

Supplementary documents

**Synthesis of self-healable and pH responsive hydrogel based on ionic
polymer/clay nanocomposite**

Sovan Lal Banerjee^a, Moumita Khamrai^b, P. P. Kundu^b, Nikhil K. Singha^{a*}

^a Rubber Technology Centre, Indian Institute of Technology, Kharagpur, India.

^bDepartment of Polymer Science and Technology, University of Calcutta, Kolkata, India.

1. XRD analysis:

The XRD pattern of the MMT and OMMT was explained in Figure S2. From the figure it was observed that for MMT and OMMT strong peak was observed at $2\theta = 6.10^\circ$ and 5.49° respectively which confirmed the modification of pristine MMT with CTAB¹.

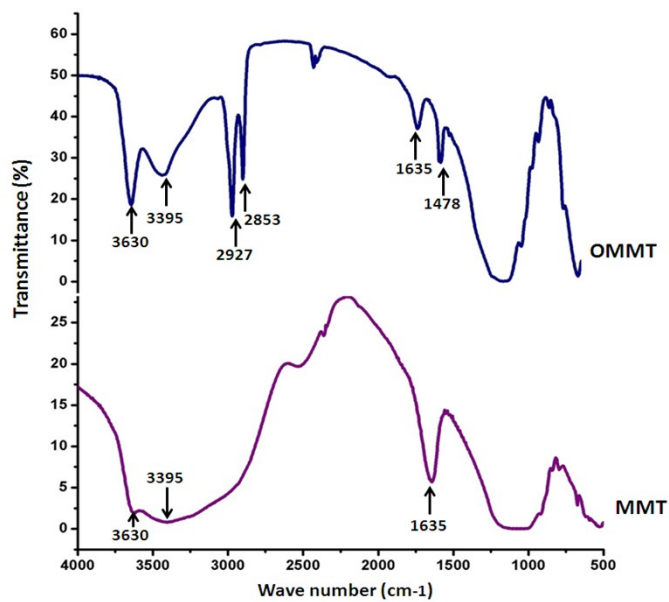


Figure S1: FTIR spectroscopy analysis of (a) NaMMT and (b) CTAB modified MMT.

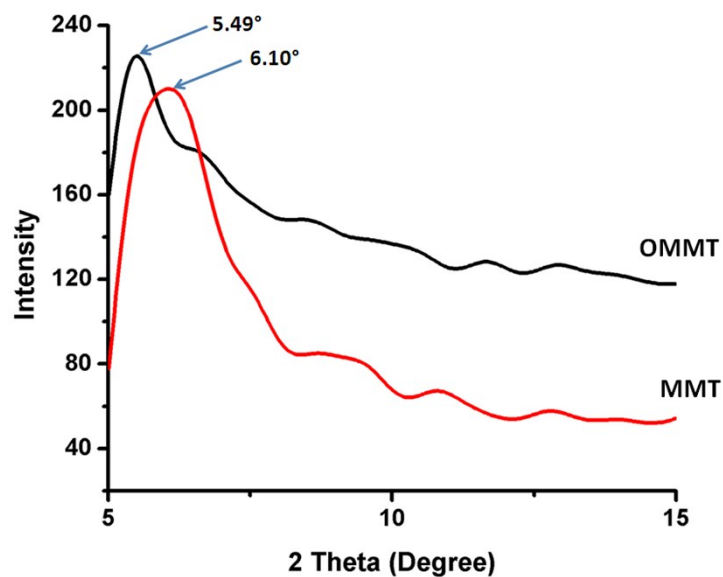


Figure S2: XRD analysis of MMT and OMMT clay.

30 **References:**

31 1. H. Li, Y. Yu and Y. Yang, European Polymer Journal, 2005, **41**, 2016-2022.

32

33