School of Science & Engineering
Research Seminars 2017

Date:   Tuesday 4 April 2017
Time:  11.00am to 12.00 noon
Venue:  H2.2.10 – Design Studio

Speaker
Professor Mark Moloney, Department of Chemistry, University of Oxford, UK

Title
Plague and Pestilence: Novel strategies to tackle antimicrobial resistance

Abstract
Natural products can provide inspiration for applied synthetic chemistry. This lecture describes how natural products have proved to be valuable starting points for the development of a completely novel class of antibacterial agents, and for the development of stable carbene precursors which have found application as surface modifying agents for a wide range of materials. The lecture will illustrate that the application of synthetic organic chemistry has an important role to play in the development of new technology which impacts on biology and materials science.

References

Biography – cont’d
Since commencing his independent academic career, his research interests have been the synthesis of functionalised, saturated enantiopure nitrogen heterocycles of biological relevance with an emphasis on antibacterial, anticancer agents and neuroexcitatory agents; the development of new synthetic methodology using main group metal-mediated reactions; and the development of direct chemical methods for the surface functionalisation of synthetic and natural polymers. Although he has enjoyed substantial EPSRC support, much of this work has also been funded by industry. He was selected as a finalist in the 2006 EPSRC Business Plan Competition his technology has formed the basis of a spin-out company Oxford Advanced Surfaces Group plc. This work has resulted in the publication of 160 papers in the primary, monograph and review literature, and numerous national and international lectures and posters at academic, industrial and conference locations.

He has authored three teaching texts. He is a member of the Editorial Board for two journals (Combinatorial and Drug Discovery Technologies; Current Organic Synthesis; Open Organic Chemistry Journal), and is an international expert referee for ASTAR (Singapore) and ARC (Australia). He completed the Diploma in Teaching and Learning in Higher Education (Oxford) in its inaugural year in 2000, was the University of Oxford Nominee for Excellence in Teaching for 2002, and was the Times Higher Education Serendipity Award winner (2009) and won an Oxford Teaching Award (2010). He is a member of the EPSRC 2006 College of Referees.

MORE INFORMATION:
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