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Hot carrier metamaterial detectors and energy converters LISA KRAYER, JEREMY N MUNDAY, Univ of Maryland-College Park — Metamaterials can be used to manipulate the flow of light in ways not typically available with traditional materials. Beyond their optical properties, metamaterials can be used as the basis for optoelectronic devices through the incorporation of a metal-semiconductor interface. The absorbed radiation in the metal can excite surface plasmons, which nonradiatively decay into hot electrons or holes that can be injected into the base semiconductor and contribute to photocurrent generation. In this talk, we will present our latest work on metamaterial photo-detectors and solar energy converters.

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