

Abstract Submitted
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Harmonic generation with an ultra-strongly coupled cavity polariton MICHAEL CRESCIMANNO, Dept. of Physics and Astron., Youngstown State University, KENNETH SINGER, BIN LIU, MICHAEL MCMASTER, Dept. of Physics, Case Western Reserve University — The large dipole density in a new class of glassy organic dyes results in ultrastrong exciton-cavity field coupling leading to polariton splittings of over an eV. We describe the theoretical model and experimental protocol used to understand third harmonic generation (THG) in this system. We quantify the THG enhancement at the polariton branches through its dependence on coupling, cavity-exciton detuning and cavity finesse.

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