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**Lighting up dark plasmon modes with electron beam** KIN HUNG FUNG, Massachusetts Institute of Technology, ANIL KUMAR, University of Illinois at Urbana-Champaign, NICHOLAS X. FANG, Massachusetts Institute of Technology — Dark plasmon modes couple weakly with free-space photons. It is, therefore, generally believed that far-field detection of dark plasmon modes is difficult. In this talk, we discuss how an electron beam can light up dark plasmon modes and show theoretically and experimentally that bright and dark modes in a single metal bowtie nanoantenna can be studied at the far field using cathodoluminescence spectroscopy.

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