OPTICS & PHOTONICS
UNIVERSITY OF NOTTINGHAM

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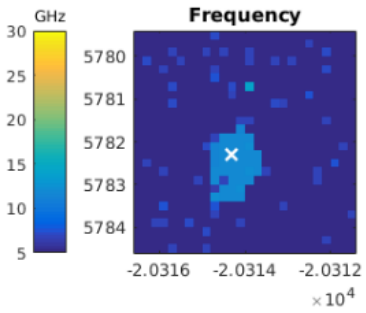
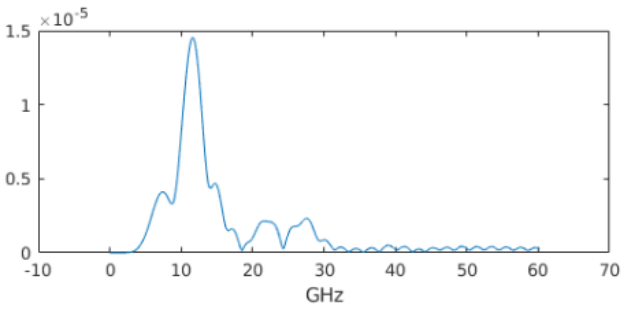
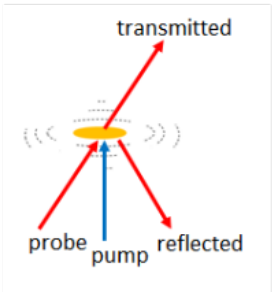
Optics and Photonics Group
Lunchtime Seminar

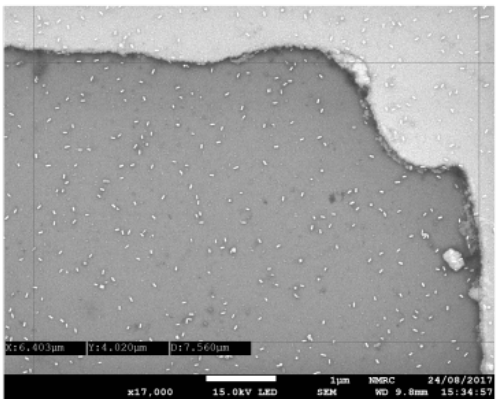
"Gold nanorod optoacoustic transducers"

Shakila Naznin









1:00pm Thursday 16th November 2017
203 Tower Building
All Welcome

http://optics.nottingham.ac.uk/wiki/Talks_2017

Abstract

“Gold nanorod optoacoustic transducers”

Shakila Naznin

1:00pm Thursday 16th November 2017

203 Tower Building

All Welcome

Metallic nanorods are of special interest in laser and picosecond ultrasonics because they exhibit anisotropic surface plasmon resonances and polarization dependent cross-sections. These can be tuned from visible to near infrared by changing the size and shape of the rods. This in turn will allow us to think about the generation and detection of ultrasound by controlling the size, shape and orientation of the nanorods. Gold nanorods have sharp longitudinal surface plasmon resonance and attractive photo-thermal properties. In this talk, we explore the use of gold nanorods as advanced opto-acoustic transducers in the GHz region by ultrafast laser excitation. We also expect that the unique properties of nanorods will help us to overcome the limit of lateral resolution that can contribute a lot to the living cell imaging. This talk is focused on my first year work mostly to present the simulated and experimental results of optical and mechanical response of gold nanorods obtained yet.