

Supplementary

Core/shell nitrogen-doped $\text{TiO}_2@\text{SiO}_2$ nano-catalyst as an additive in photocatalytic paint for gaseous acetaldehyde decomposition

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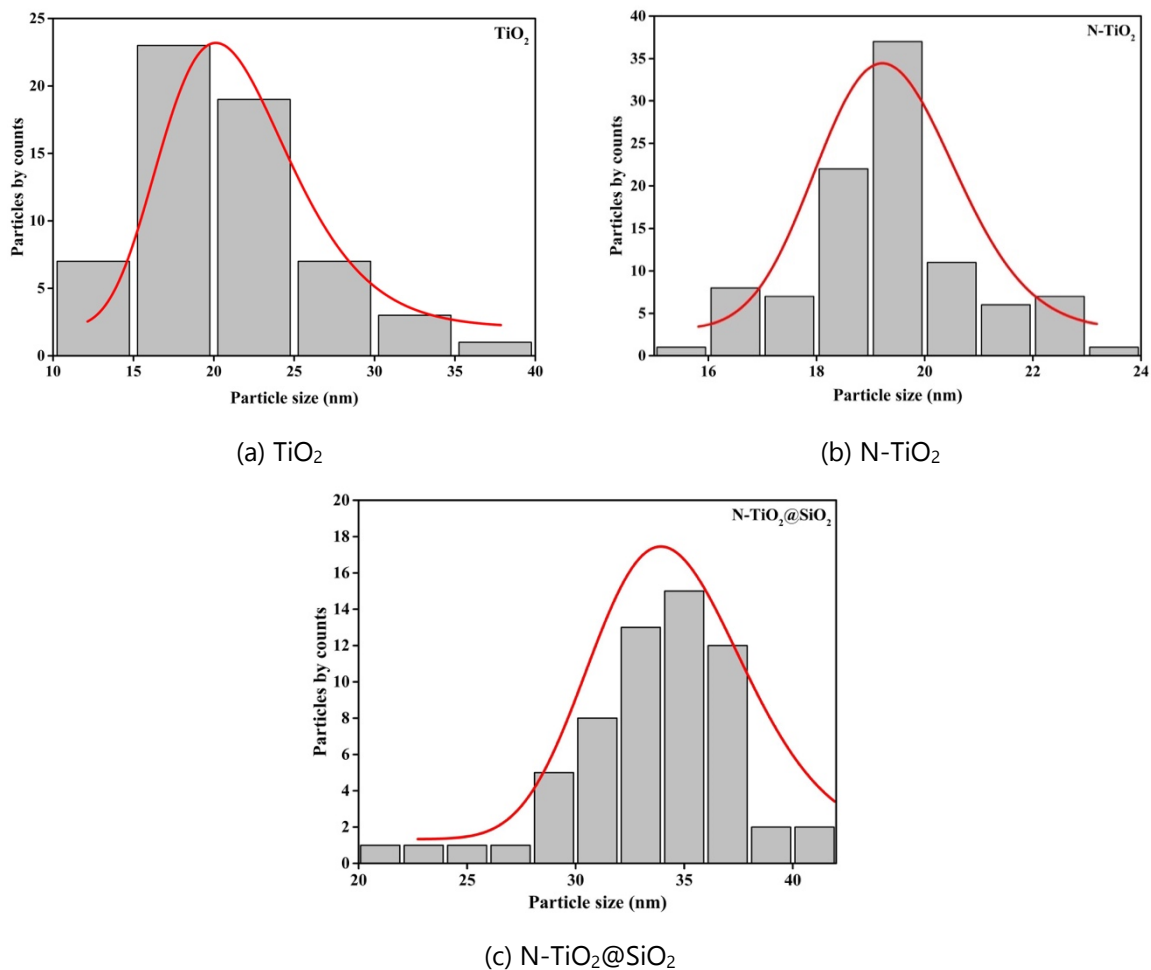
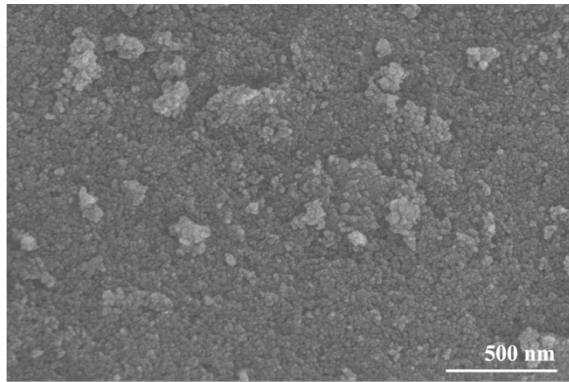
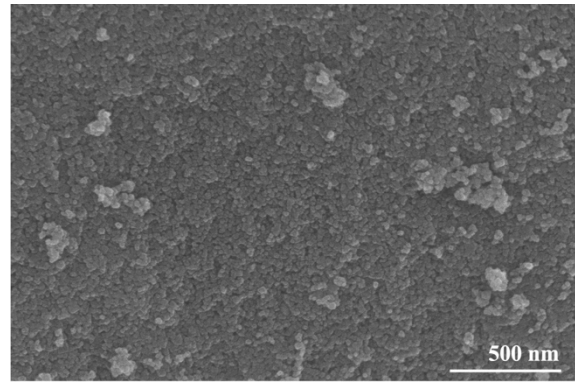


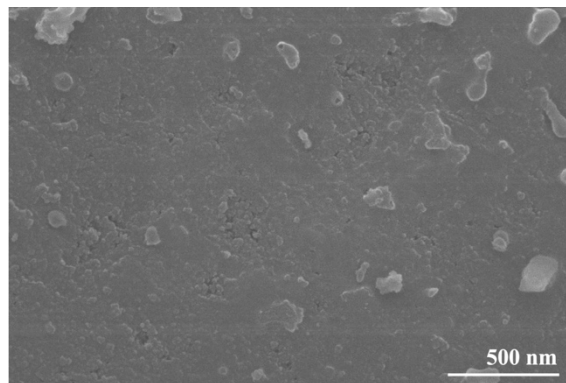
Figure 1. The particle size distributions of (a) TiO_2 , (b) N-TiO_2 , and (c) $\text{N-TiO}_2@\text{SiO}_2$.



(a) TiO_2

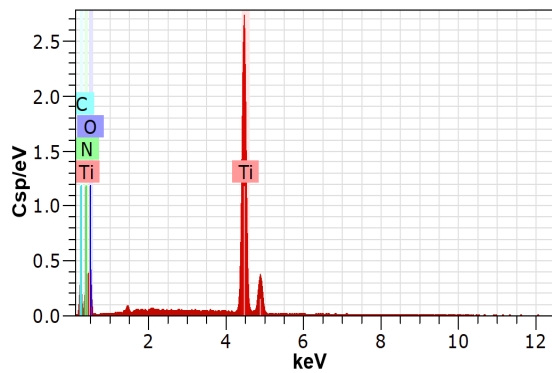


(b) N-TiO_2

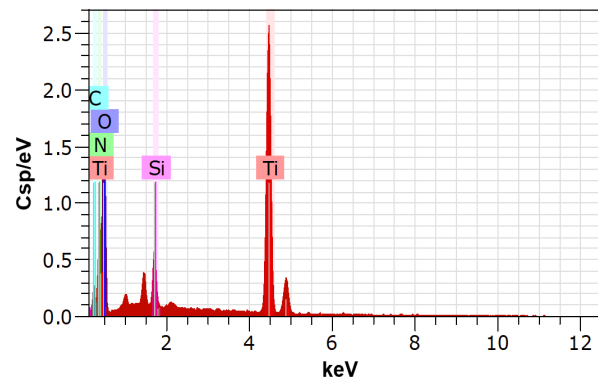


(c) $\text{N-TiO}_2@\text{SiO}_2$

Figure 2. SEM images of (a) TiO_2 , (b) N-TiO_2 , and (c) $\text{N-TiO}_2@\text{SiO}_2$.



(a) N-TiO_2



(b) $\text{N-TiO}_2@\text{SiO}_2$ core/shell

Figure 3. The EDX spectrum of (a) N-TiO_2 and (b) $\text{N-TiO}_2@\text{SiO}_2$ core/shell.