

Abstract Submitted  
for the DAMOP18 Meeting of  
The American Physical Society

**Optical trapping of CaF** LOIC ANDEREGG, BENJAMIN AUGEN-  
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— We demonstrate a high-density RF magneto-optical trap of CaF molecules. Grey  
molasses cools the CaF molecules well below the Doppler limit to 30 uK allowing  
us to load the molecules into an optical dipole trap. Optical trapping lays the  
groundwork for many research directions, including ultracold collisions and chem-  
istry, quantum simulations, and new precision measurements. A particularly promis-  
ing avenue is constructing optical tweezer arrays of molecules, where one can realize  
full quantum control in a scalable platform.

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Date submitted: 23 Jan 2018

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