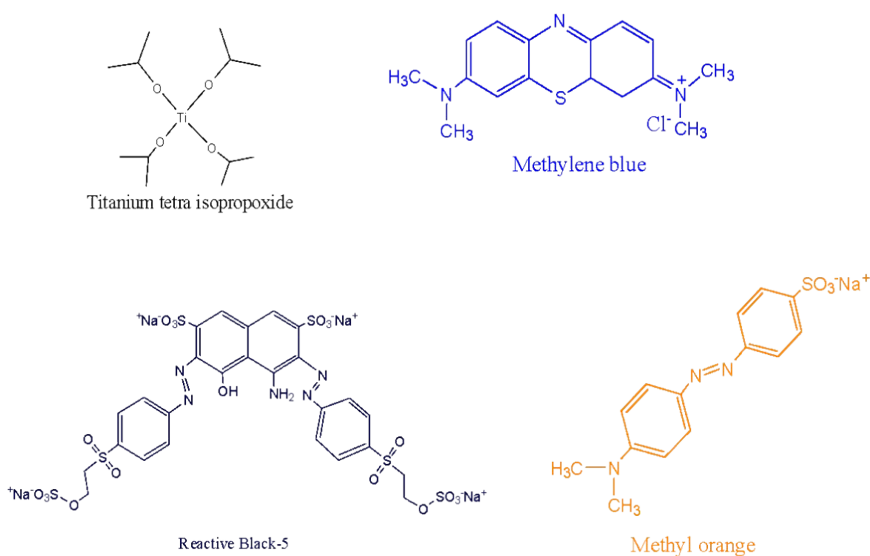


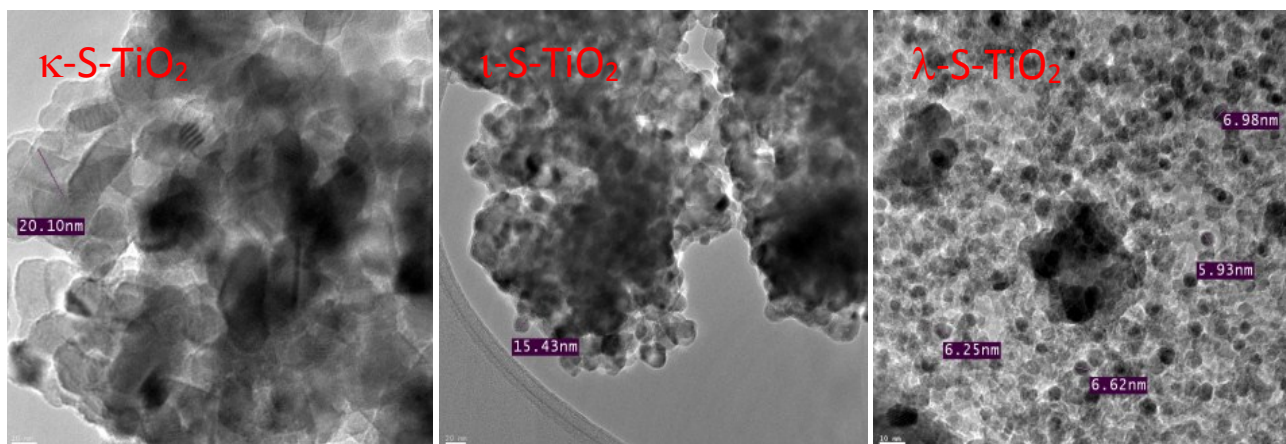
## Electronic Supporting Information (ESI)

### Fabrication of carbon and sulphur-doped nanocomposites with seaweed polymer carrageenan as efficient catalyst for rapid degradation of dye pollutants using solar concentrator

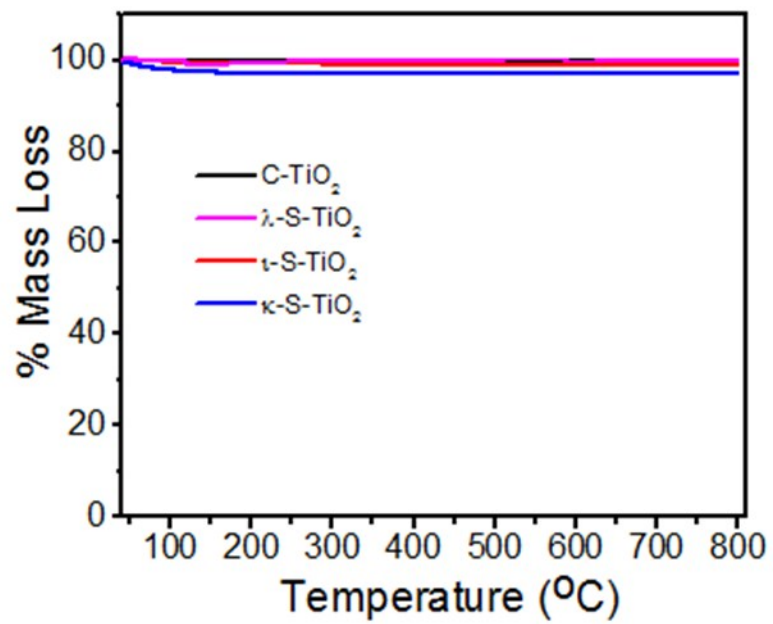
Jai Prakash Chaudhary,<sup>a,b</sup> Ashesh Mahto,<sup>b,c</sup> Nilesh Vadodariya,<sup>a,b</sup> Faisal Kholiya,<sup>a</sup> Subarna Maiti,<sup>a</sup> Sanna Kotrappanavar Nataraj,<sup>c\*</sup> Ramavatar Meena,<sup>a,b\*</sup>



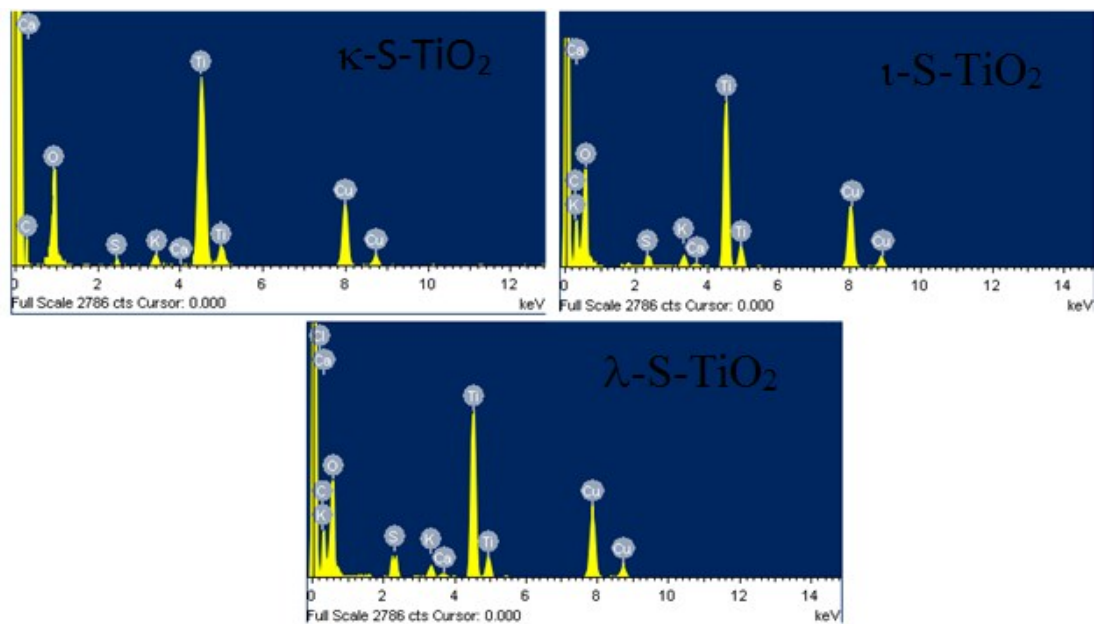
**Figure S1.** Molecular formula of titania precursor and dyes used in the current study (MB, RB-5, MO)



**Figure S2.** TEM images of composite TiO<sub>2</sub> nanocomposite mass prepared from (a) *kappa* (b) *iota* and (c) *lambda* carrageenans referred as  $\kappa$ -S-TiO<sub>2</sub>,  $i$ -S-TiO<sub>2</sub> and  $\lambda$ -S-TiO<sub>2</sub>, respectively.



**Figure S3.** Thermo gravimetric analysis of C-TiO<sub>2</sub> and TiO<sub>2</sub> nanocomposite prepared from (a) *kappa* (b) *iota* and (c) *lambda* carrageenans referred as κ-S-TiO<sub>2</sub>, ι-S-TiO<sub>2</sub> and λ-S-TiO<sub>2</sub> respectively



**Figure S4.** TEM-EDX images of various TiO<sub>2</sub> prepared in present study

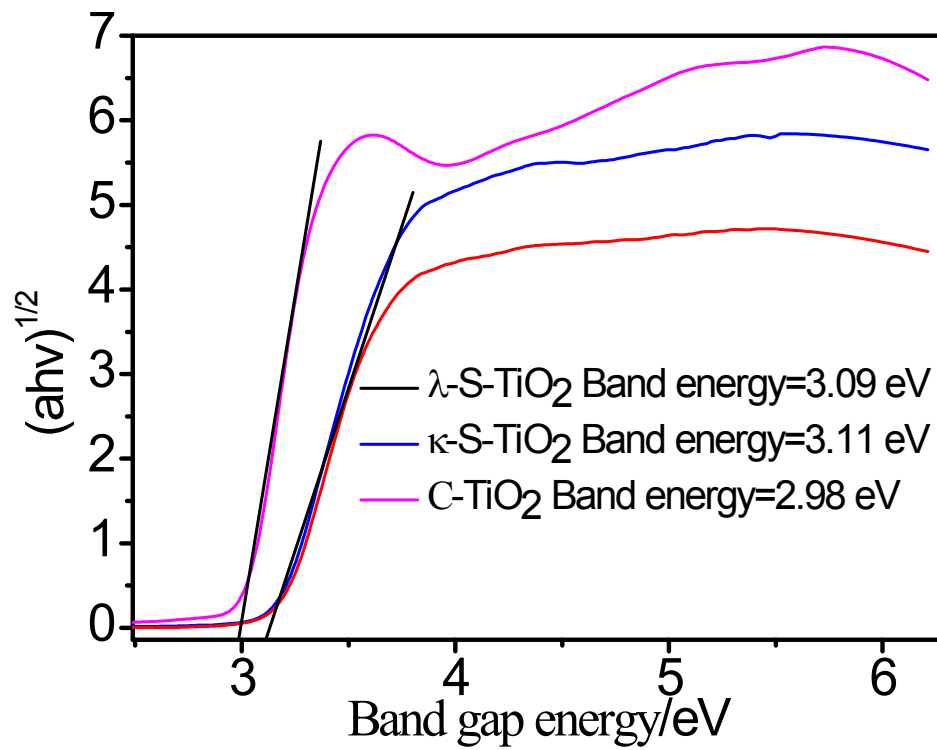


Figure S5. Kubelka-Munk function versus light energy for each materials