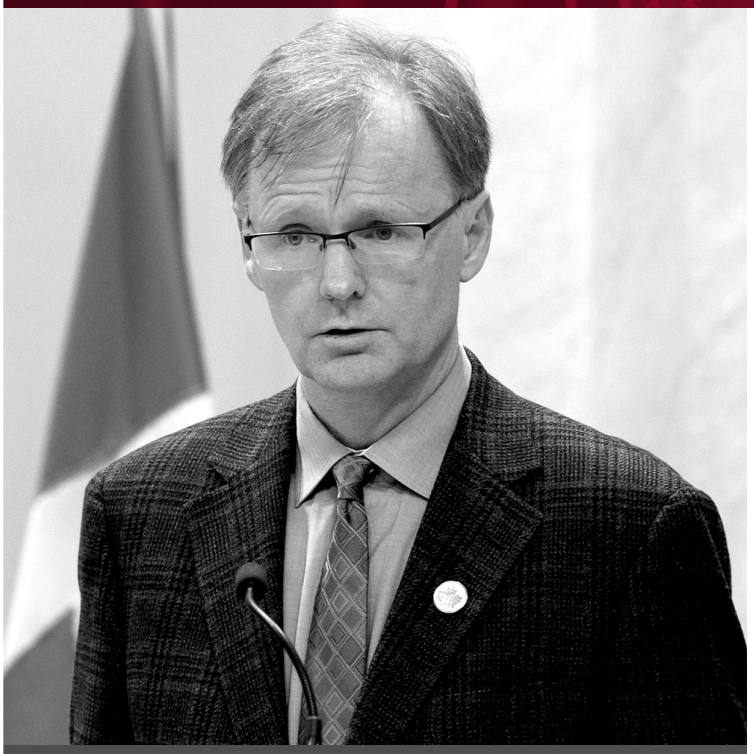
UNIVERSITY of GUELPH

IMPROVE LIFE.

Guelph Chemistry Presents

A Distinguished Alumni Lecture



THURSDAY **NOVEMBER 10** | **3PM**

MACNAUGHTON BUILDING ROOM **101**

Dr. Michael G. Organ

Director

Centre for Catalysis Research and Innovation and The Department of Chemistry and Biomolecular Sciences University of Ottawa

Designing Purpose-Built Ligands for Catalysts: "Say Live and Let Die...."

This seminar will address the invention and evolution of the Pd-PEPPSI catalyst platform (PEPPSI = pyridine enhanced pre-catalyst preparation stabilization and initiation).

In this presentation our approach to rational ligand design in cross-coupling applications will be discussed and how this approach has been used to improve catalyst performance in terms of both general reactivity and selectivity. In particular, time will be dedicated to the discussion of 1) avoiding beta hydride elimination in the coupling of alkyl nucleophiles and electrophiles leading to metal hydride formation and olefin byproducts, 2) the incorporation of secondary alkyl centres onto aromatic and heteroaromatic cores without isomerization to create more architecturally complex molecular targets, and 3) the impact of these innovations in drug discovery and materials science.

Light refreshments will be served.

Dr. Michael Organ (BSc. '86, MSc. '88, PhD '92) received his doctorate degree under the tutelage of Professor Gordon L. Lange. He then was an NSERC Postdoctoral Scholar in the laboratory of Professor Barry M. Trost at Stanford (1994). His independent career started at Indiana University-Purdue University at Indianapolis in 1994 after which he moved in 1997 to York University in Toronto where he rose through the ranks to full professor. He is currently the Director of the Centre for Catalysis Research and Innovation (CCRI) at the University of Ottawa.

His career highlights and accomplishments are impressive, and far too extensive to list here. The University of Guelph and the Department of Chemistry are thrilled to welcome him back for this lecture.