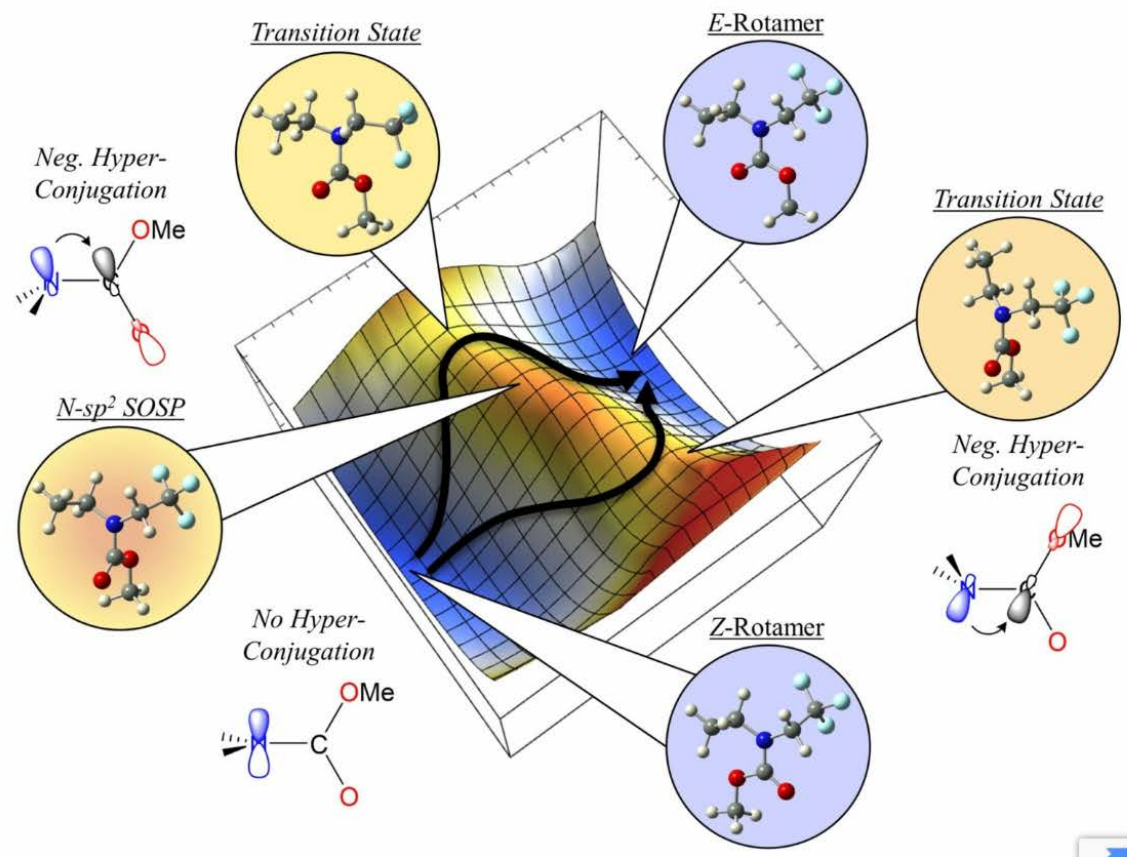


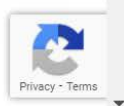


## S&T researchers publish in chemistry journals

Posted by Kimber Crull  
On February 7, 2023

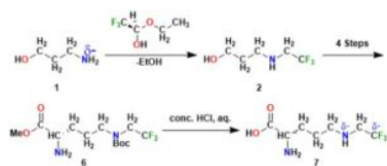


Cover art chosen for ChemPhysChem



Brian Jameson, a Ph.D. student in chemistry, and his advisor, Dr. Rainer Glaser, professor of chemistry and interim vice provost of graduate education, have published articles in two peer-reviewed chemistry journals.

“Rotation-Inversion Isomerization of Tertiary Carbamates. Potential Energy Surface Analysis of Multi-Paths Isomerization Using Boltzmann Statistics” was selected by the editor of European chemistry journal *ChemPhysChem* as a cover feature and a cover profile. The results illustrate how the synergy of amino acid synthesis,  $^{13}\text{C}$  NMR spectroscopy and *ab initio* electronic structure studies provide unique insights into the dynamic stereochemistry associated with multi-paths E/Z rotation-inversion equilibria.



**“Unnatural Lysines with Reduced Sidechain N-Basicity. Synthesis of N-trifluoroethyl Substituted Lysine and Homologs”** is featured in the European chemistry journal *ChemSelect*. The authors report a highly efficient and flexible synthesis of unnatural lysines. The introduction of the N-trifluoroethyl group is the essential feature of these new unnatural lysines, and this feature enables carbamylation at significantly lower pH values. This work on unnatural amino acid

synthesis is a part, and a major milestone, of a larger project aimed at the development of RuBisCO mimetic CO<sub>2</sub> capture and release systems from air.

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