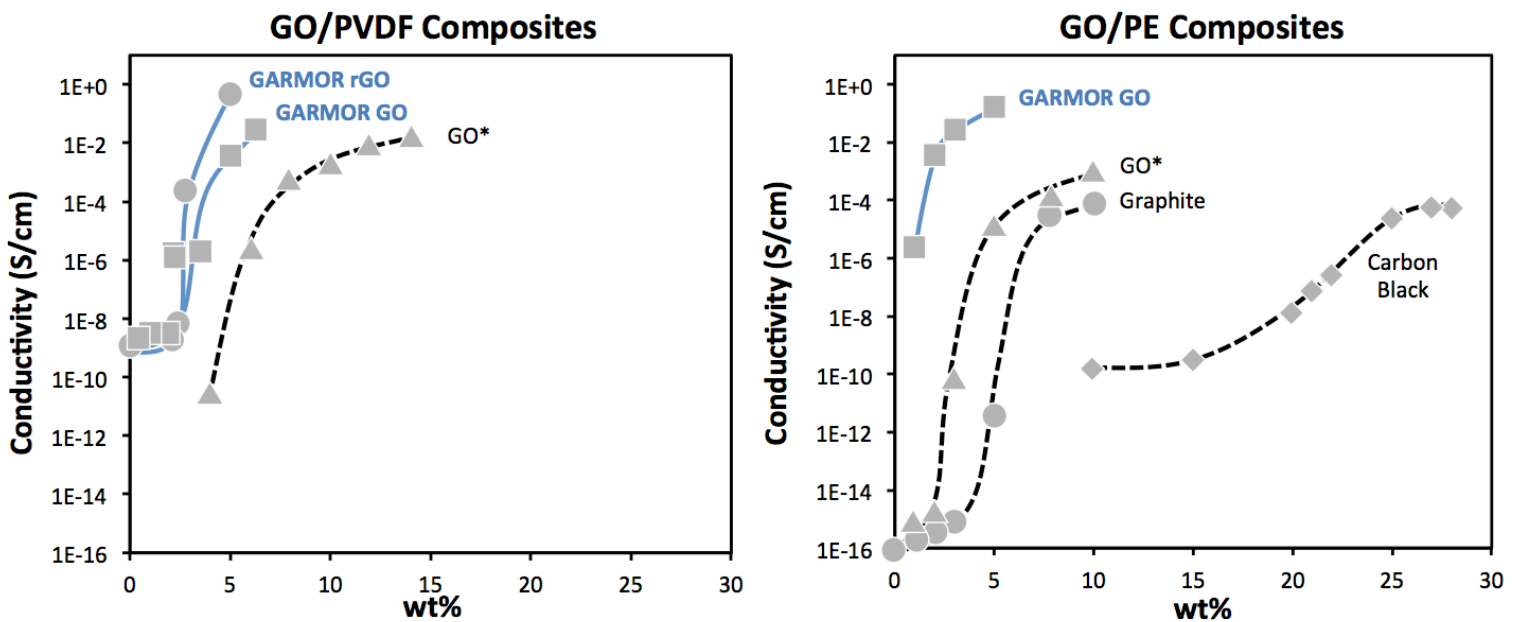


# CONDUCTIVE GO/POLYMER COMPOSITES

*Garmor-produced graphene oxide delivers 100-1000X improvement in composite conductivity at lower loadings compared to leading fillers.*

One of the most promising aspects of graphene-based composites is their use in electronic-related applications due to their high electrical conductivity. Achieving an effective yet economical graphene-polymer composite is driven by a low percolation threshold, the point at which a conductive network of the filler is formed, and high electrical conductivity. Benefits of a low percolation threshold include not only economic considerations arising from a low amount of filler but also ease of processability of the composite blend.

Today, only a handful of graphene-based products are offered for sale due to the high price of graphene. Garmor exploited proprietary advancements in mechanochemistry to achieve significant cost improvements in the production of graphene oxide. Today, Garmor sells graphene oxide (GO) and reduced graphene oxide (rGO) as a commodity-priced, high-value additive for large-scale polymer applications. Garmor's GO and rGO provide exceptional conductivity at low loadings as shown in the figures below.



*Bulk electrical conductivity of the composites were measured using an electrometer workstation.*

*Values on the graphs represent an average of three values recorded for each GO loading.*

*GO\*: Graphene oxide prepared via sonication of graphite.*

## Advantages

- Significant enhancement of the conductivity of the composite material
- Reduced loadings facilitate easier processing

## Applications

- EMI Protection
- Gas Sensors
- Thin Films
- Energy Storage
- Fuel Cells