

Dept. of Chemistry and Biochemistry  
Organic/Inorganic Seminar Series

**Anthony Cozzolino**

Texas Tech University

**Friday, February 22, 2019**

2:00 pm Reception, 2:30 pm Seminar  
331 Klamath



Hosted by Carl Brozek

## ***Pnictogen Bonding in Solution: From Catalysis to Reversed Bilayer Formation***

Pnictogen bonding is part of a broader class of secondary bonding interactions shared by many of the heavier p-block elements. Despite a strong redundancy in the underlying phenomenon, the supramolecular design of systems that utilize chalcogen, pnictogen or tetrel bonding can be more challenging than with halogen bonding, as the same 1:1 topological analogy with hydrogen bonding does not exist for these other groups as it does for the halogens. Despite this, the ability of these elements to engage in more than one simultaneous supramolecular interaction can have important utility in the design. This will be demonstrated with examples of pnictogen bonding in solution, ranging from the self-assembly of reverse bilayer vesicles, to non-covalent catalysis, to supramolecular pairs that functionally resemble Watson-Crick base.

