

Appendix

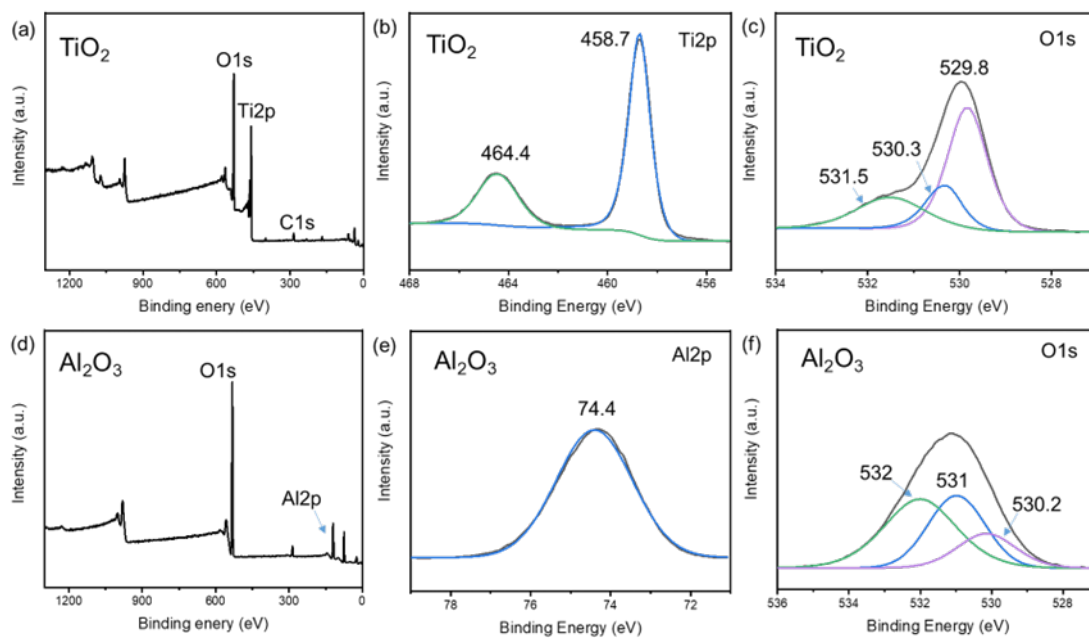


Fig. S1 XPS spectra of TiO₂ (a), Ti 2p (b), O 1s (c); and XPS spectra of Al₂O₃ (d), Al 2p (e), O 1s (f).

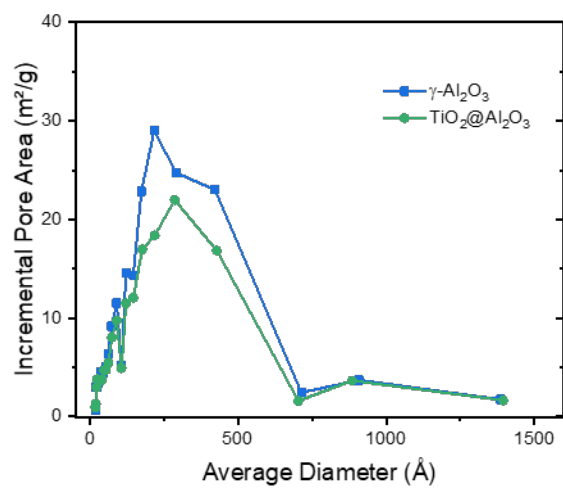


Fig. S2 The incremental pore area of γ -Al₂O₃ and TiO₂@Al₂O₃.

Table S1 The XRF results of urea solid from power plant.

Elements	XRF value	Concentration (mg/kg)
Al	0.0629	2.64
Ca	0.0230	0.97
Cu	0.0159	0.67
Fe	0.0185	0.78
Na	0.0062	0.26
Zr	0.0264	1.11

Table S2 The bond length (Å) after model optimization of TiO₂@Al₂O₃ and TiO₂.

TiO ₂ @Al ₂ O ₃		TiO ₂			
Chemical bond	Bond length (Å)	Chemical bond	Bond length (Å)	Chemical bond	Bond length (Å)
Al-O1	1.82	Ti1-O1	1.82	Ti-O1	1.85
Al-O2	1.91	Ti2-O2	1.94	Ti-O2	1.98
Al-O3	1.85	Ti3-O2	2.02	Ti-O3	2.03
Al-O4	1.91	Ti4-O3	1.94	Ti-O4	1.97
Al-O5	1.82	Ti5-O4	1.93	Ti-O5	1.81