

BIMR/CCB SEMINAR

Four Decades of Silicon Chemistry at McMaster University: Mike Brook's Exit lecture

Friday, January 24, 2025

2:30 – 3:30 p.m.

In-Person: ABB 102

Online:

<https://mcmaster.zoom.us/j/96909458386>

In winter of 1984, the Chemistry department at McMaster University offered me a position as Assistant Professor, funded by an NSERC University Research Fellowship. This lecture will be a look back at some of the scientific outcomes in areas of silicon, silica and silicone chemistry, including: the β -effect; silica and silicone biomaterials; the Piers-Rubinsztajn reaction; and the sustainability of silicones over the 40ish years between July 1985 and July 2024, when I formally retired from teaching.

I will also provide some comments / suggestions / advice for students and colleagues regarding strategies I found have helped me with teaching and more generally to survive in the University and beyond. I may offer some suggestions for the Administration based on my experiences. One objective of this lecture is to allow one to decide, "Did the University's bet pay off?" However, the most important outcome will be an opportunity to thank my many colleagues and coworkers for an amazing experience.



Prof. Michael A. Brook

Professor Emeritus of Chemistry and Chemical Biology, McMaster University

Mike Brook is a Professor Emeritus of Chemistry and Chemical Biology, Distinguished University Professor Emeritus and Faculty of Science Chair in Sustainable Silicone Polymers at McMaster University in Hamilton, Canada. Brook is an expert in silicon, silica and silicone chemistry. He wrote the solely authored book *Silicon in Organic, Organometallic and Polymer Chemistry* (Wiley) in 2000, and has published over 315 papers and has 12 granted patents (h-index 64). Currently, his research has three main axes: incorporation of natural materials in silicones to convey new properties including more facile breakdown at end of life; inclusion of waste products (used tire rubber, ground glass) as reinforcing fillers in elastomers and concrete, and developing cure systems that facilitate rubber recycling. He is Chief Scientific Officer for two startup companies engaged in sustainable elastomer development: EnRoute Interfaces; and Neopara Materials.

Brook won the Macro Group UK Medal for Outstanding Achievement, and the Award for Green Chemistry (Canadian Society for Chemistry) in 2023, D'Arcy McGee Beacon Fellowship, Ireland Canada University Foundation in 2021, Macromolecular Science & Engineering Award from the CIC in 2017, the Frederic Stanley Kipping Award for Silicon Chemistry (American Chemical Society) in 2016, was a Canadian Killam Research Fellow and, with Mark McDermott (McMaster University), won the Synergy Prize for Industrial Collaboration with Connaught Laboratories.