

Electronic Supplementary Information

Fabrication of Black TiO₂ Through Microwave Heating for Visible Light-driven Photocatalytic Degradation of Rhodamine 6G

Riska Rachmantyo,^{‡ab} Afif Akmal Afkauni,^{‡c} Ricky Reinaldo,^a Lei Zhang,^d Arramel Arramel,^c
Muhammad Danang Birowosuto,^e Arie Wibowo^{*af} and Hermawan Judawisastra^{*a}

^aMaterials Science and Engineering Research Group, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung 40132, West Java, Indonesia.

^bDoctoral Program of Materials Science and Engineering, Faculty of Mechanical and Aerospace Engineering, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung 40132, West Java, Indonesia.

^cNano Center Indonesia, Jalan Raya PUSPITEK, South Tangerang, Banten 15314, Indonesia.

^dDepartment of Physics, National University of Singapore, Singapore 117551, Singapore.

^eŁukasiewicz Research Network—PORT Polish Center for Technology Development, Stabłowicka 147, 54-066, Wrocław, Poland.

^fResearch Center for Nanoscience and Nanotechnology, Institut Teknologi Bandung, Ganesha 10, Bandung 40132, West Java, Indonesia.

‡ These authors contributed equally.

*Corresponding authors: hermawan.judawisastra@itb.ac.id ; ariewibowo@itb.ac.id

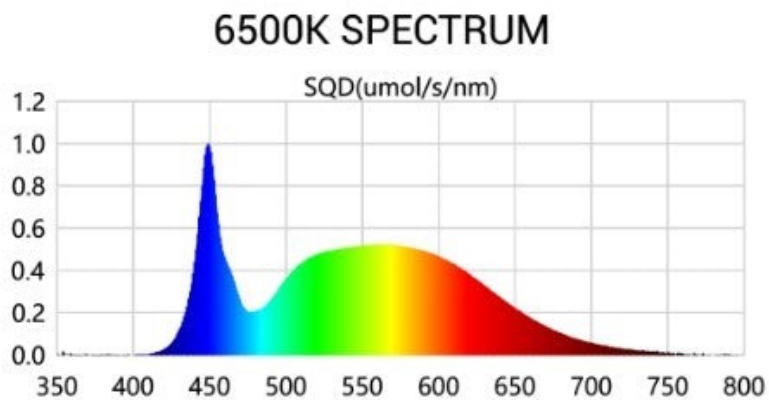


Fig. S1 LED light spectrum with 6500K colour¹.

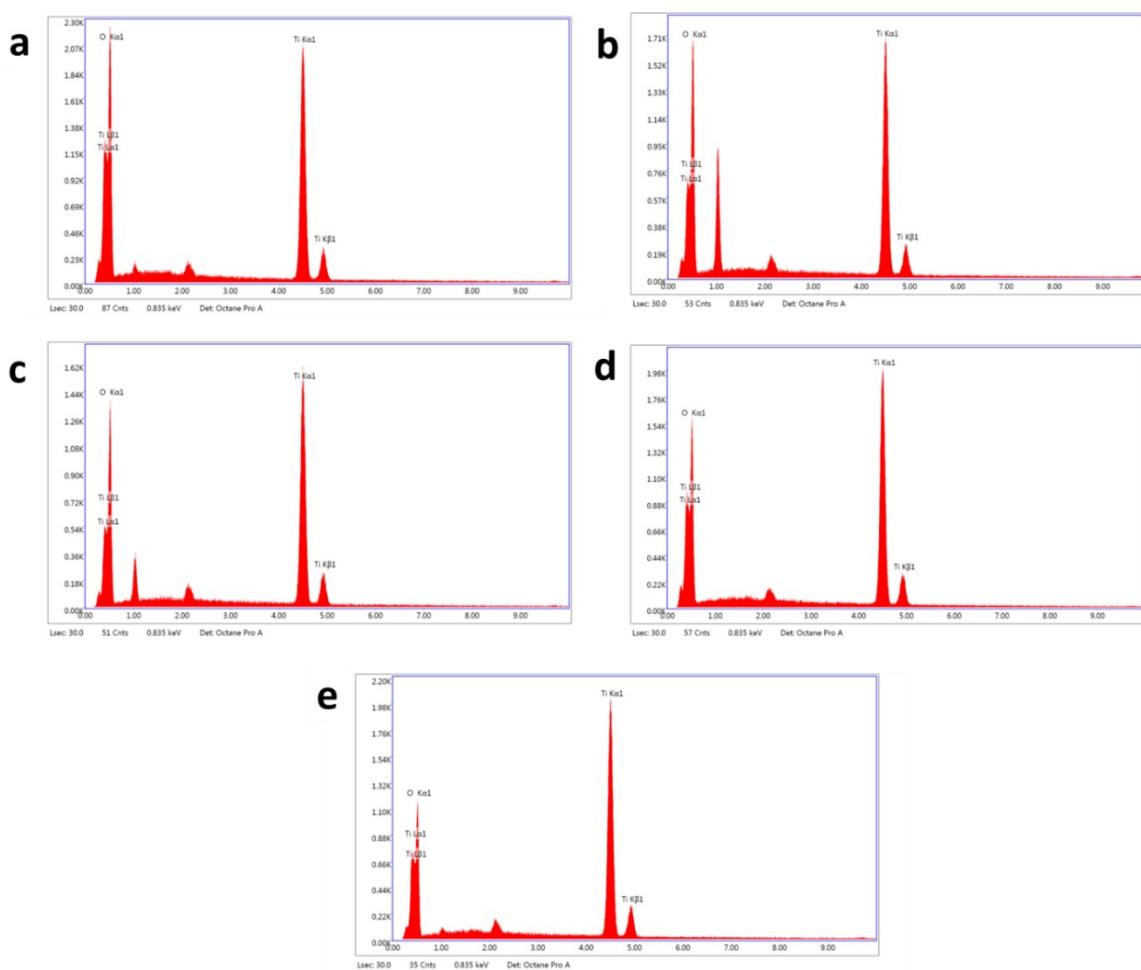


Fig. S2 EDS spectra of (a) P25, (b) T-20, (c) T-30, (d) T-40 and (e) T-50 samples.

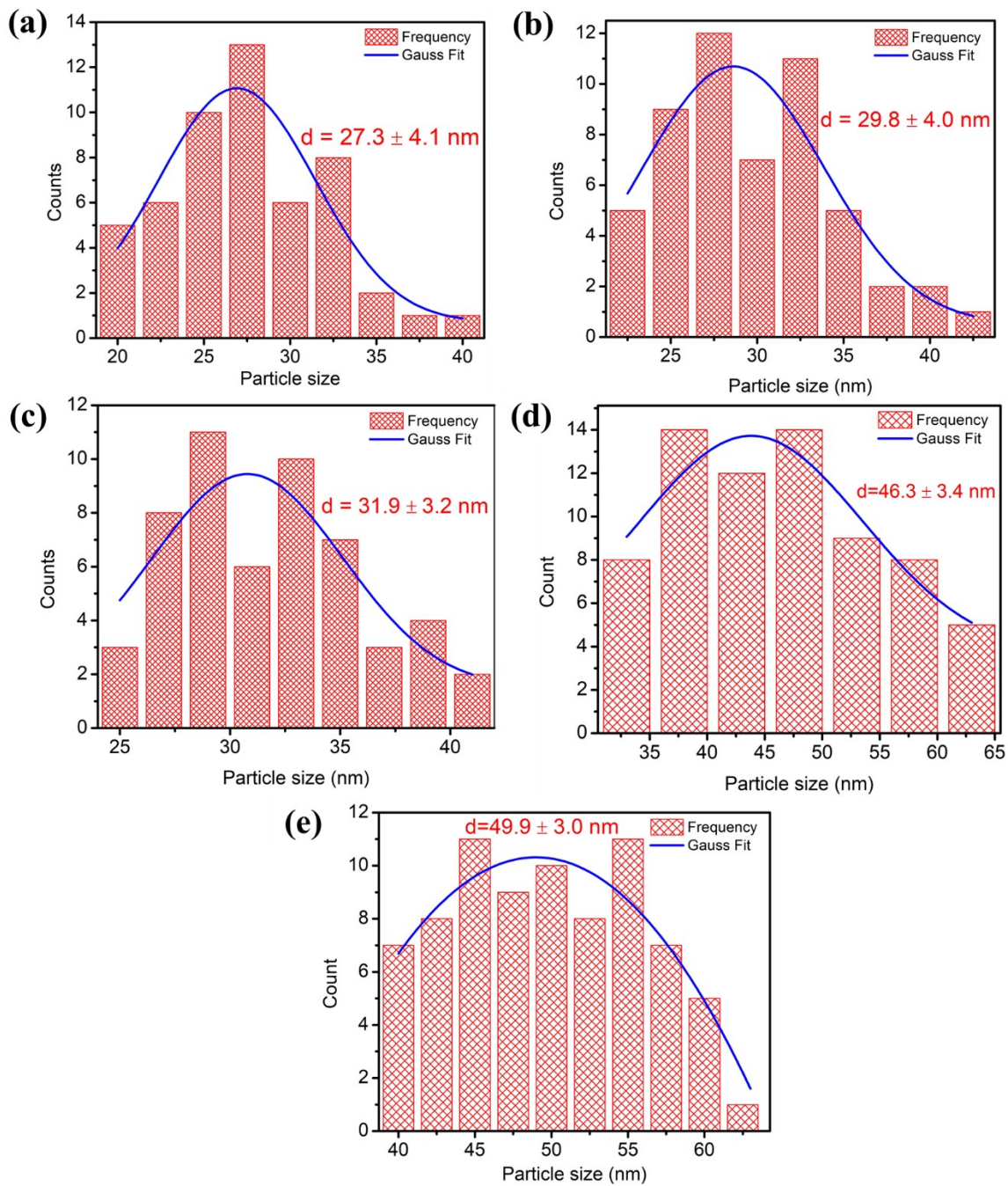


Fig. S3 Particle size distribution based on SEM images of (a) P25, (b) T-20, (c) T-30, (d) T-40 and (e) T-50 samples.

References

- 1 6500K vs 2700K; what does the Kelvin number actually mean? - The 2Hr Aquarist, <https://www.2hraquarist.com/blogs/light-3pillars/k-rating>, (accessed 16 July 2024)