

C. Mims Biographical Sketch

Ph. D. Physical Chemistry, U. California, Berkeley 1972

Post-doctoral Fellow, M.I.T. 1972-1975

Research Chemist, Exxon Research and Engineering, Synthetic Fuels Laboratory, 1975-1978

Research Chemist, Exxon Research and Engineering, Corporate Research Laboratory, 1979-1990

Professor, Department of Chemical Engineering and Applied Chemistry (Chemistry Cross Appointment), University of Toronto, 1990 - present (NSERC Industrial Chair 1990-1995)

Sabbatical and Visiting Appointments

Dept. Chem. Eng., M.I.T., 1979; Dept. Chemistry, U. Houston 1997; Dept. Chemistry, U. California Berkeley 2004, Alternate Sponsored Summer Fellow, Pacific Northwest National Lab, Institute for Interfacial Catalysis, 2006.



Research Experience and Interests

Heterogeneous Catalysis and Electrocatalysis

Coal gasification, liquefaction, combustion
Mineral matter in coal combustion
Diesel soot catalytic combustion
Natural gas conversion: reforming, coupling, Fischer-Tropsch synthesis
Gas separation membranes (oxygen)
Heavy oil upgrading with methane
Solid oxide fuel cell electrodes
Selective oxidation
Isotope tracing (SSITKA) for reaction mechanisms, reactor engineering

Surface Science and Chemistry

Surface analysis (XPS, SIMS, EXAFS)
SI-Ontario surface analytical facility at U of Toronto
Surface redox properties, elementary kinetics, pathways
Water reactions on oxides and cellulose
Polyurethane adhesion studies