

Department of Physics

Condensed Matter Physics

Clarendon Laboratory, Parks Road, Oxford OX1 3PU



CONDENSED MATTER SPECIAL SEMINAR

Tuesday 11 June at 3.30pm

“Organic Semiconductor Optoelectronics: Excitons, Vortex Lasers and Visible Light Communication”

Prof Ifor Samuel

Organic Semiconductor Centre
University of St Andrews, UK

This talk will explore three aspects of solution-processed semiconductors. The first is the role of excitons and their diffusion in solar cells. The second is the use of spiral gratings to make polymer lasers that can directly generate vortex beams. The third is visible light communication (VLC). The rapid growth of data communication means that radio frequency communication (Wi-Fi) is reaching its limits. Visible light communication (also known as Li-Fi) provides an attractive alternative. The field of VLC will be introduced and results in which organic semiconductors are used to achieve record data rates for white visible light communication will be presented.

Host: Prof Henry Snaith/Dr Moritz Riede
Simpkins Lee Room, Beecroft Building