Supplemental information

Characterization and cytotoxicity study of rectorite and carbon nanotubes incorporated nanofibrous mats

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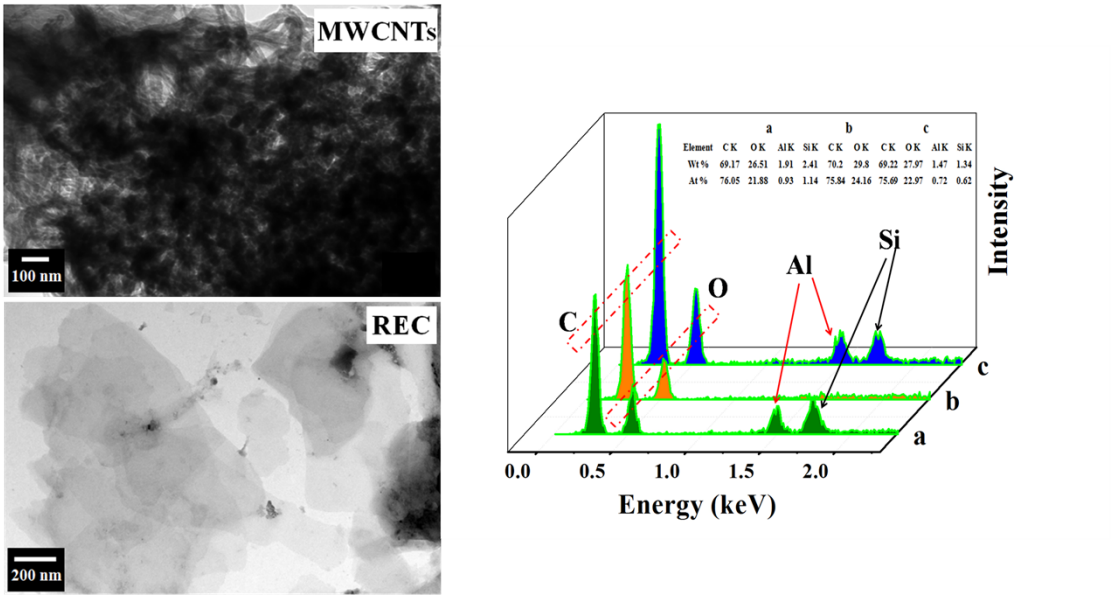
EDX spectroscopy of the composite nanofibrous mats: In Fig. S1, EDX analysis was also applied to determine the elements in the composites. As expected, the characteristic elements of REC were Si and Al, which were detected in the EDX spectrum of PLA/REC and PLA/MWCNTs/REC nanofibrous mats. And the composite nanofibrous mats containing MWCNTs showed higher weight percentage of carbon element than that in PLA/REC nanofibrous mats.

XPS narrow scans of Si and Al in the composite nanofibrous mats: In Fig. S2**,** the narrow scans were analyzed using the free software XPSPEAK Fit. In the Si_{2p} scan of the REC contained mats, the peaks at 102.53 and 101.4 eV were corresponding to the Si $2p_{3/2}$ and Si $2p_{1/2}$ of REC.[1] When MWCNTs were added, the Si_{2p} peaks were shifted to lower binding energy (BE) of 102.4 and 101.35 eV, indicating the valence electron density of silicon nuclei was increased.[1] And the similar peak shift appeared in the Al_{2s} scan, the peak in the PLA mats containing REC at 117.8 eV belong to the Al-O of REC, was shifted to the lower value of 116.5 eV in the PLA/MWCNTs/REC mats. In the curve-fitted C_{1s} core-level spectrum of the PLA, the main peak at 284.87 eV assigned to the C-H of PLA, the peak with a higher BE of 286.7 eV attributed to the C-O and C=O species, and the main peak at 288.84 eV stood for the ester functional group of PLA.[2] When the MWCNTs were incorporated into the PLA mats, the BE of the C_{1s} had not changed.

Supplemental References:

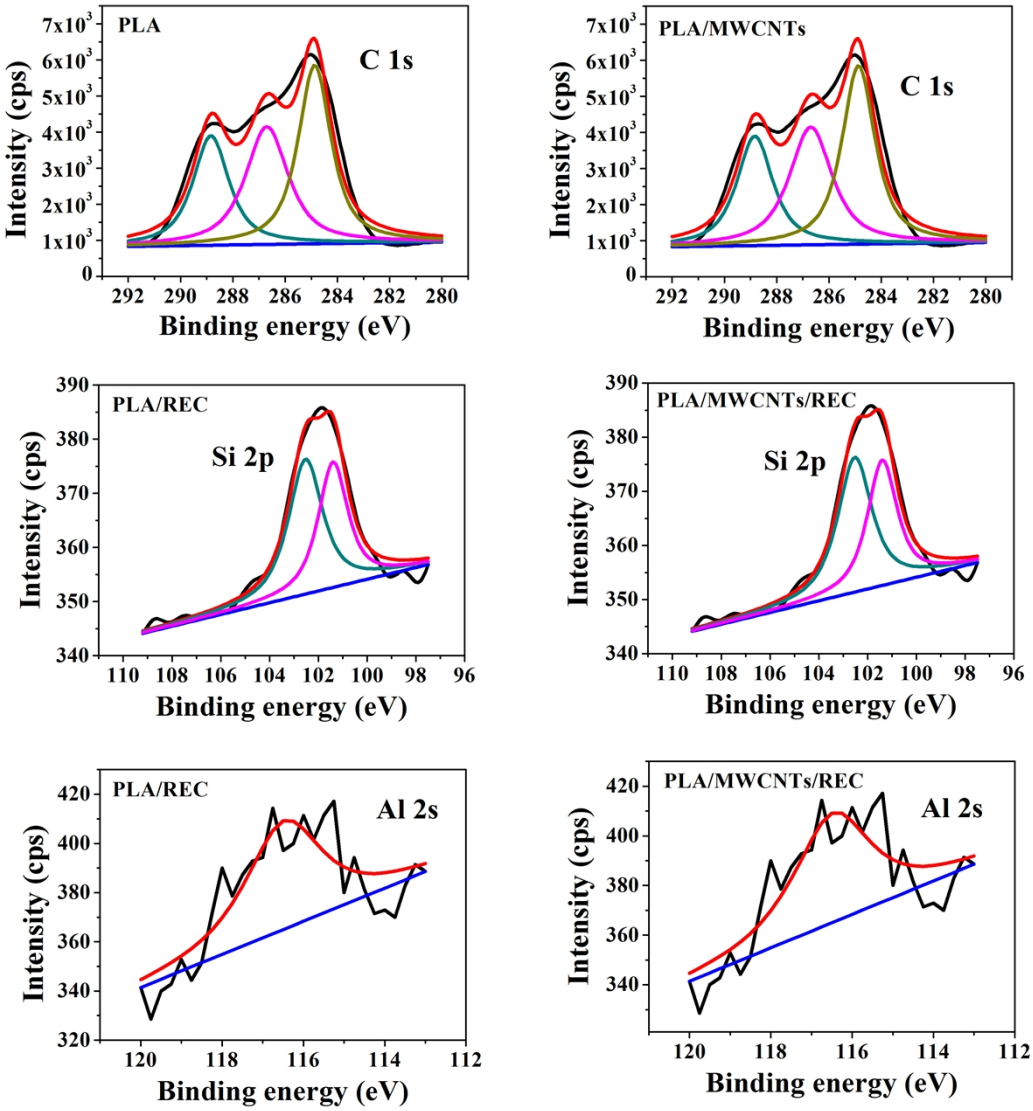
1. R. Sawyer, H. Nesbitt and R. Secco, *Journal of Non-Crystalline Solids*, 2012, **358**, 290.

2. Z. Ding, J. Chen, S. Gao, J. Chang, J. Zhang and E. Kang, *Biomaterials*, 2004, **25**, 1059.



Supplemental Figure S1

TEM images of the pristine MWCNTs and REC, and EDX spectroscopy of the composite nanofibrous mats. (a) PLA/REC, (b) PLA/MWCNTs and (c) PLA/MWCNTs/REC.



Supplemental Figure S2: XPS narrow scans of C_{1s}, Si_{2p} and Al_{2s} in the nanofibrous mats.