

## **Capturing and Utilizing CO<sub>2</sub> and Other Related Heteroallenes**

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Work in the Kemp laboratory at UNM has largely focused on the reaction chemistry of CO<sub>2</sub> and the related heteroallens – CS<sub>2</sub> and COS – into main group element complexes. While our initial interest was in the fixation of <sup>14</sup>CO<sub>2</sub> into radiolabelled isocyanates or carbodiimides for possible PET applications, our group has more recently branched into attempting to understand the fundamental reaction chemistry of these species. Recently, we have discovered that these heteroallenes have previously-unrecognized abilities to force degradation reactions under extremely mild conditions (-78 °C) on ligands and compounds that were previously believed to be much more stable. While the majority of the talk will focus on this fundamental chemistry, a brief overview of Sandia work in CO<sub>2</sub> capture and utilization chemistry will also be presented.