polymers

MDPI

Supporting Information for

Surface-Initiated Initiators for Continuous Activator Regeneration (SI ICAR) ATRP of MMA from 2,2,6,6–tetramethylpiperidine–1–oxy (TEMPO) Oxidized Cellulose Nanofibers for the Preparations of PMMA Nanocomposites

Figure S1. Apparent images of 2,2,6,6–tetramethylpiperidine–1–oxy–oxidized cellulose nanofibers (TOCN)–*g*–PMMA powders prepared by (**a**) surface-initiated initiators for continuous activator regeneration atom transfer radical polymerization (SI ICAR ATRP) (167 ppm copper) vs (**b**) SI normal ATRP (2000 ppm copper).

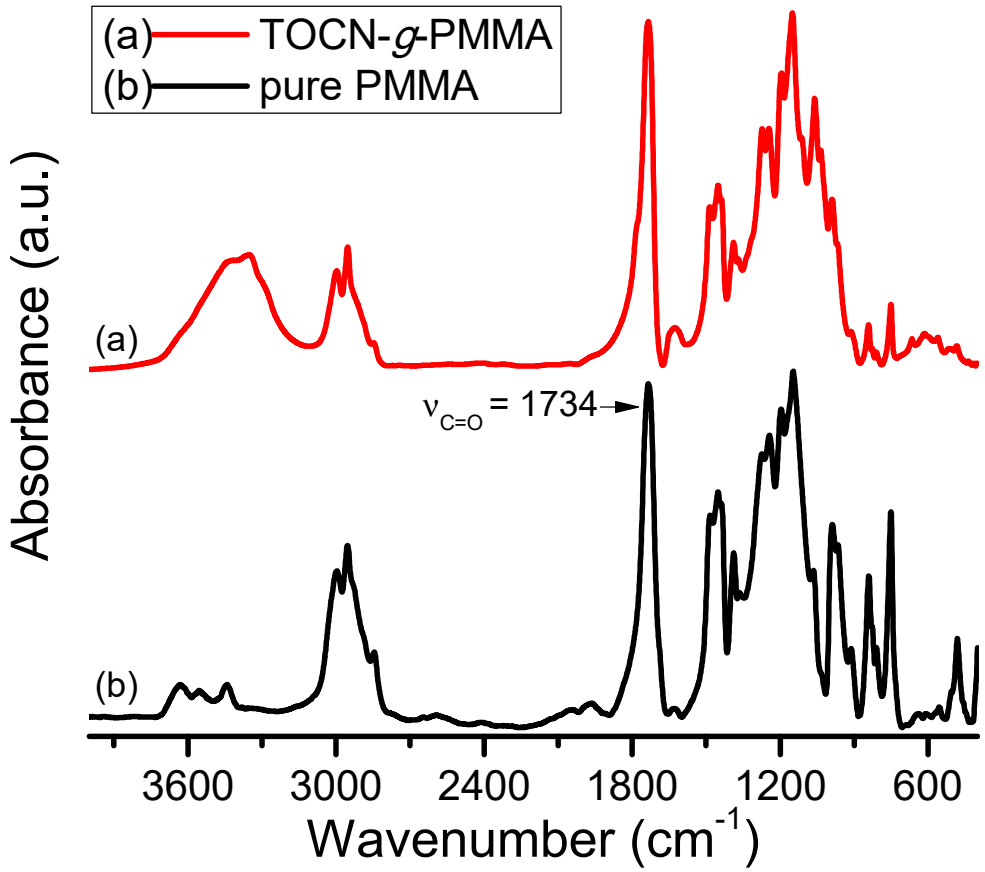

Figure S2. Fourier transform infrared (FT–IR) spectra (4000–400 cm^{-1}) of (**a**) 2,2,6,6–tetramethylpiperidine–1–oxy–oxidized cellulose nanofibers (TOCN)–*g*–PMMA and (**b**) pure PMMA.

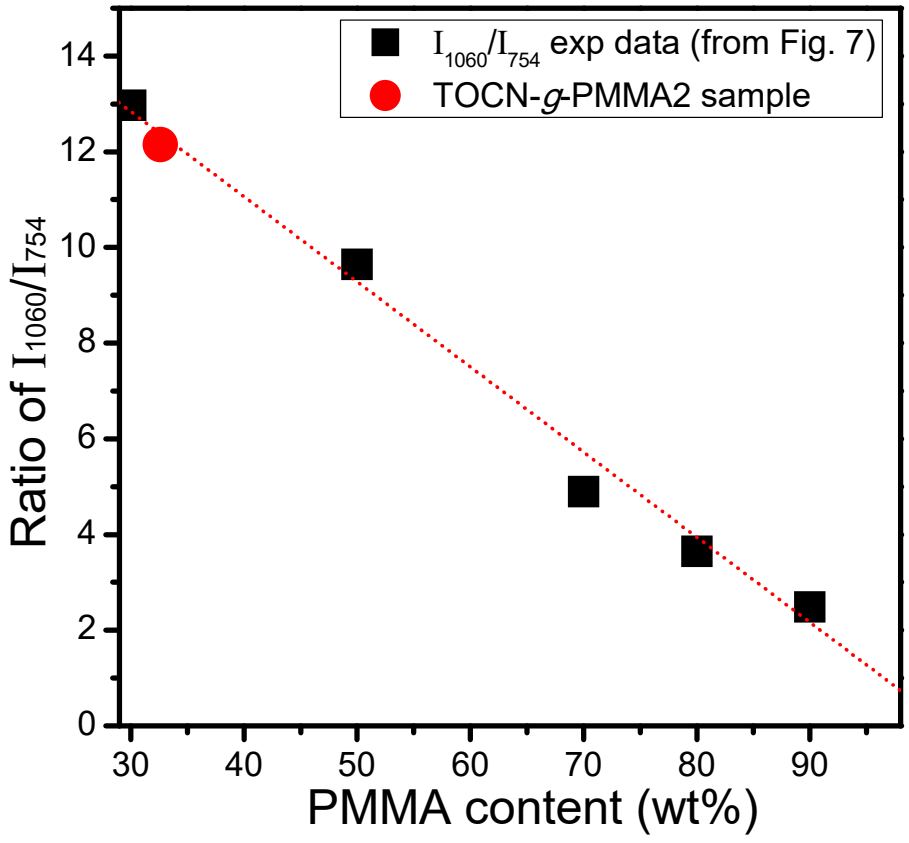

Figure S3. Fourier transform infrared (FT–IR) calibration line based on the absorption intensity ratios of characteristic peaks of 2,2,6,6–tetramethylpiperidine-1–oxy–oxidized cellulose nanofibers (TOCN)/PMMA blends and TOCN-*g*-PMMA2 sample.

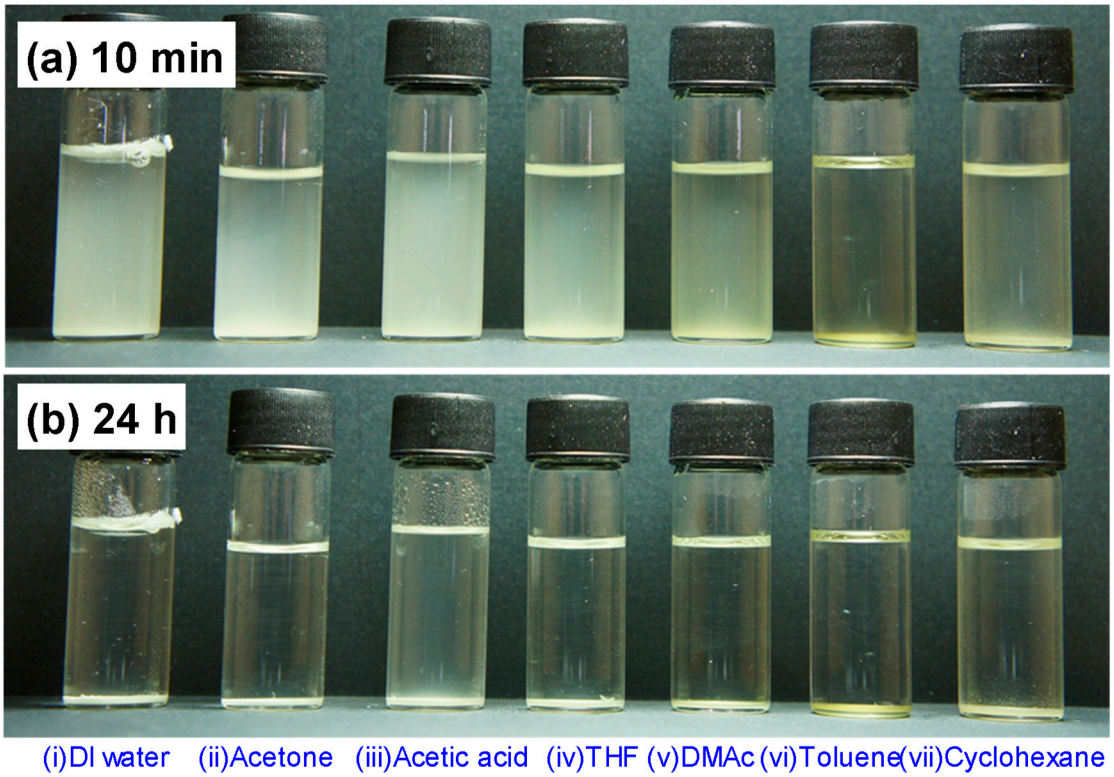

Figure S4. Dispersion photos of 2,2,6,6–tetramethylpiperidine-1–oxy–oxidized cellulose nanofibers (TOCN)–*g*–PMMA2 (10 mg) in different solvents (3 mL) in (**a**) 10 min and (**b**) 24 h.