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Influence of water on the surface of graphene

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How does water modify the surface conductivity of graphene?

The hope is that the GEM lets electrons through but not ions. As a result, there would be no space charge due to ions drifting from their production point to the drift volume. Therefore, graphene can be use in GEM detectors.

Graphene is an allotrope of carbon in the form of a two-dimensional, atomic-scale, hexagonal lattice in which one atom forms each vertex. It can be considered as an indefinitely large aromatic molecule, the limiting case of the family of flat polycyclic aromatic hydrocarbons. It is also shows hydrophobic properties. Although these properties, the graphene interacts with water molecules, and then the water may condense on the graphene changing its properties. In this study, we will examine how does water modify the surface conductivity of graphene.

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