



Showcasing research from Dr Sushanta Mitra and his team at the University of Waterloo, Waterloo, Canada.

Cs⁺ conductance in graphene membranes with Ångström-scale pores: the role of pore entrance geometry

This work investigates the electrophoretic transport of Cs⁺ ions in a graphene membrane with effective pore heights of 3.4 Å, mimicking natural membrane proteins (Aquaporins) using the molecular dynamics technique. A strong correlation between membrane geometry and conductivity is shown by systematically varying pore entrance geometry. This relationship is linked to two functional group-related ion dehydration mechanisms.

As featured in:



See Sushanta K. Mitra *et al.*,
Phys. Chem. Chem. Phys.,
2024, **26**, 11311.