Abstract Submitted
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Toward non-destructive, dispersive imaging of ultracold molecules[1] MICHAEL HIGHMAN, University of Illinois at Urbana-Champaign, QINGZE GUAN, Temple University, GARRETT WILLIAMS, ERIC MEIER, University of Illinois at Urbana-Champaign, MING LI, SVETLANA KOTOCHIGOVA, Temple University, VITO SCAROLA, Virginia Polytechnic Institute and State University, BRIAN DEMARCO, BRYCE GADWAY, University of Illinois at Urbana-Champaign — There is currently a lack of high-fidelity and non-destructive imaging strategies for generic diatomic molecules, in particular for the commonly used bialkalis. Here, we propose and describe a technique to address this shortcoming using naturally occurring optical birefringence of excited rotational states. We will also discuss current experimental progress toward the creation of ground-state sodium-rubidium molecules and the demonstration of this proposed imaging scheme.

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