Electronic Supplementary Material (ESI) for Materials Advances.

Photodegradation of emerging contaminant tetracycline using Zinc titanate nanocellulose composite as an efficient photocatalyst

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Electronic Supporting Information (ESI)

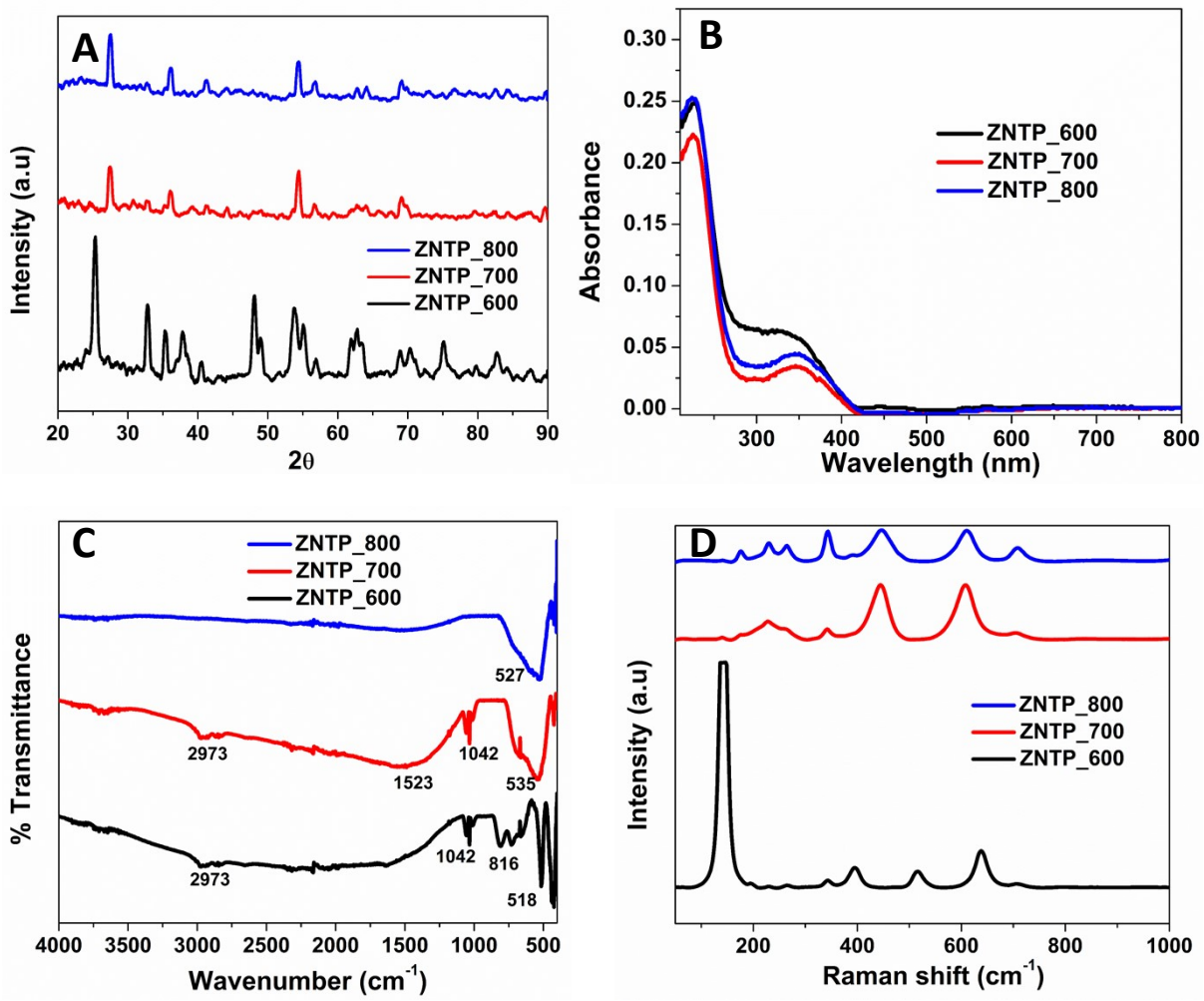

Fig S1: (A) stacked XRD diffractograms (B) Stacked Uv-Vis spectra (C)stacked FTIR spectra (D) Stacked Raman spectra of the polyethylene glycol doped zinc titanates calcined at different temperatures

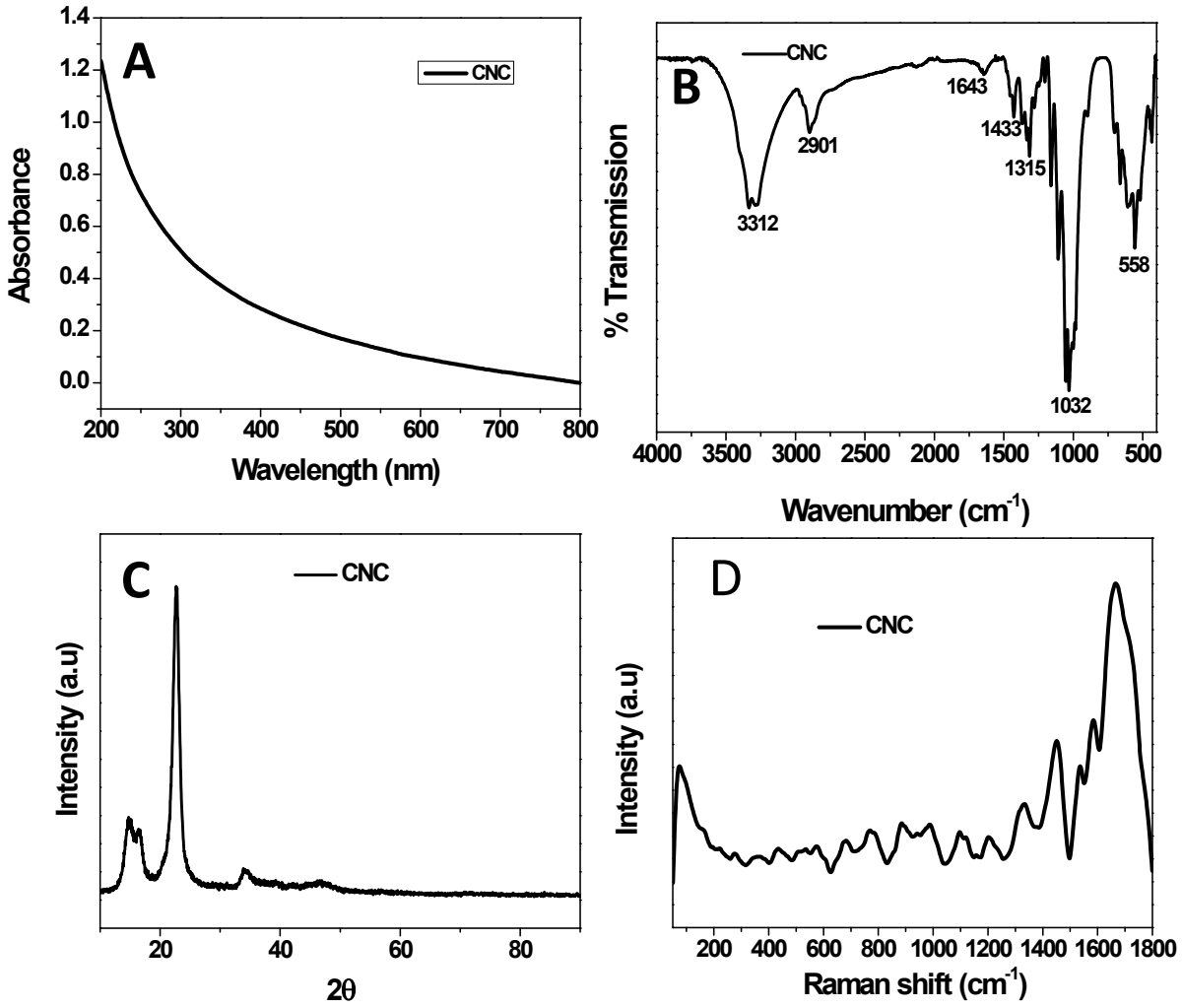

Fig S2: Characterization of the cotton nanocellulose (A) UV-Vis spectrum (B) FTIR spectrum (C) XRD diffractogram (D) Raman spectrum

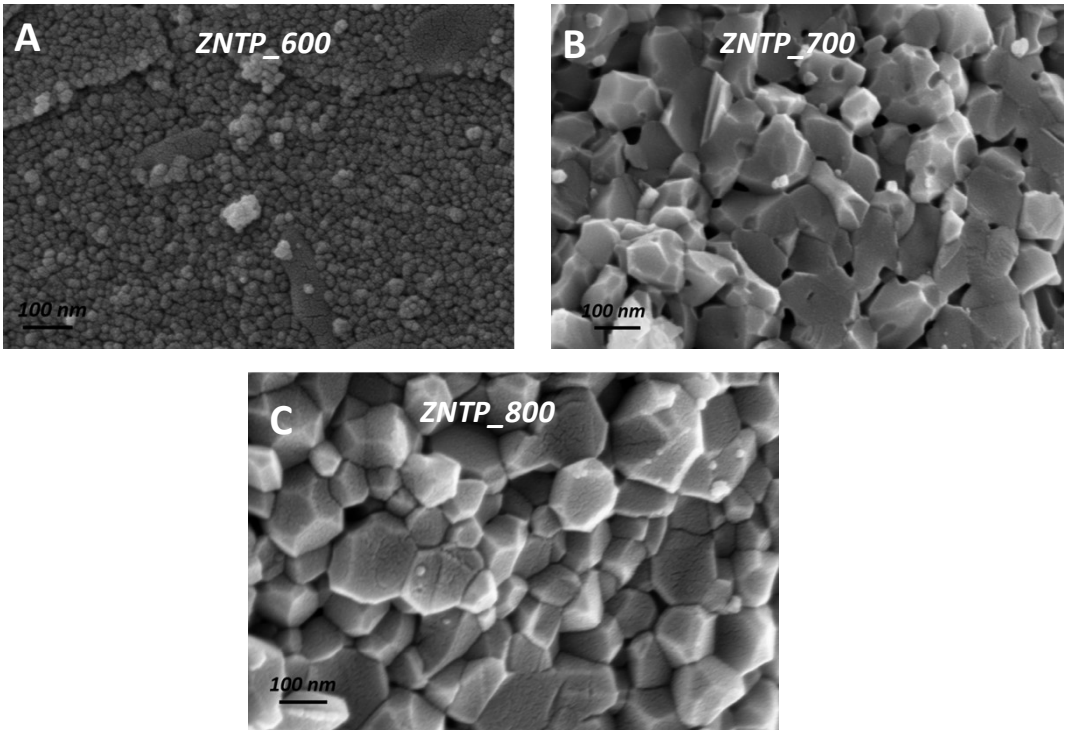

Fig S3: Scanning Electron Microscope images of the polyethylene glycol doped zinc titanates calcined at (A) 600^0C/2h (B) 700^0C/2h (C) 800^0C/2h

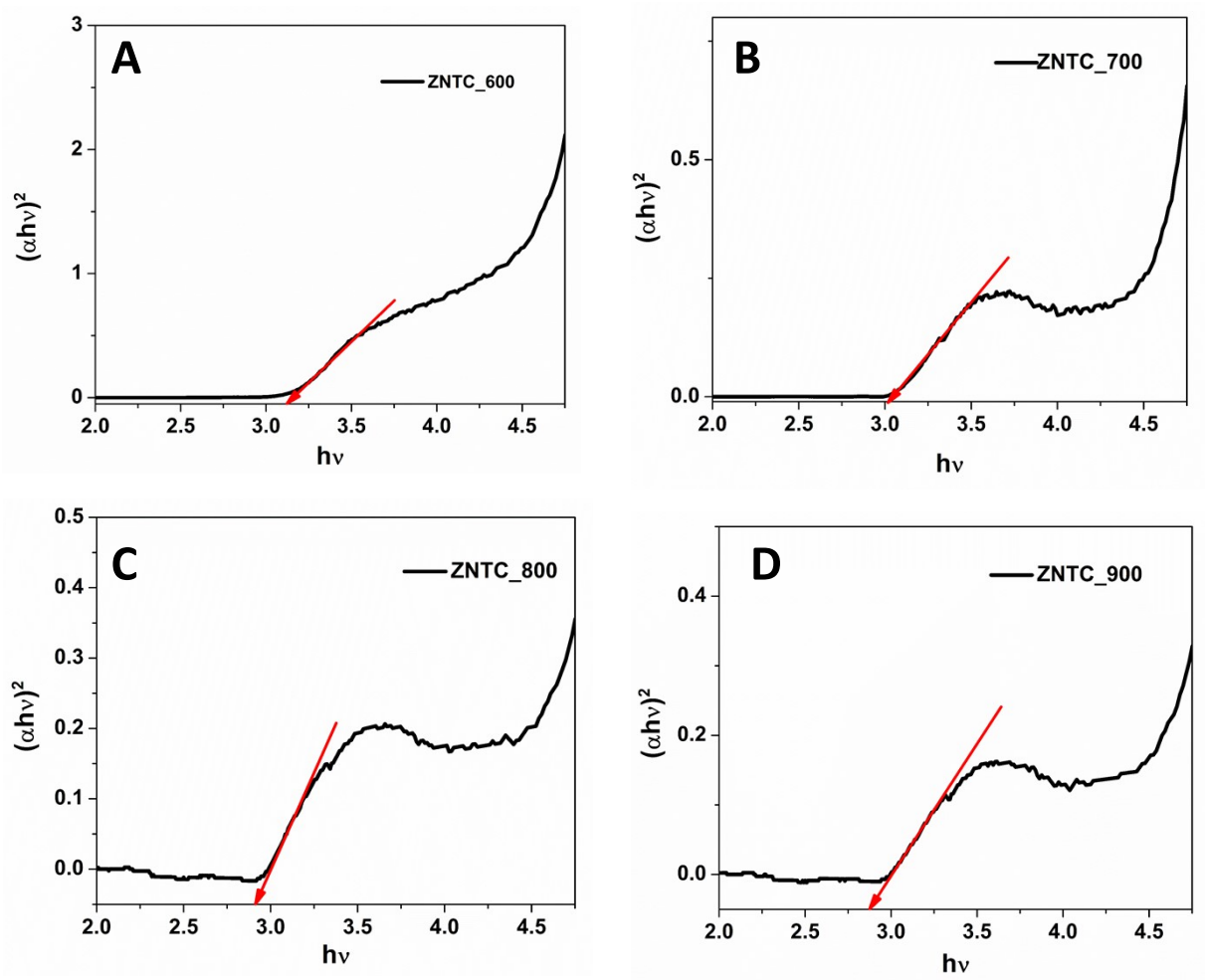

Fig S4: Band gap of (A)ZNTC_600 (B)ZNTC_700 (C) ZNTC_800 (D) ZNTC_900

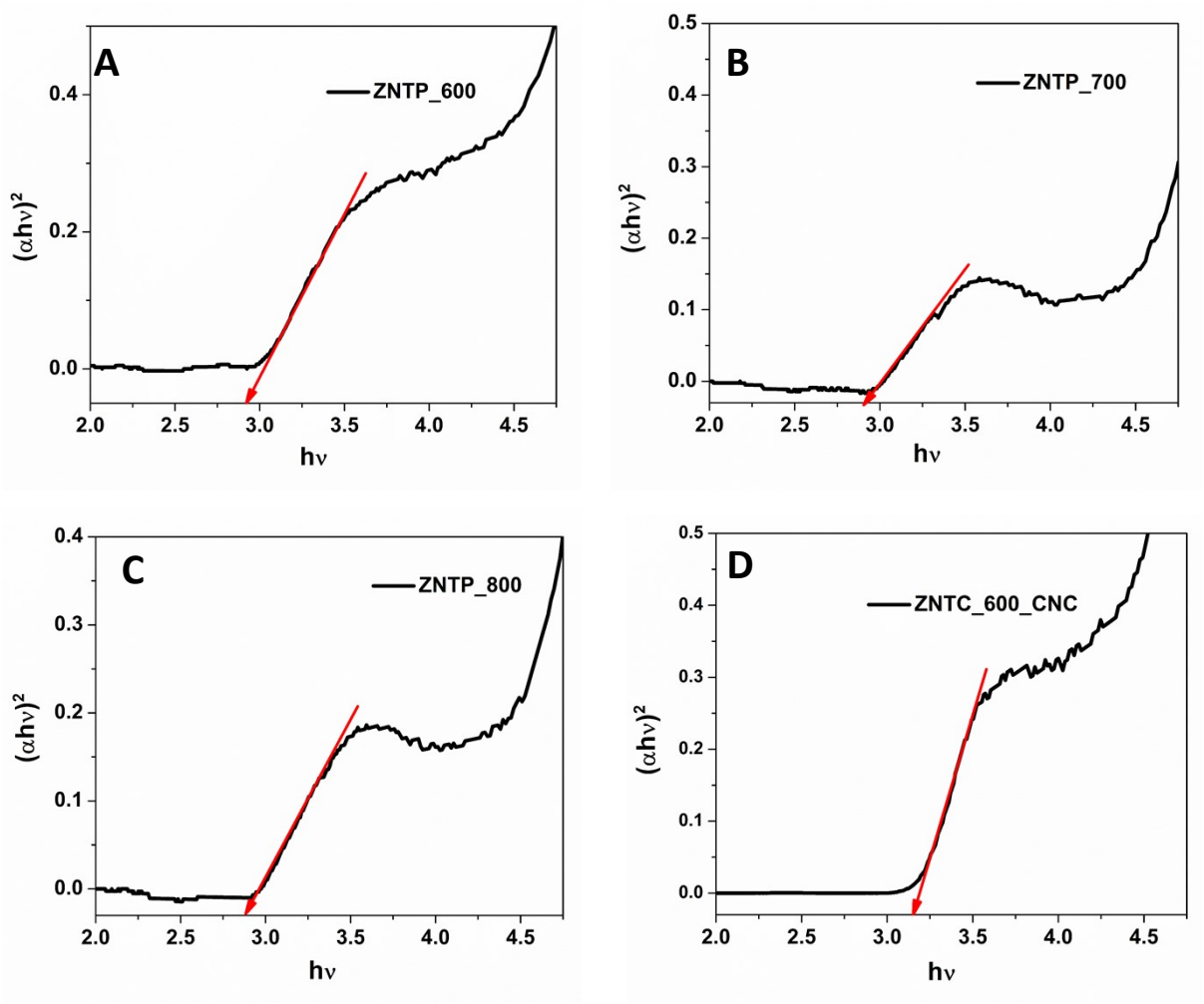

Fig S5: Band gap of polyethylene doped zinc titanates calcined at different temperatures (A) ZNTP_600 (B) ZNTP_700 (C) ZNTP_800 (D) Band gap of the composite ZNTC_600_CNC

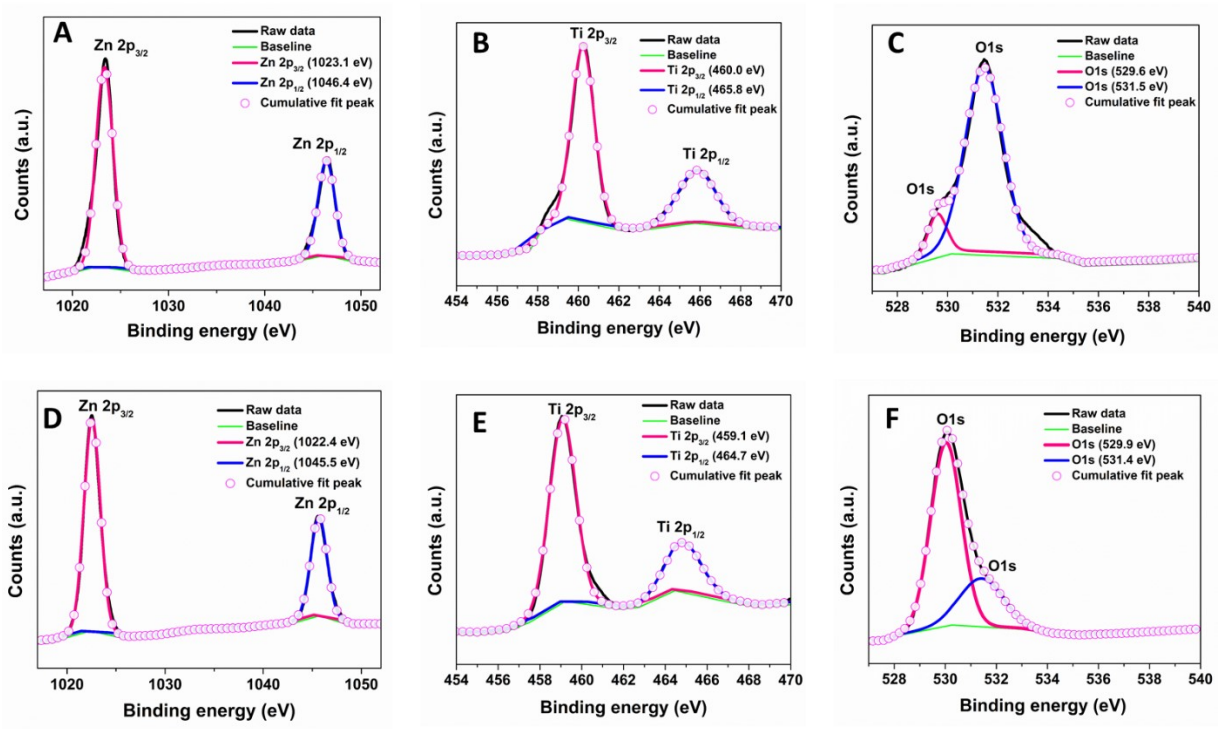

Fig S6: High-resolution scans of (A) Zn 2p, (B) Ti 2p, and (C) O1s core level spectra of ZNTC_600 and High-resolution scans of (D) Zn 2p, (E) Ti 2p, and (F) O1s core level spectra of ZNTP_600

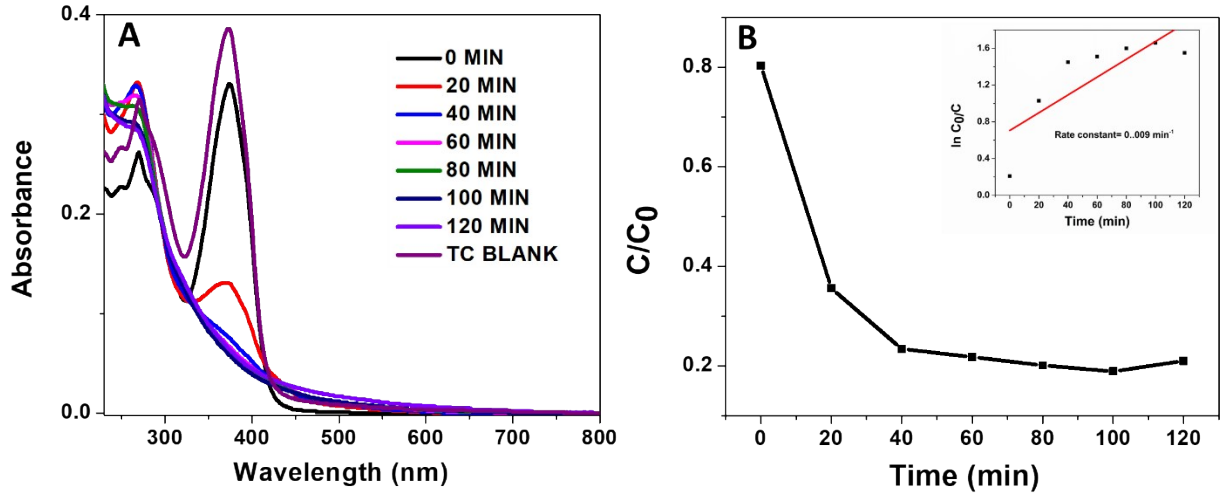

Fig S7: (A) UV-Vis absorbance variations of TC-HC for 120 minutes in the presence of light and ZNTC_600_CNC in normal (tap) water; (B) Dynamic curves (plots of $\ln(C_0/C)$ versus time in inset)

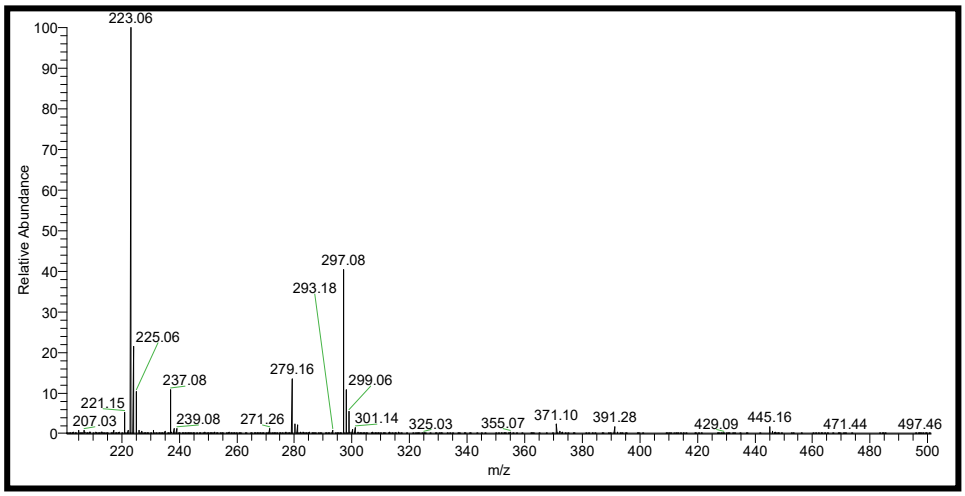

Fig S8: Chromatogram showing separation of photodegradation of the TC-HC under light illumination in presence of ZNTC_600 photocatalyst.

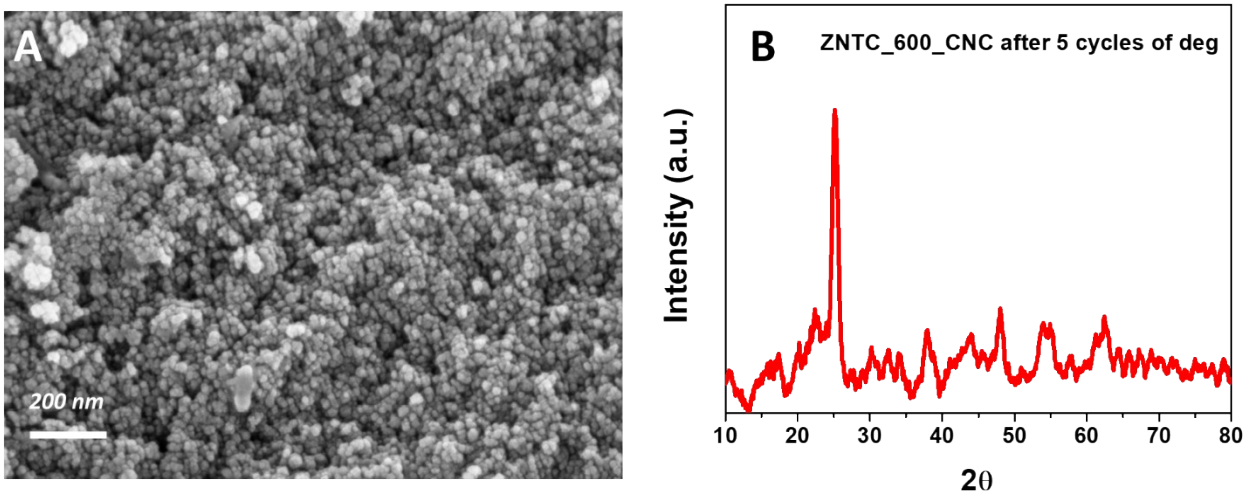

Fig S9: (A) SEM Images and (B) XRD diffractogram of catalyst ZNTC_600_CNC after being used in the degradation of TC-HC under light illumination for 5 cycles.