澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU

應用物理及材料工程研究院
INSTITUTO DE FÍSICA APLICADA E ENGENHARIA DE MATERIAIS
INSTITUTE OF APPLIED PHYSICS AND MATERIALS ENGINEERING

IAPME Seminar

Electrically-driven nano-light sources based on tunnel junctions

11 December 2024

Prof. Tao WANG
Soochow University
Venue: N23-4018
Time: 15:00 - 16:00
Hosted by: Prof. Shen LAI

Abstract

Photonic circuits, utilizing photons as information carriers, present remarkable benefits such as high bandwidth and low energy dissipation in comparison with their electronic counterparts. However, photonic circuits generally possess a considerably larger footprint, thus restricting their prospects for achieving high-density integration. In this context, plasmonic circuits, with the capability of guiding photons at sub-diffractional dimensions, could serve as an alternative to photonic circuits, particularly on the micro- or nano-scale. In this talk, progresses in Wang group will be discussed regarding the electrically-driven nano-light sources for plasmonic circuits.

Biography

Prof. Tao WANG is currently a full professor at the Institute of Functional Nano & Soft Materials of Soochow University. He received his bachelor degree from Beijing University of Posts and Telecommunications in 2007 and Ph.D. from Paris-sud University in 2012. From 2012 to 2019, He was engaged in postdoctoral research at RWTH Aachen in Germany, National University of Singapore, and A*STAR in Singapore. In May 2019, he joined the Institute of Functional Nano and Soft Materials of Soochow University. Over the past years, he has mainly worked on electrically-driven nano-light sources. So far, he has published 40 papers as the first or corresponding author, including Nature Photonics (2), Nature Communications (1), Nano Letters (4), Advanced Materials (1), Advanced Science (1), Small (3) etc., and has been granted 5 patents.

Enquiry: iampe.enquiry@um.edu.mo