Fabrication of various metal-coated graphene nanoplatlets for Electromagnetic interference shielding by solventless synthetic method

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Hugh progress in electric and electronic devices has improved quality of lives of the people. However, interference of electric and electronic devices leads to significant damage to surrounding devices or health of the creature. Graphene nanoplatelets are at the center of the research with lightweight and flexibility. Magnetic materials including pure metals or metal oxides are utilized with its high permeability. Synergetic effect shows up when metals or metal oxides are deposited on high surface area of GNP. Such metal-coated GNPs are simply fabricated by solventless synthetic method. Drying and filtering stages are eliminated in this process. To the best of my knowledge, only a few reports handle solventless synthetic method for EMI SE. In this report, various kinds of metals are coated on GNP by solventless fabrication and also expanded to form hybrid-metal coating with higher efficiency in EMI SE than that of single-metal form. Additionally, structures of the coated metals and working temperature can be controlled by switching other kinds of capping agents.
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