

New Formats for Molecular Discovery and Complex Chemical Systems

Prof. Dr. Lee Cronin

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Professional career



2009-: Gardiner Professor, Uni. of Glasgow
2006-2011; Professor of Chemistry, Uni. of Glasgow
2005-2006: Reader, Uni. of Glasgow
2002-2005: Lecturer at the Uni. of Glasgow
2000-2002: Lecturer at the Uni. of Birmingham
1999-2000: Alexander von Humboldt research fellow (Uni. of Bielefeld)
1997-1999: Research fellow (Uni. of Edinburgh)
1997: Ph.D. Bio-Inorganic Chemistry, Uni. of York
1994 BSc. Chemistry, First Class, Uni. of York.

The quality of LCs work is reflected in his publication record: >235 papers including 9 in *Nature* group / *Science*, ca. 55 in *Angew.* / *J. Am. Chem. Soc.* His research achievements have been recognised by many awards including the 2012 RSC Corday Morgan, 2011 RSC Bob Hay Lectureship, a Wolfson-Royal Society Merit Award in 2009, Election to the Royal Society of Edinburgh in 2009, the 2008 Morino Foundation Lectures, a 2007 Philip Leverhulme Prize (£70,000), Nexuus young scientist award in 2006.

Research Interests

The focus of Cronin's work is understanding and controlling self-assembly and self-organisation in Chemistry to develop functional molecular and nano-molecular chemical systems; linking architectural design with function and recently engineering system-level functions (e.g. coupled catalytic self-assembly, emergence of inorganic materials and fabrication of inorganic cells that allow complex cooperative behaviours). Much of this work is converging on exploring the assembly and engineering of emergent chemical systems. One target is the development of 'inorganic biology' i.e. a biological system beyond the naturally occurring 'organic biology' found on planet earth. Not only does this have ramifications for the origin of life on earth, elsewhere in the universe, the realisation of a living system assembled from the bottom up would also lead to a range of new technologies. To achieve his aims, Cronin and his group regularly collaborate with Physical, Theoretical, Organic, Materials, and Biological Chemists as well as Scientists in Chemical and Electrical Engineering, Physics and Medicine. It is also worth pointing out that the expertise in the Cronin group is unique bringing together chemists, chemical engineers, reaction modelling, complex system modelling, evolutionary theory, synthetic biology, robotics and AI.