

## Conductive Polymer Nanocomposites with Improved Electrical and Electrochemical Performances

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Conductive Polymer (CP) nanocomposites possess attractive properties, such as high conductivity, unique redox behaviors, facile film-forming, tunable morphology, and cost-effectiveness. Such advantages of CP nanocomposites make them suitable for various applications, such as chemical sensors, supercapacitors, solar cells, light-emitting diodes (LEDs), antennas, and so forth. In this presentation, a variety of approaches for fabricating CP nanocomposites will be described. Interestingly, the CP nanocomposites can be synergistic with different materials including metals, carbons, and graphenes. Thus, the effects of carbon materials and metals on the resulting properties of CP nanocomposites will also be discussed. To help better understanding of appropriate design approaches for highperformance CP nanocomposites, proper and creative examples will be given.