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**Scattering in Optical Nanofibers** BRIELLE ANDERSON, American University — Optical nanofibers (ONFs) have provided a robust platform for strong interactions between light and atoms. More recently, studies have investigated the optomechanical interaction between the torsional motion of an ONF's tapered region and guided light with linear or angular momentum. Here we investigate the optical scattering inside an ONF as a function of wavelength and its impact on torsional motion. This work hopes to guide research into the suppression of torsional motion, which is understood to be a heating source for atoms trapped around the ONF.

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