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COLLEGE OF PHYSICAL AND APPLIED SCIENCES

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SCHOOL OF CHEMISTRY

PRIFYSGOL BANGOR UNIVERSITY

RSC/ERDF Lecture 201617

‘Making Superlens from spider silk and micro-nano spheres’

Dr Zengbo Wang

Conventional microscope is not powerful enough to see the nanoscale objects like viruses. But recent research undertaken in Bangor University School of Electronic Engineering reveals we could make the microscope much more powerful by shrinking the lens size down into microscale. This is underpinned by the new physics discovered behind small micro and nano-sized transparent particles when they interact with lights. At Bangor we are proud ourselves to be the leading pioneer of such type of superlenses including ‘microsphere superlens (2011)’, ‘spider silk superlens (2016)’ and ‘nanoparticle-made metamaterial superlens (2016)’, all were widely publicised. In this lecture, I will explain to you the basic physics of these superlenses, how they were made and how they work, in a simple manner a layman can understand.

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