



Department of Physics Colloquium

March 27, 2023



3:00 PM

Laser-cooled molecules for quantum science and controlled organic chemistry

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Laser-cooling and trapping techniques for molecules promise access to a diverse range of ultracold species for applications such as quantum simulation and improved precision measurements. In this talk, I will present recent progress from two experiments within my group to laser-cool and trap two different species for complementary studies of molecule-molecule interactions. The first, AlCl , has an electronic structure analogous to that of alkaline earth atoms and presents a number of advantages for realizing large, dense samples of laser-cooled molecules. The second, CH , has traditionally been a challenging molecule to produce at high density but offers access to studies of simple controlled organic chemistry that may be compared to calculations by quantum chemists.

This colloquium will be held in-person, at SERC 116 unless announced otherwise.