



Materials After Dark

MAD Seminar Series & WWU Chemistry Department present

Concentrating Light using Anisotropic Nanopyramidal Shells

Dr. Teri W. Odom

Nanofabricated pyramidal shells are a new class of asymmetric, metal particle that offers unprecedented opportunities to manipulate light in confined volumes. This talk will discuss how 3D, anisotropic structures exhibit wavelength and polarization-dependent optical properties that are tunable from visible to near-infrared wavelengths. These surface plasmon characteristics enable light to be bent or focused directionally. Next, we will describe the design rules for assembling the nanopyramids into hierarchical structures and how different nanoparticle assemblies exhibit different electromagnetic hot spot volumes that produce different SERS signals. Finally, we will show how these pyramidal particles can act both as a probe to identify the spatial locations of specific biomarkers on cells and as a therapeutic agent to ablate cancer cells by localized heating.

Wednesday, May 12th 5pm in CF110
Pizza will be provided!

Please join us for this interdisciplinary discussion session, whose purpose is to foster collaboration among students and faculty interested in materials science research. All are welcome!



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