

Abstract Submitted  
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**Modifying atom-surface vdW interactions with light** ALEX CRONIN, VINCENT LONIJ, University of Arizona, JOHN PERREAULT, JILA — Electromagnetic radiation can modify van der Waals interactions. We predict how the atom-surface interaction potentials should depend on light frequency, intensity, and polarization. We also present progress towards observing this effect with an experiment based on atom diffraction from a nanograting that is illuminated by a laser.

Alex Cronin  
University of Arizona

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