

Dr. Ufuk Kilic is a Research Assistant Professor in the Department of Electrical and Computer Engineering at the University of Nebraska-Lincoln. His research specializes in experimental and computational electromagnetics, focusing on the design and fabrication of advanced nanophotonic systems and quantum materials. With extensive experience in deposition processes, particularly glancing angle and atomic layer deposition techniques, Dr. Kilic has developed nanostructures that exhibit distinctive optical, magnetic, and quantum properties. His significant contributions to chiral plasmonics and nonlinear optics have resulted in several publications in prestigious high-impact journals. He aims to bridge theoretical principles with practical applications in areas such as sensing, imaging, and energy harvesting. Utilizing spectroscopic ellipsometry, he conducts in situ monitoring of thin film growth, performs chiral sensing, and engages in ex situ characterization of fabricated metamaterial designs. By leveraging this contact-free and non-abrasive characterization technique, he provides critical insights into the fundamental physical mechanisms underlying light-matter interactions at the nanoscale.