



## **Stuart Rowan**

Professor in IME and the Department of Chemistry

### **Areas of Research Expertise**

Supramolecular chemistry, polymeric materials

### **Research Overview: The Rowan Group**

The Rowan Group studies the chemistry of non-covalent interactions (supramolecular chemistry).

### **Contact**

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Assistant

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### **Research**

Stuart Rowan is an acclaimed soft material engineer focusing on the chemistry of non-covalent interactions (supramolecular chemistry). His group studies the properties and construction of structurally dynamic polymeric materials.

Working with supramolecular polymers, Rowan investigates self-healing materials, stimuli-responsive material and nanocomposites, metal-containing polymers, gels, and biomaterial. His group is developing new synthetic methods for the construction of complex polymeric architectures. They study the synthesis of metallocsupramolecular and stimuli-responsive polymers; isolation and utilization of cellulose nanocrystals in biomimetic and porous systems; and reversible covalent chemistry.

In addition, Rowan has developed numerous new methods for the construction of interlocked species, specifically using dynamic covalent chemistry and “surrogate” stoppers.

## Bio

Rowan earned his B.Sc. (Hons.) and PhD in Chemistry from the University of Glasgow. His post-doctoral work began in the Chemistry Department at the University of Cambridge, continued at Girton College, Cambridge, and culminated at the University of California, Los Angeles. Rowan was the Kent Hale Smith Professor in the Department of Macromolecular Science and Engineering at Case Western Reserve University before joining the faculty IME in 2016.

Rowan won the American Chemical Society Mark Scholar Award, the Morley Medal, the National Science Foundation CAREER Award, and the CWRU School of Engineering Research Award. He is a Fellow of the Royal Society of Chemistry, Deputy Editor of *Macro Letters*, published by the American Chemical Society, and a member of the editorial advisory boards of the *Journal of Polymer Science Part A: Polymer Chemistry*, *Chemical Science*, the *Journal of Macromolecular Science*, and *Pure & Applied Chemistry*. Rowan has published more than 125 scientific papers and reviews.