

Russell Morris

*Bishop Wardlaw Professor of Chemistry
University of St Andrews
School of Chemistry
Purdie Building
St Andrews KY16 9ST
Fife, Scotland*

Developing Biological Applications of MOFs

Metal-organic frameworks are some of the most exciting new materials to have emerged over the last couple of decades. In this presentation I will explain how we are developing biological applications of MOFs, with a particular focus of MOFs as mimics of the endothelial cells that line the arteries in the human body. I will discuss what features of MOFs make them good for this type of application, including how easy it is to formulate MOFs into usable articles and how the properties of MOFs translate into the properties of the articles.

Russell Morris was born and brought up in north Wales and is currently Bishop Wardlaw Professor of Chemistry at the University of St Andrews. Morris's research concentrates on the synthesis, characterisation and application of porous materials such as zeolites and metal-organic frameworks. Some of his developments include the use of ionic liquids for the ionothermal synthesis of materials, the ADOR method for the manipulation of zeolites, the use of porous materials to store and deliver medically useful gases, and the incorporation of the technology into medical devices. He is an elected Fellow of the Royal Society (FRS), the Royal Society of Edinburgh (FRSE), the Learned Society of Wales (FLSW) and a Member of the Academia Europea (MAE). He is Vice-president (physical sciences and engineering) for the Royal Society of Edinburgh and is the holder of a European Research Council advanced grant.