

# RSC Harrison-Meldola Memorial Prize Winner Talk



**Dr David Mills**

University of Manchester

Thursday 24 January

4.00 pm, Physics Lecture Theatre, Science Concourse

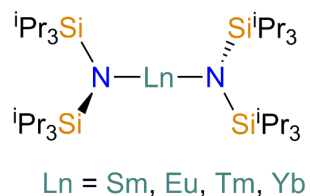
## “Building precise molecular architectures to maximise f-element properties”

The complexity and richness of synthetic f-element chemistry has attracted increasing attention in recent years. Our research focuses on stabilising f-element complexes with unusual coordination geometries and/or oxidation states, which can provide enhanced reactivity and unique physical properties.

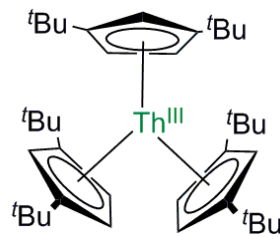
Here we will present some recent highlights of this work, such as the first near-linear f-element complexes **(1)**, the first measurements of actinide covalency by pulsed EPR spectroscopy on the Th(III) complex **(2)** and the first isolated f-block metallocenium cations **(3)**, which provided record magnetic hysteresis temperatures for the dysprosium analogue in 2017.

### Biography

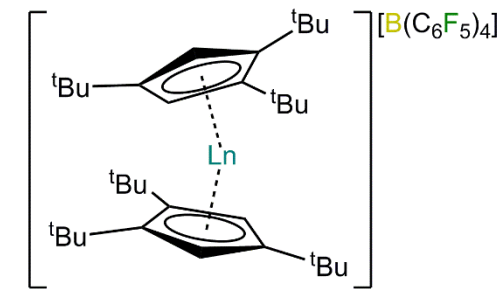
MChem (2004) and PhD (2008, supervised by Prof. Cameron Jones) both obtained at Cardiff University. Post-doctoral work carried out with Prof. Stephen T. Liddle at the University of Nottingham (2008-2012). Appointed as a lecturer at The University of Manchester School of Chemistry in 2012. Senior Lecturer since 2017.



**(1)**



**(2)**



$\text{Ln} = \text{Gd, Dy, Ho, Er, Tm, Yb, Lu}$

**(3)**