The Hebrew University Center
for Nanoscience & Nanotechnology

האוניברסיטה
העברית
בירושלים

Nano Seminar

Nanoporous Metallic Networks: Fabrication, Optical Properties and Applications

Dr. Adi Salomon

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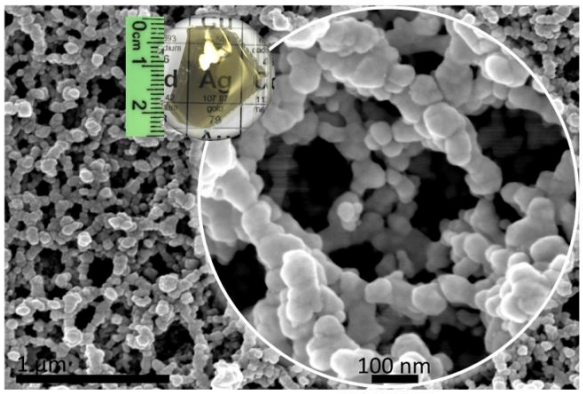
Abstract:



Nanoporous metallic networks are a group of porous materials made of solid metals with sub-optical wavelengths sizes of both particles and voids. They are characterized by unique optical properties, as well as high surface area and permeability of guest materials. As such, they attract a great focus as novel materials for photonics, catalysis, sensing, and renewable energy. Their properties together with the ability for scaling-up evoke an increased interest also in the industrial field.

Recently, my group pioneered large-scale nanoporous metallic. These disorder networks are pure, and are made of chain-like ligaments with characteristic dimensions of about 50 nm, forming a continuous solid framework with multi-sized and -shaped pores. Our results suggest that these networks support plasmonic excitation over a broad optical frequency range, and they may viewed as a carpet of 'hot-spots'. Such 3D metallic networks exhibit high optical transparency and electrical conductivity. We characterize the unique optical properties of such metallic nano-architecture networks, which are named 'Netals'.

Gathering & Refreshments at 10:50

Tuesday, November 13th 2018, 11:00 at the Seminar Hall
Los Angeles Building, entrance floor.