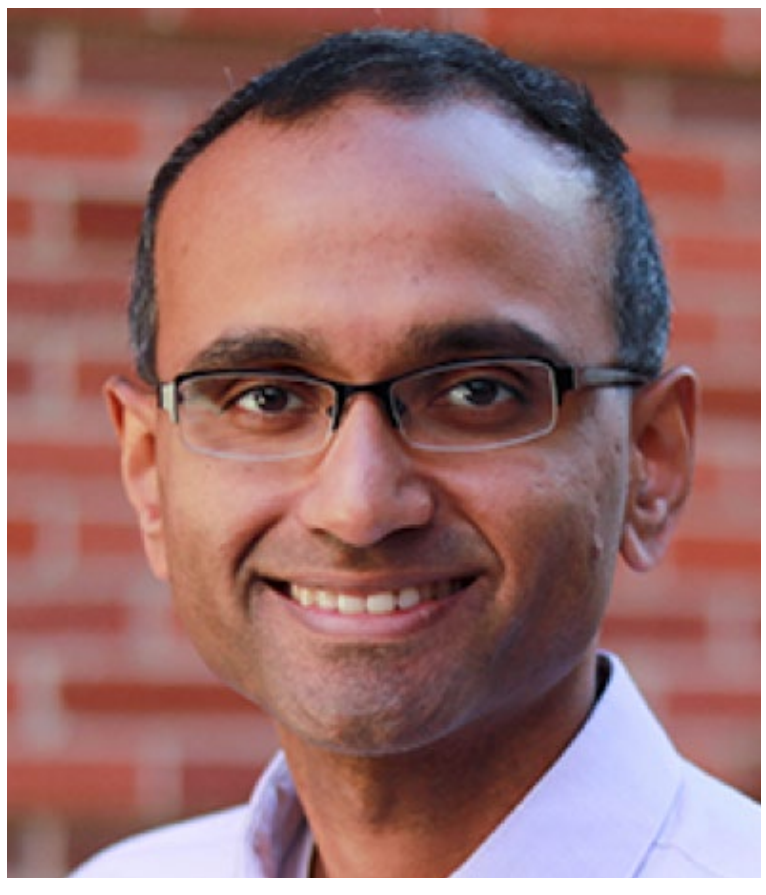
UCLA College | Physical Sciences Chemistry & Biochemistry

PHYSICAL CHEMISTRY SEMINAR



Prof. Aaswath Raman

Department of Materials Science and Engineering
University of California, Los Angeles

Monday, May 22, 2023

4:00 PM | YH 4222

Mani L. Bhaumik Collaboratory -

Dongwon Yoo Seminar & Conference Hall

Nanophotonic Control of Thermal Emission and Radiative Cooling Applications

Abstract: Thermal emission is a ubiquitous light emission process whose control is of central importance to a broad range of energy, heat transfer and imaging applications. In this talk, I will describe my group's recent work on controlling the directional and spectral characteristics of thermal emission using nanophotonic strategies. Recent work demonstrating how infrared emissivity can be arbitrarily controlled using graded-doped III-V semiconductor films will be discussed. I will also introduce new energy and climate resilience capabilities enabled by these kinds of material capabilities, in particular highlighting our body of work on radiative cooling for building efficiency as well as desalination applications.

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Please contact isaiahgtz@chem.ucla.edu for additional information.