

The areas of synthesis and catalysis are largely driven by non-covalent interactions, and it is therefore essential to understand, control, and manipulate them. Doing so would allow for the optimisation of the properties and functions of new catalysts across the length scales. The current challenges involved in this area include structure determination of reactive intermediates, ascertaining structure-activity relationships, modelling transient states in catalytic cycles, and developing processes for reliable synthesis of non-covalent systems.

The format of Faraday Discussions facilitates in-depth, dedicated discussions between researchers from across the area of synthesis and catalysis. This allows for a wide range of valuable insights and perspectives on the leading areas of the field.

This volume brings together internationally leading researchers in the fields of synthesis, materials, and catalysis, particularly involving systems where non-covalent interactions are a crucial factor.

In this volume the topics covered include:

- The importance of non-covalent interactions in synthesis
- Understanding the structural and electronic changes within these catalytic systems
- Modelling and computational analysis of reactive sites
- Controlling the activity and selectivity of a synthetic catalyst by manipulation of the surroundings

Front cover image  
Uncovering the hidden noncovalent interactions that affect small molecule photoswitching using non-spherical atom refinements in NoSpherA2.

# Faraday Discussions

## Volume: 244

**Faraday Discussions** documents a long-established series of Faraday Discussion meetings which provide a unique international forum for the exchange of views and newly acquired results in developing areas of physical chemistry, biophysical chemistry and chemical physics.

The papers presented are published in the Faraday Discussion volume together with a record of the discussion contributions made at the meeting. Faraday Discussions therefore provide an important record of current international knowledge and views in the field concerned.

ISBN 978-1-83767-091-8

