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Investigation on Properties and Applications of Graphene as Single Layer of Carbon Atoms

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Abstract : Graphene is undoubtedly emerging as one of the most promising materials because of its unique combination of superb properties, which opens a way for its exploitation in a wide spectrum of applications ranging from electronics to optics, sensors, and biodevices. In addition, Graphene-based nanomaterials have many promising applications in energy-related areas. Graphene a single layer of carbon atoms, combines several exceptional properties, which makes it uniquely suited as a coating material: transparency, excellent mechanical stability, low chemical reactivity, Optical, impermeability to most gases, flexibility, and very high thermal and electrical conductivity. Graphene is a material that can be utilized in numerous disciplines including, but not limited to: bioengineering, composite materials, energy technology and nanotechnology, biological engineering, optical electronics, ultrafiltration, photovoltaic cells. This review aims to provide an overiew of graphene structure, properties and some applications.

Keywords : graphene, carbon, anti corrosion, optical and electrical properties, sensors
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