

Abstract Submitted  
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**Cold and Controlled Chemical Reactions between Molecules and Ions** TIANGANG YANG, GARY CHEN, Univ of California - Los Angeles, ARTHUR SUITS, University of Missouri, ERIC HUDSON, WESLEY CAMPBELL, Univ of California - Los Angeles — Reactions between molecules and ions at low temperature are of significant importance in both fundamental chemistry as well as in interstellar medium. Control over reactant translational and internal energies are necessary for addressing these reactions experimentally. Recently, we have developed a new platform for quantum-state-resolved ion-molecule chemistry by utilizing a combination of cryogenic buffer gas cooling, laser-cooled ion sympathetic cooling, and integrated Time-of-Flight (TOF) mass spectrometer in an RF Paul trap. In this talk, I will provide our most recent results on cold beryllium/carbon ions' chemistry.

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