

COPOLYMERIZATION OF 8-HYDROXYQUINOLINE WITH ANILINE AND INTERCALATION OF 8-HYDROXYQUINOLINE INTO MONTMORILLONITE CLAY

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Aniline and 8-hydroxyquinoline were successfully electropolymerized in acetonitrile medium using tetraethylammonium tetrafluoroborate as the background electrolyte. Also, aniline and 8-hydroxyquinoline were copolymerized with different ratios under same conditions, and found that the good ratio of aniline: 8-hydroxyquinoline to make copolymer is 2:1. Cyclic voltammetry and FT-IR spectroscopy analysis confirmed the formation of copolymer. The chemical polymerization of 8-hydroxyquinoline was achieved by using a redox reaction with Ce(IV) ions and intercalation of 8-hydroxyquinoline within the interlayer galleries of the Ce(IV)-MMT clay is succeeded in an aqueous media. Ce(IV) ions were successfully intercalated into MMT clay and this material was further used in the intercalation and polymerization of 8-HQ within the interlayer galleries of MMT clay.