

PhD/Post-Doctoral position

(Prof. Yonatan Sivan, Ben-Gurion University, Israel)

I am looking for PhD students / Post-Doctoral fellows for theoretical work towards a comprehensive study of the combined optical, electronic and thermal response of metal nanostructures to intense optical illumination. This will be a follow up of our previous work on the topic employed for low intensities, which enabled a re-interpretation of previous results on plasmon-assisted photo-catalysis [Sivan et al., Science 2019; Dubi & Sivan, Light: Science & Applications 2019, ...].

The project involves calculations of electronic rate equations coupled to the Maxwell and heat equations based on a new theoretical model. Applications include extending our previous for non-Drude metals and semiconductors, a comprehensive study of light emission from metals and its use for (transient) thermometry, comparison of coherent and incoherent nonlinearities of metals etc..

Prior experience in plasmonics and/or nonlinear optics and/or solid state physics is an advantage.

For more details, please contact Prof. Yonatan Sivan (sivanyon@bgu.ac.il) with a CV and research description. I will be available in the "Open Position" room of the META NANO 2020 conference.