Seminar announcement

Wednesday, January 15, 2025
1:00 pm
WSI, Seminar room S 101
Exclusively in person

“Thermal transport in semiconductors”

As semiconductor devices continue to miniaturize, effective thermal management has become paramount. Accurate thermal conductivity measurements and a comprehensive understanding of heat conduction mechanisms are crucial for developing efficient thermal management strategies. In this seminar, I will discuss the thermal transport mechanism in GaN with dislocations, where dislocation-phonon scattering leads to a remarkable thermal transport anisotropy. Secondly, I will delve into inelastic phonon transport across Al/GaN and Al/Si interfaces, demonstrating an additional pathway for heat conduction alongside conventional elastic phonon transport. Finally, I will present our recent investigations into the influence of nuclear quantum effects on thermal conductivity in perovskite materials.

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