

## The importance of functionalisation & lateral size of Graphene in Coating & Inks commercialization

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Graphene with its large surface area and conductive nature play significant role anticorrosive surface treatments in protective metal coating systems [1-2]. Further, with its large strength to weight ratio, graphene can be an important component in next generation light weight composites for Aerospace & Automotive applications. The current bottlenecks in using graphene are availability of cost effective high-quality graphene and its effective incorporation (Functionalisation and Dispersion) into coating & inks for fuel cell systems. On overcoming these factors, coatings & inks may prove to be significant demand drivers for graphene in terms of volume consumption.

Graphene produced from industrially scalable and cost effective top down routes, can be electrochemically/chemically/mechanically, functionalised & further progressed for use coatings & inks. The process of commercialization can be seen to solving a jigsaw puzzle. Further some highlights of a future large industrial progress shall also be discussed.

Keywords: Graphene, Graphene industrial scale up production, anti-corrosion, multi metals protection.

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### **References**

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- 1) Bohm, S., Graphene against corrosion. Nat Nano, 2014. 9(10): p. 741-742.
- 2) Graphene Anti corrosion surface treatment, Flatchem, 1, 2016, (11-16)