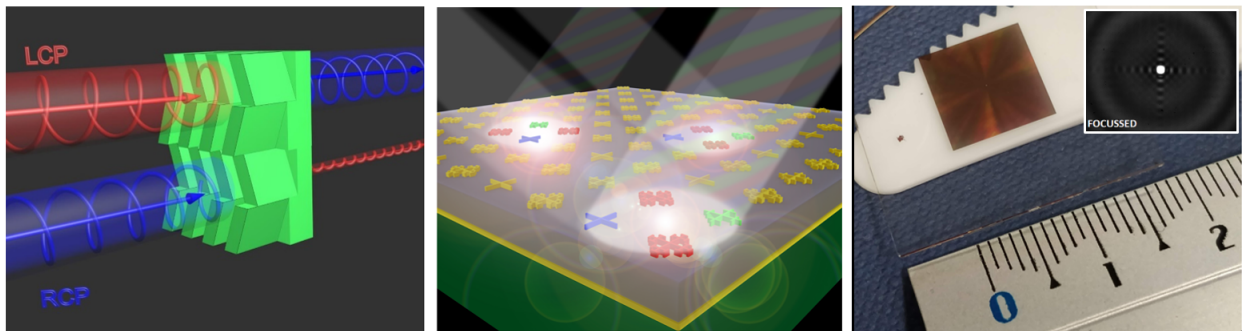


Optics and Photonics Group
Lunchtime Seminar

“From absorbers to lenses: designing highly-efficient metasurfaces”

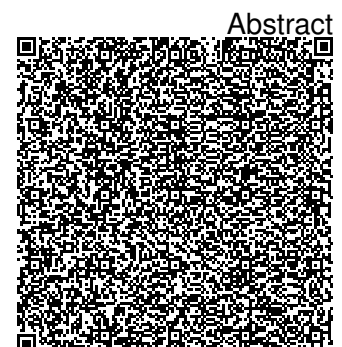
Mitchell Guy Kenney

University of Glasgow



1:00pm Friday 13th September 2019
C15 Chemistry building
All Welcome

http://optics.nottingham.ac.uk/wiki/Talks_2019



“From absorbers to lenses: designing highly-efficient metasurfaces”

Mitchell Guy Kenney

1:00pm Friday 13th September 2019

C15 Chemistry building

All Welcome

Metasurfaces, the 2D variant of metamaterials, have been at the forefront of optics research in the past few years, due to the simplicity and flexibility of their design, and the impact of novel devices which can be created. Primarily realised using plasmonic effects - fabricated from patterned metallic nanostructures - metasurfaces suffered from poor performance when carrying out the desired response. This is due to the low interaction of light when transmitted through metallic thin films, where the efficiency is typically limited to 15% or less. Here, I will talk about the works carried out at the University of Birmingham and more recently at the University of Glasgow on realising high performance metasurfaces by utilising both metallic metasurfaces in reflection mode and dielectrics in transmission mode. From broadband visible holograms and THz absorbers in reflection mode, to infrared lensing and THz chirality in transmission mode, metasurfaces are now at a standard which can be incorporated for commercial prospects and show real promise for being a highly sought after commodity in the future.