

Abstract Submitted
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Interspecies probe of Feshbach molecule formation and stability¹ WILL DOWD, ANDERS HANSEN, ALAN JAMISON, ALEXANDER KHRAMOV, SUBHADEEP GUPTA, University of Washington — Feshbach resonances are an integral tool in ultracold atomic physics allowing for two-body interaction tuning and molecular dimer formation. The two lowest energy states of the ⁶Li atom exhibit a broad Feshbach resonance at 834 Gauss which can be utilized to link pairs of atoms into dimers. We study the formation and dynamics of shallow Li₂ Feshbach dimers in the presence of a second species, ¹⁷⁴Yb, at ultracold temperatures. The collisional stability of the Li-Yb mixture is adequate to allow time-resolved studies of these interactions. We will report on the observed modifications of Li₂ formation and stability due to the presence of Yb, as well as the concomitant effect on the Yb gas.

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