



**Showcasing research from the group of Dr Rumeng Liu,
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**Unexpected reduction in thermal conductivity observed in
graphene/h-BN heterostructures**

This research examined the thermal conductivity in a novel graphene/h-BN heterostructure with heat-flow-parallel interfaces. Results showed lower thermal conductivity compared to individual graphene or h-BN, defying expectations of a weighted average. Analysis of phonon indicates that phonon scattering is enhanced by stress at the interface and the mass distribution throughout the heterostructure. The heterostructure model introduced in this study offers new insights for controlling phonon transport in nanoscale structures.

As featured in:



See Rumeng Liu *et al.*,
Phys. Chem. Chem. Phys.,
2024, **26**, 3823.