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Polydopamine-coated graphene oxide/PEDOT hybrid thin film by electrochemical synthesis for supercapacitors

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We report the facile synthesis of polydopamine coated graphene oxide/conducting polymer hybrids as an electrode material for supercapacitors. Polydopamine has catechol moieties that can undergo redox reactions, which may result in extra faradic capacitance. Polydopamine coated graphene oxide hybrid materials, which were easily prepared by concomitant dopamine oxidation and slight reduction of graphene oxide, showed enhanced specific capacitance when compared to bare graphene oxide hybrid materials. Although polydopamine layers slightly decreased the conductivity of the hybrid materials, extra redox reactions appeared to contribute more to the overall specific capacitance.

Biography

Inhwan Cha has completed his BS from Sungkyunkwan University. Currently, he is a Master-doctor combined course student under Changsik Song at the Department of Chemistry, Sungkyunkwan University, Republic of Korea.

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