

## **Synthesis of Polystyrene Grafted Filler Nanoparticles: Effect of Grafting on Mechanical Reinforcement**

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**Abstract :** A series of PS-nanoparticles were prepared by grafting PS from both aggregated silica and colloidal silica using atom-transfer radical polymerisation (ATRP). The mechanical behaviour of the nanocomposites have been examined by differential scanning calorimetry (DSC) and dynamic mechanical thermal analysis (DMTA).

**Keywords :** ATRP, nanocomposites, polystyrene, reinforcement

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