This Cluster provides insights into some of the most recent advances and aspects in the field of transformations catalyzed by organosulfur and organoselenium compounds. Enjoy eleven wonderful contributions by experts in this field!

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## **Organosulfur and Organoselenium Compounds in Catalysis**



X. Zhang

First example of pollutant degradation through Se catalysis





A. Tsuchihashi

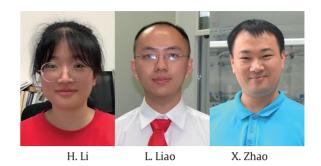
S. Shirakawa

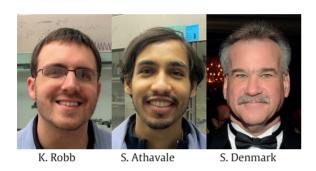


S. Huber

and selected Lewis acids

$$R^{1} \overbrace{\overset{\bullet}{II}}_{X = NPG, O} \overset{\bullet}{\overset{\bullet}{N}}_{A} \overset{\circ}{\overset{\bullet}{\overset{\bullet}{N}}}_{Oxidant} + R^{1} \overbrace{\overset{\bullet}{II}}_{II} \overset{\circ}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{N}}}}_{R^{2}} \overset{\circ}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{N}}}}}_{Ox} \overset{\circ}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{N}}}}}_{Ph}$$



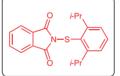


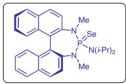
Sulfenylating agent

LB\* catalyst

HFIP, 25 °C

Rate unaffected by R



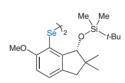


Unusual kinetic behavior!

~0.5 order in substrate

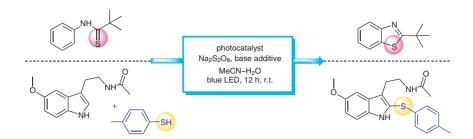
~0.5 order in sulf. agent

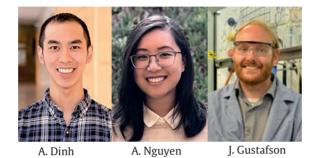
1st order in catalyst













odorless

R = alkyl or benzyl 18–78% 20 examples



L. Yu X. Jiang



C2-Symmetric Sulfur Based Chiral Catalyst for Bromolactonization

L. Yu