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Preparation and Optical Properties of Metallodielectric Core-Shell-Corona Particles THOMAS PRESTON, RUTH SIGNORELL, University of British Columbia — The preparation of metallodielectric core-shell-corona particles is described and their optical properties are analyzed using the discrete dipole approximation. These particles consist of a spherical gold core coated with a thin dielectric layer and an outer gold layer (the corona). We demonstrate that stable dispersions of these particles possess plasmon modes in the near-infrared that can be tuned in a controlled fashion, while particle diameters can be kept below 100 nm.

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