

# Gentile Interdisciplinary Lectureship

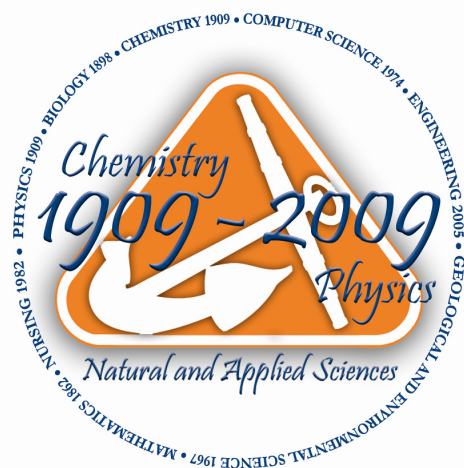


**Speaker: Dr. A. Paul Schaap '67  
President of Lumigen Corporation**

## Abstract:

### **Chemiluminescence and 1,2-Dioxetanes: From Fireflies to the Detection of DNA**

1,2-Dioxetanes are high-energy chemical compounds that undergo decomposition to generate light. They are intermediates in the bioluminescence of the firefly and in the luminescent glow of light-sticks. These dioxetanes, however, are very unstable and cannot be isolated. The research of our group at Wayne State University involved the study of a type of dioxetane that is thermally stable but can be "triggered" to generate light by a chemical reaction. Chemiluminescence efficiencies up to 49% have been observed in organic solvents. The unique properties of these materials prompted the founding of Lumigen, Inc. in 1987 in order to commercialize the dioxetanes. The sensitivity, versatility and stability of these chemiluminescent detection reagents has led to their use world-wide in life science research and medical diagnostics.



**DEWITT THEATRE  
OCTOBER 9, 2009  
3:30PM**