# Industrial Graphene nanoplatelets possibilities

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## Abstract

GrapheneTech is a dynamic company graphene producer, working day after day to become a world leader in graphene technology adapted to the specific needs of each client.
Graphene manufacture as nanoplates, we specialize in large-scale production for various industrial applications using our patented method that allows us to offer suitable to industrial needs, complex and costly than other methods do not allow prices.

Six years of experience with nanomaterial of high performance are behind us. The multidisciplinary team formed by PhD in chemistry and physics of our firm has a R&D extensive experience and share with the clients the vision to develop our services with accurate communication, consistent and direct.

Graphene nanoplatelets are mainly obtained by two kinds of production: Chemical exfoliation leads to graphene oxide (GO) with very poor electrical conductivity, which, if further reduced to increase conductivity (reduced graphene oxide, rGO), tends to lead graphene defective, not fully reduced and carrying many non-carbon elements from the hazardous chemicals used (as in Hummers o Brodie methods), hence limiting its quality for potential industrial uses. In contrast, mechanical exfoliation protocols use shear forces to separate graphene stacks in graphite and are currently producing non-oxidised graphene nanoplatalets (GNPs) with a broad range of quality, number of layers, conductivity, surface area and mechanical performance depending on the success degree of exfoliation. As a result mechanical exfoliation appears to be the most promising route for the mass manufacturing of high quality bulk graphene.

Industrial applications for Graphene nanoplatelets are mainly based on composites, however is needed to modify the graphene, specially graphene oxide, for the final application; via reduction,[1] dopping[2] with others metal or atoms, functionalizasing[3] with aliphatic chains or molecules… Then, Is it a real final application?

## References

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