Electronic Supplementary Information (ESI†)

In situ Interlamellar Production of Amide Based Functional Copolymer/Clay Nanocomposites

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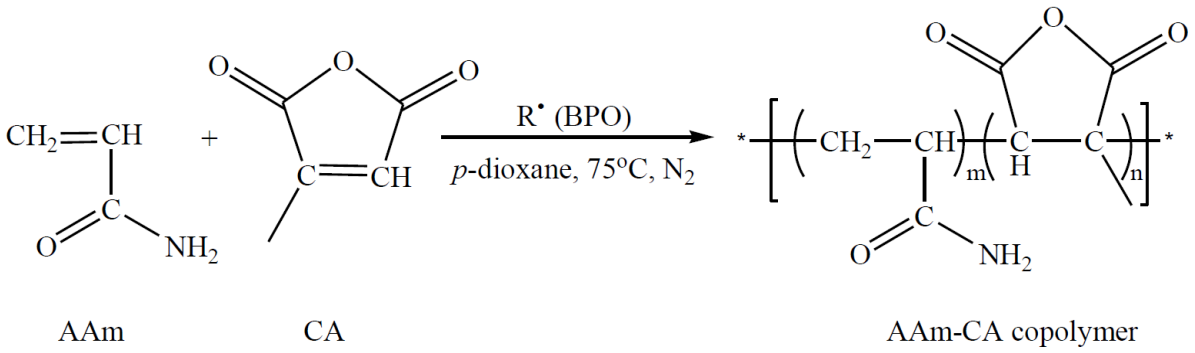
Synthesis of AAm-CA Copolymer

The radical solution copolymerization of AAm with CA at a 50:50 mol% of monomers was performed in *p*-dioxane solutions by BPO (0.2%, based on the total weight of monomers) as initiator. Standard conditions were used for copolymerization. Equal moles of monomers, *p*-dioxane and BPO were added to narrow neck glass tube and stirred for the complete dissolution. To reduce the influence of oxygen, tube was flushed with nitrogen gas and was sealed. Copolymerization was performed in a thermostated heater with a magnetic stirrer at 75°C with 300 rpm for 8 h. At the end of the reaction glass tube was cooled in ice-water and copolymer was separated by precipitation into cold diethyl ether and then washed with several portions of acetone and finally reprecipitated in the cold diethyl ether solution. Copolymer was obtained as white powder and dried under vacuum 50°C (Scheme S1).



Scheme S1. The process of copolymer formation from AAm and CA monomers *via* solution radical copolymerization.