



American Chemical Society

Central Wisconsin Section



Boron: It's Not Just for Rocket Fuels Anymore

by

Dr. Thomas A. Holme

University of Wisconsin - Milwaukee

Wednesday, October 17, 2001

7:30 PM Phillips Hall 007

UW - Eau Claire

5:30 - 6:00 Cash Bar, 6:00 - 7:00 Dinner, Sweetwaters Restaurant

Abstract:

As an element involved in important compounds, boron has a rich history. The rocket fuels programs in the 1950s were followed by its use as hydroboration agents continuing to today. Increasingly, compounds that contain boron have been found to have surprising physiological activities. First proposed for usage in boron neutron capture therapy (BNCT), a variety of boron containing compounds have been synthesized and screened for biological behavior. This talk will focus on those compounds that contain boron-nitrogen dative (or adduct) bonds. The history of this synthetic effort with its origins in BNCT will be noted as well as some of the more intriguing biological behaviors such as lowering of cholesterol levels and anti-inflammatory actions. The possible role of Lewis acid-base chemistry and the use of computer modeling to investigate that role will be discussed.

The Speaker:

Prof. Holme is an Associate Professor at the University of Wisconsin - Milwaukee. His research group works in computational chemistry of main group elements, such as silicon and boron. His work in understanding silicosis and the surface chemical events that are important in its onset are carried out in collaboration with the Health Effects Laboratory Division of the National Institute of Occupational Safety and Health in Morgantown, WV.

The social mixer at 5:30 and dinner at 6:00pm will be at Sweetwaters Restaurant, 1104 W. Clairemont Ave, Eau Claire (near the intersection of Clairemont (US 12) and State Highway 37). Dinner reservations should be made by contacting **Dave Lewis** at 715-836-4744 or email lewisd@uwec.edu **before 5 PM on Tuesday, October 16.**