

UCLA Department of Physics & Astronomy

COLLOQUIUM

Thursday, January 30 at 4 p.m.

1-434 PAB

Shedding nano-light on quantum materials

**Dmitri Basov
(Columbia University)**



Optical spectroscopies have contributed immensely to the present understanding of metals, semiconductors and superconductors. Unfortunately, optics encounters problems when it comes to “seeing” effects at length scales below the diffraction limit of light and also with probing physics outside of the light cone. Both capabilities are highly desirable for the exploration of quantum physics of new quantum materials. Over the last decade or so, our group has developed and deployed scanning-probe nano-optical methods for the nano-scale spectroscopy and imaging of complex materials. In this talk, I will discuss recent examples of the progress we have made in understanding the electronic phenomena in atomically layered van der Waals materials, all empowered by deeply subdiffractive nano-light.

Refreshments at 3:30 p.m. on the PAB Patio. Undergraduates Welcome!