

Metasurfaces have shown their unprecedented capability to manipulate the amplitude, phase, and polarization state of the electromagnetic wave, demonstrating various exotic optical phenomena and novel functionalities for a wide variety of applications such as wave-front engineering, enhanced light-matter interaction at nanoscale, and chemical and biological sensing, to name a few. In this talk, the focus will be first placed upon my recent work on few-layer metasurfaces for manipulating the terahertz (THz) wave to realize linear-to-circular polarization conversion, optical antireflection, narrowband filtering, and beam focusing, with unprecedentedly high efficiencies promising for practical applications where compact, high-performance THz photonic components and devices are desired. Then, I will switch gears to talk about my work on high-temperature nanophotonics, in which refractory metasurfaces for solar thermophotovoltaics (STPV) with desirable tailored absorptance and emittance are experimentally demonstrated, featuring thermal stability up to at least 1200 °C and a projected STPV efficiency of 18% when a fully integrated absorber/emitter refractory metasurface intermediate structure is employed.

ההרצאה תתקיים ביום רביעי, ה-13.1.21 - בשעה 12:30 בזום

<https://technion.zoom.us/j/99045165482>

The lecture will take place on Wednesday, 13.1.21 at 12:30

via Zoom <https://technion.zoom.us/j/99045165482>

Host: Assistant Professor Yoav Sagi