Electronic Supplementary Material (ESI) for CrystEngComm

Supporting information for

Growth of hierarchical TiO_2 nanostructures on anatase nanofibers and their application in photocatalytic activity

Xianhui Meng, [a]Dong-Wook Shin,[b] Seong Man Yu,[b] Jae Hun Jung, [a] Hong Ik Kim, [b] Hyun Myuong Lee,[a]Young-Ho Han,[b] Vasant Bhoraskar [a,c] and Ji-Beom Yoo *[a,b]

[a] School of Advanced Materials Science & Engineering(BK21), Sungkyunkwan University, Suwon 440-476, Korea
[b] SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University, Suwon 440-476, Korea
[c] Department of Physics, University of Pune, Pune, India

*Corresponding author.

E-mail:jbyoo@skku.edu

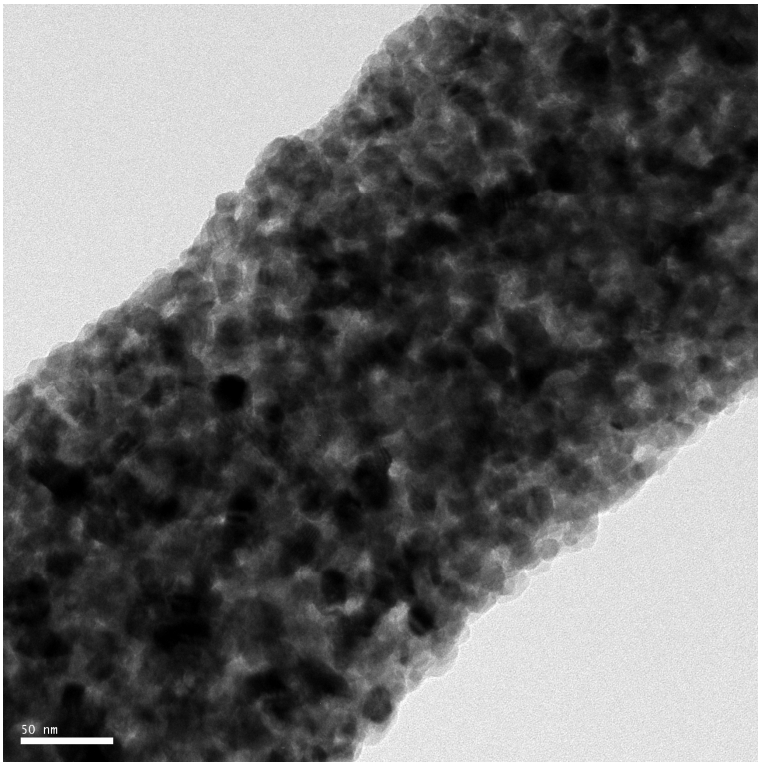

Fig. S1 (1) HR-TEM image for pure anatase nanofibers.

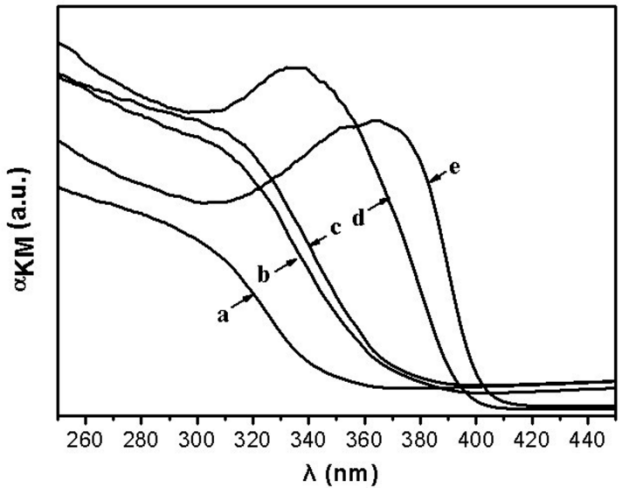

Fig. S2 (1) equivalent absorption coefficients (α_{KM}) for pure anatase nanofibers and hierarchical structure. These hierarchical nanostructures were prepared at 150 °C for 2.5 hrs using titanium isopropoxide solutions of different weight: (a) pure anatase nanofibers, (b) 0.4 g, (c) 0.5 g, (d) 0.7 g and (e) 1.0 g.

(a) (b)

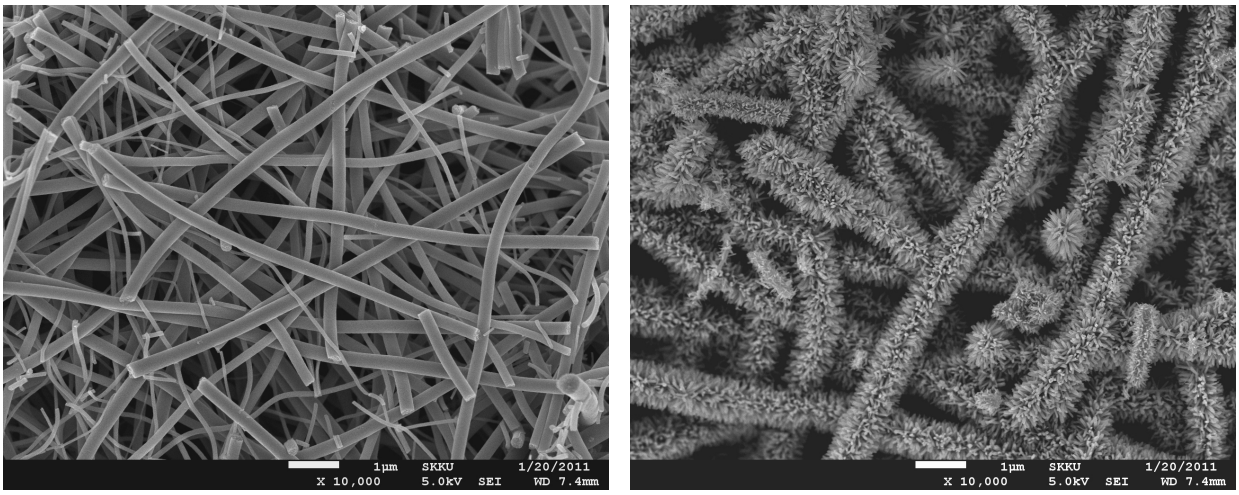

Fig. S3 SEM images of the samples for BET measurement and photocatalyst ability. (a) nanofibers and (b) TiO_2 hierarchical nanostructures.

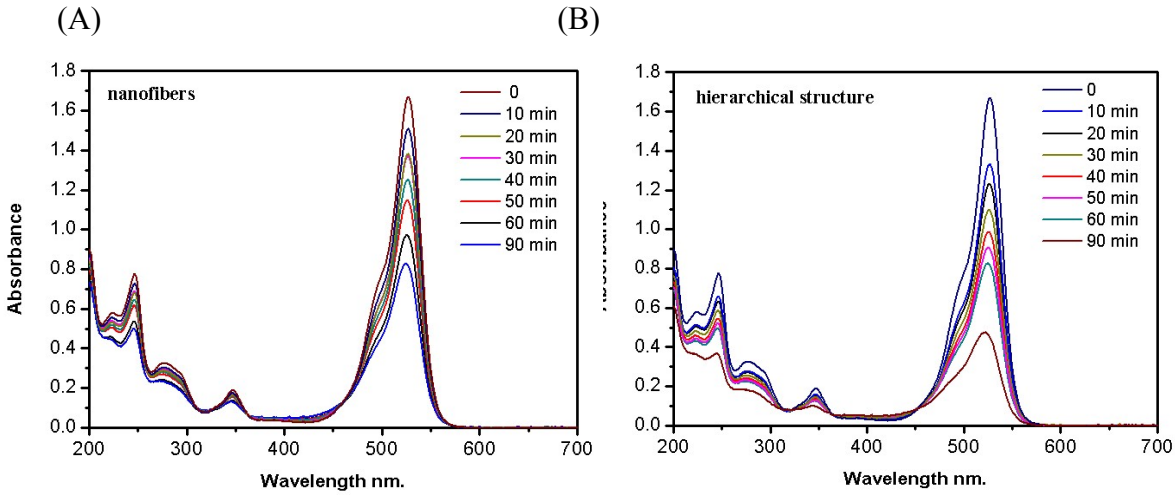

Fig. S4 The UV-vis absorbance spectra of photocatalytic degradation of Rhdomine -6G solutions after different periods of time over (A) anatase nanofibers and (B) hierarchical TiO2.