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Energy Harvesting Cell of Reduced Graphene Oxide for Space Structure

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Carbon Nano Materials are important material in recent time for many applicable purposes such as energy, structure, textile, coating, etc. Among them, graphene is the most noticeable material having huge potential to grow in the development of scientific, industrial, commercial phase. The particular property of reduced graphene oxide is the converting performance of electrical generation from its reacting effect of inside lattice while the external force is exerted as much as a little displacement of nanoscaled distance. This study is attempted to find the most efficient rate of material composition, dominant factors in fabrication process, adaptable morphological design for space component, appropriate cost for all progress to complete system, and other replaceable carbon material etc. Several atomic elements are used to increase the performance of generation and to protect the harsh space environments such as space charging with the relatively conventional technology. The system is installed on space system in the forms of coating, bonding, compositing, and sustainable structure itself. Finally this system is naturally allowed the lightest weight comparing with current using structural materials. It is expected that the ratio of reduction is possible to get almost one of ten in total weight. If this system is successfully resulted with the imagine performance, the space programs are met one of revolutionary improvement in the category of power supply, structure, launch cost, and designing concept.