

Open positions for a PhD student / Post doctorate associate in two projects:

1. Based on our recently-developed electron non-equilibrium theory, and the re-interpretation of plasmon-assisted photocatalysis experiments (Dubi & Sivan Nature:LSA 2019; Sivan et al, Science 2019), we have an ongoing project whereby we extend this theoretical approach to the study of more realistic metal structures, to semiconductors, to the nonlinear optical response, and to the study of various additional physical effects such as photoluminescence theory, thermometry technique development, photon drag, chemical interface damping etc..
2. Based on our recently-developed Green's tensor calculation technique (Chen, Bergman & Sivan Phys. Rev. Applied 2019), also known as Generalized Normal Mode Expansion (GENOME), we have an ongoing project whereby we apply the method to a range of quantum optics effects in complex nanostructures, including thermal emission calculations, scintillation, electron energy loss spectroscopy etc..

More details on relevant projects can be given to interested candidates, please email Prof. Yonatan Sivan at sivanyon@bgu.ac.il with a CV and list of publications. Background in solid state physics, electronic calculations, quantum optics, theoretical electrodynamics or numerical analysis is an advantage.

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