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Department of Chemistry

Seminar

9:45 a.m. Thursday, April 28, 2016 • 331 Smith Hall



Professor

Jonathan Sessler

Department of Chemistry
University of Texas, Austin

Expanded Porphyrins: A Personal Journey

Research interests: the design and construction of molecules carefully tailored so as to accomplish a specific objective through an appropriate combination of design, synthesis, and testing.

Website:

http://sessler.cm.utexas.edu/Sessler_Web/Home.html

Abstract

Expanded porphyrin is a term we introduced into the literature in 1988 to describe larger homologues of natural and synthetic tetrapyrrolic macrocycles. Expanded porphyrins, along with many other contracted, isomeric, and core-modified porphyrin analogues, are now known. Expanded porphyrins, in particular, have seen application in areas as diverse as anion recognition and transport, self-assembly, liquid-liquid ion extraction, photodynamic therapy, and anticancer drug development. In recent years expanded porphyrins have helped increase our understanding of aromaticity and antiaromaticity. In this lecture, an update on recent systems that have been synthesized as possible drug leads will be presented. Also discussed will be systems that support unexpected electronic configurations, including unusual $[4n + 1]$ π -electron semi-aromatic peripheries or which support expanded porphyrin-based self-assembly.

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Host: Professor Valerie Pierre
Refreshments will be served prior to the seminar.