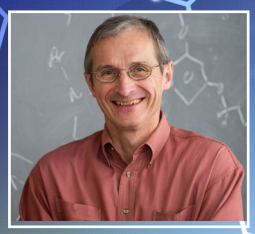
W H E R E C O N V E R G I N G M I N D S F R E E L Y E X P L O R E

The Peter Wall Institute presents:



Dr. Richard Shrock

MY ROLE IN ELUCIDATING THE CATALYTIC REACTION THAT LED TO A NOBEL PRIZE IN 2005

Tuesday,
May 19, 2015
12:45 pm - 2:00 pm

Chemistry B Block,
Room B250
2036 Main Mall
Vancouver, BC

A catalytic reaction discovered in 1955 allows one to break carbon-carbon double bonds and form new ones with remarkable ease. This "metathesis" reaction began to attract the interest of organic, inorganic, and polymer chemists in the 1960's because of its great potential in manipulating carbon-carbon bonds, which is the fundamental goal of organic chemistry. The metathesis reaction has continued to change how chemistry that involves carbon-carbon double bonds is practiced in the laboratory and industry.

I was in the right place at the right time to make a discovery that helped us understand how this reaction works and have spent my career developing catalysts for it. In the process I also discovered catalysts that "metathesize" carbon-carbon triple bonds and one that will "break" the bond in dinitrogen (to give ammonia catalytically), a reaction that is crucial to all life on earth.

Richard R. Schrock is a Nobel Prize-winning Chemist from M.I.T. and a Peter Wall International Visiting Research Scholar at UBC. He received his B.A. from the UC Riverside in 1967 and his Ph. D. degree in inorganic chemistry from Harvard in 1971. As a chemist at the Central Research and Development Department of E. I. duPont de Nemours and Company he made a discovery that led him to M.I.T. in 1975 and, thirty years later, to a Nobel Prize in Chemistry. The discovery allows us to make carbon-carbon double bonds from other carbon-carbon double bonds, and ultimately helped change the way much organic chemistry is done today in academia and, increasingly, in industry. For example, because life is based on carbon-carbon bonds, we can increasingly make some of the chemicals we need from abundant and renewable sources such as plant oils instead of petroleum.
Schrock is a member of the National Academy of Sciences and a Foreign Member of the Royal Society of London. He has published more than 560 research papers and supervised over 170 Ph.D students and postdocs.

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