Position Title	PhD Studentship - Infrared Plasmonic Behavior of 2D and 3D Patterned Conducting Polymer Metamaterials
Project Abstract	The objective of this project is to experimentally determine if traditional plasmonic responses associated with patterned metallic micro and nano structures, such as surface plasmon polaritons and localized surface plasmon resonances can occur in highly doped 2D and 3D patterned conjugated polymer materials at mid-infrared wavelengths (i.e., in the 3 µm to 25 µm wavelength range). The main hypothesis is that by forming patterned nano- and micro-structures of highly-doped conjugated polymers, similar resonant optical properties to those observed in metallic nanostructures at visible wavelengths (i.e., surface plasmon resonances) will be apparent in the mid - infrared. Surface plasmon resonances have found unique applications in surface sensing as well as in sub-wavelength optics at visible and near-infrared electromagnetic wavelengths.
Experience	The PhD position is funded for 4 years, including a monthly stipend and materials and travel budget. Applicants should hold a minimum of an honours bachelor's degree at 2:1 level or equivalent in a relevant subject such as Physics or Nanoscience. Candidates should also have a strong interest in Additive Manufacturing and Photonics.
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	TCD
Closing Date	Friday 29th June 2018
For more information contact	Igor.chvets@tcd.ie; 00353-1-896-1653

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