ICIQ

Institut Català d'Investigació Química

2013

Seminar Program

Sponsored by BASF The Chemical Company

Av. Països Catalans, 16, Campus Sescelades (St. Pere i St. Pau), Tarragona. Tel. 977920200

Fluorine Conformational Effects In Reactions Design: An Emerging For Molecular Pre - Organisation

Prof. Ryan Gilmour

Westfälische Wilhems - Universität Münster, Münster (Germany)

Friday 25th January, 2013. ICIQ Auditorium, 12 p.m.

Professional Career

Ryan Gilmour was born in Ayrshire, Scotland in 1980. He received a Masters degree (1st class) from the University of St Andrews in 2002. He then moved to the University of Cambridge to complete a Ph.D. with Professor Andrew B. Holmes FRS working on marine natural product medium ring ether synthesis. Following a one year post-doctoral stay with Professor Alois Fürstner at the Max-Planck-Institut für Kohlenforschung (Germany) working on marine polyketide synthesis, he moved to the ETH Zurich (Sweitzerland) to join Professor Peter H. Seeberger's group. In December 2007 he was awarded the Alfred-Werner-Assistant-Professorship and in August 2008 the Board of the Swiss Federal Institutes of Technology appointed him as Assistant Professor of Synthetic Organic Chemistry at the ETH Zurich. In October 2012, Gilmour accepted a call to the Westfälische Wilhelms-Universität Münster as part of the German Excellence Initiative, where he is *CiMIC* Professor of Chemical Biology.

Research Interests

The principal research interest of the Gilmour Laboratory centres on molecular design and catalysis. Enantioselective organocatalysis has revolutionised asymmetric synthesis, transforming rudimentary considerations of enamine and iminium ion reactivity into powerful strategies for stereoselective reaction design. This renaissance of catalysis mediated by low molecular weight organic amine-derivatives has culminated in the development of a colossal number of innovative, often bio-inspired, organocatalytic processes. Whilst this constantly expanding repertoire is impetus enough for further development, interplay between preparative and mechanistic studies is imperative in order to sustain innovation. The improvement of existing catalyst topologies and the *de novo* design of unique architectures require an intimate appreciation of the decisive interactions involved in orchestrating asymmetric amplification. Addressing this limitation is a major focus of our research programme. Other research themes include organofluorine chemistry, chemical biology and preparative glycochemistry.