

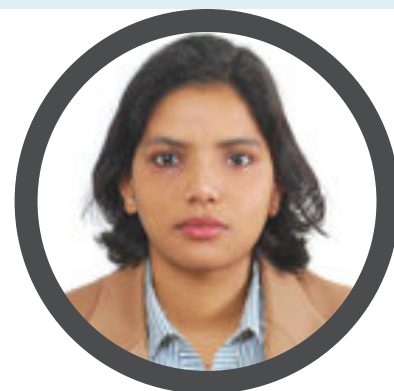
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## RECENT PROGRESS IN SMART POLYMER COMPOSITE MATERIALS

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**A** recent study in polymer composite materials is presented in this overview. Polymer composite materials open up more attention rather than polymer because of application flexibility in the electric or magnetic field in various sectors industry. The polymer matrix undergoes a phase transitions from a liquid like to semi solid like state as a result of additive filler particles. The responsive filler particles and its behaviour can be induced by extremal electric or magnetic field. The orientation of filler particles within the polymer matrix induce the various properties and processed in a variety manner to create useful by products. The application of composite materials solves the problem related to polymers such as low activity and less physical and chemical stability. The composites were fabricated using various approach methods with electric or magnetic field and help to boost the wide application of both ER and MR fluids.



### Biography

Dr. Samal has completed her Ph.D. at the age of 29 years from research institute of minerals and materials technology (IMMT, CSIR), India and postdoctoral studies from various places of Wits University, Johannesburg, Inha University, South Korea, Technical University Liberec, Czech Republic and University of Rennes 1, France. Now she works as a scientist at the department of functional materials at IoP, Prague. She has published more than 53 papers in reputed journals and has been serving as a reviewer of repute.

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