



Erratum

Corrigendum to “Polymer hydrogel from carboxymethyl guar gum and carbon nanotube for sustained transdermal release of diclofenac sodium” [Int. J. Biol. Macromol. 49 (2011) 885–893]

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Corrigendum: The SEM figure with two images (Fig. 3b) in the original article was inadvertently added during final submission through an unfortunate error, as the image belongs to parallel research reported elsewhere (doi: <https://doi.org/10.1016/j.jhazmat.2011.06.083>). Therefore, all mention of the SEM images must be removed from the article. Fortunately, the SEM images were provided only as supporting evidence of dispersion of MCNT within CMG, which was further well described and supported by the rheology data. Therefore, the conclusions of the paper remain sound.

The authors would like to apologise sincerely for any inconvenience or confusion that this error might have caused readers.

The changes reflected by the removal of Fig. 3(b) are as follows:

Section 2.3 Characterization

CNT and MCNT were characterized using Fourier Transform infrared (FTIR) spectroscopy (JASCO FTIR within spectral range of 400–4000 cm^{-1} and resolution 4 cm^{-1}) and thermogravimetric analyzer (Perkin Elmer, degradation range: room temperature to 600 °C, heating rate used 10 °C/min, heated in alumina pan under nitrogen). FTIR and TG analysis of the nanocomposites were studied using same instruments. Solid state ^{13}C nuclear magnetic resonance (NMR) spectroscopic analysis was done in Bruker NMR spectrophotometer operated at 500 MHz at room temperature. Morphology analysis was done using polarized light

(PLM, Leitz GMBH, Germany, magnification used 100 \times). Room temperature rheological studies were carried out in a HAAKE Viscotester 550, Thermo Scientific, Germany using shear rate from near 0 to 400 S^{-1} .

Section 3.3 Polarized light microscopic (PLM) image analysis of hydrogel nanocomposites

Fig. 3 shows PLM images of neat and MCNT filled hybrid nanocomposites. Neat CMG has shown non-uniform film thickness after application on glass slide since some portion of it appears brighter than the rest. Images of hydrogel nanocomposites are clearly more homogeneous than neat CMG. This is due to better wettability of the nanocomposites achieved through net rise in surface energy after addition of MCNT. The black spots in the images indicate dispersed MCNT domains in CMG. It shows gross uniformity in spreading inside the CMG matrix. The driving force being CMG–MCNT interaction as was discussed in the preceding Sections (Sections 3.1 and 3.2). The MCNT domain sizes increase with its concentration and they tend to concentrate locally due to dominant filler–filler interaction at higher concentration.

Fig. 3 Polarized light microscopic images (100 \times) of neat CMG and its hybrid nanocomposites with various MCNT contents.

Once again the authors would like to apologise sincerely for any inconvenience this might have caused readers.

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