

Comparative Studies of Modified Clay/Polyaniline Nanocomposites

Authors : Fatima Zohra Zeggai, Benjamin Carbonnier, Aïcha Hachemaoui, Ahmed Yahiaoui, Samia Mahouche-Chergui, Zakaria Salmi

Abstract : A series of polyaniline (PANI)/modified Montmorillonite (MMT) Clay nanocomposite materials have been successfully prepared by In-Situ polymerization in the presence of modified MMT-Clay or Diazonium-MMT-Clay. The obtained nanocomposites were characterized and compared by various physicochemical techniques. The presence of physicochemical interaction, probably hydrogen bonding, between clay and polyaniline, which was confirmed by FTIR, UV-Vis Spectroscopy. The electrical conductivity of neat PANI and a series of the obtained nanocomposites were also studied by cyclic voltammograms.

Keywords : polyaniline, clay, nanocomposites, in-situ polymerization, polymers conductors, diazonium salt

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