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Nanoarchitectures in designing polymer sensors

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Electronic industry has been moving to a new phase with the invention of polymer nanocomposites. Large number of polymers and their composites containing nanomaterials such as carbon nanotubes, reduced graphene oxide, metal nanoparticles as well as their hybrid and functionalized derivatives are being used in manufacturing sensors, actuators, piezoelectric devices, capacitors and so on. Here in this work, sensors made of polyvinylidene flouride (PVDF) and its nanocomposites containing metal nanoparticles and its hybrid cobinations with nanocarbon materials are investigated. The metal nanoparticles are synthesized by followith hydrothermal method and the final composites are made by simple solution casting. The use of polymers in fabricating light weight and flexible electronic parts will be mainly focussed; and this piece of work aims to have tremendous applications in technology and engineering.

Biography

Deepalekshmi Ponnamma has completed her PhD from Deakin University, Australia and at present working as a Postdoctoral researcher at the Center for Advanced Materials, Qatar University. Her research in the field of polymer nanocomposites (among other topics) has been published in international journals and book contributions, and has been awarded at several international conferences with best poster and oral presentation awards. She has published more than 15 papers in reputed journals and 13 book chapters in different books. She has also edited 6 books.

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