

Abstract Submitted
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Optical Kerr Effect in Organic Ultrastrongly Coupled Cavity Polaritons: Theory and Experiment MICHAEL CRESCIMANNO, Dept. of Physics, Youngstown State University, B. LIU, Dept. of Physics, The City College of New York, S. SCHWAB, K. SINGER, Dept. of Physics, Case Western Reserve Univ. — Recent results from experiments in the optical dispersion of THG and the Optical Kerr effect in organic ultrastrongly coupled cavity polaritons indicate new physical processes that are understood in an expanded theory of non-linear optical (NLO) processes in polaritonic matter. We briefly indicate the materials and experiments, summarize the most revealing experimental findings and then describe the extensions of previous theory approaches that quantify the contribution that the polaritonic states make to each of these NLO processes.

Michael Crescimanno
Dept. of Physics, Youngstown State University

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