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## **Non-covalent Interactions for Synthesis of New Graphene Based Composites**

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### **ABSTRACT**

Compared with covalent modification methods, non-covalent modifications will not destroy graphene's intrinsic structure, thus its excellent properties can be preserved, therefore it has been extensively utilized to prepare composite materials. In this feature article, we like to present our recent work on the preparation of graphene based composite materials with polymers, small molecules and biomolecules via non-covalent interactions and the characterization of their structures and properties. The applications in the preparation of mechanical property-enhanced and electrical conductivity-tunable composites, solar cells and other fields are explored. We also discussed the challenges and future trends.

*Keywords:* A. Polymer-matrix composites; A. Nano composites; B. Electrical properties; B. Mechanical properties; Non-covalent interactions.

### **1. Introduction**

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