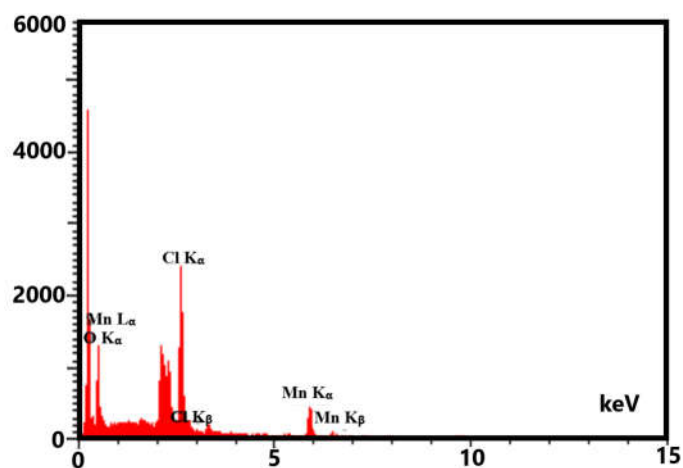


Supplementary Information

Efficient photocatalytic degradation of gaseous benzene and toluene over novel PIL@TiO₂/m-GO composites



Quantitative Results

Elt	Line	W%	A%
C	K α	57.74	71.15
O	K α	23.31	21.57
Cl	K α	14.75	6.16
Mn	ka	4.2	1.13

Figure S1. EDX of m-GO.

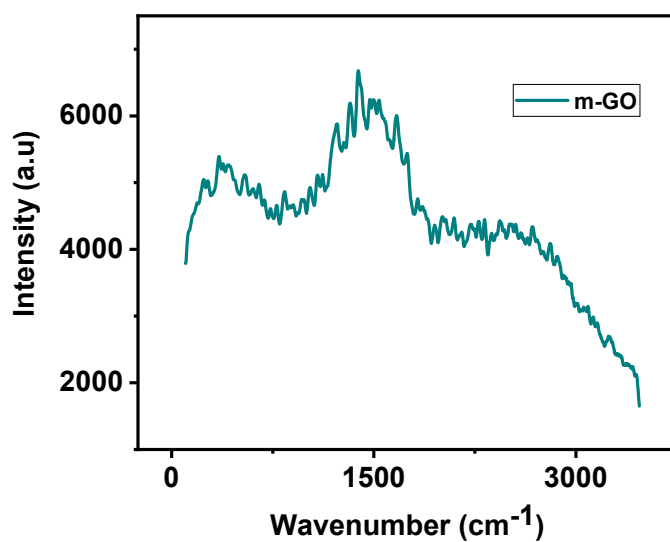


Figure S2. Raman spectrum of m-GO.

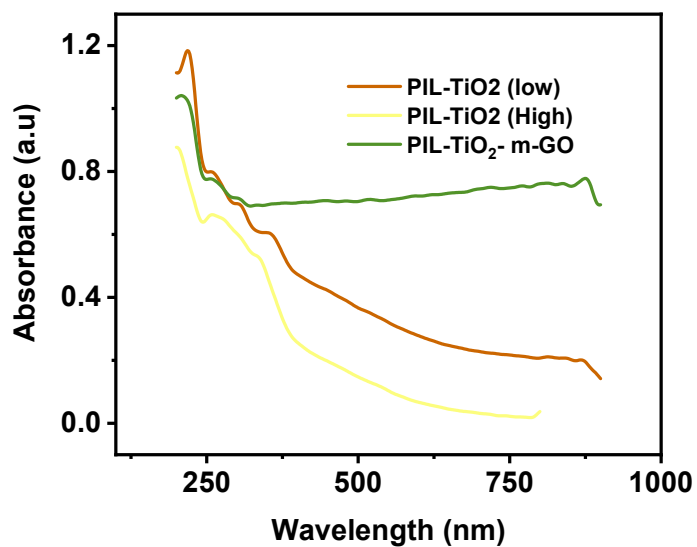


Figure S3. UV- Vis DRS spectra of PIL(high)@TiO₂, PIL(low)@TiO₂ and PIL(low)@TiO₂@m-GO

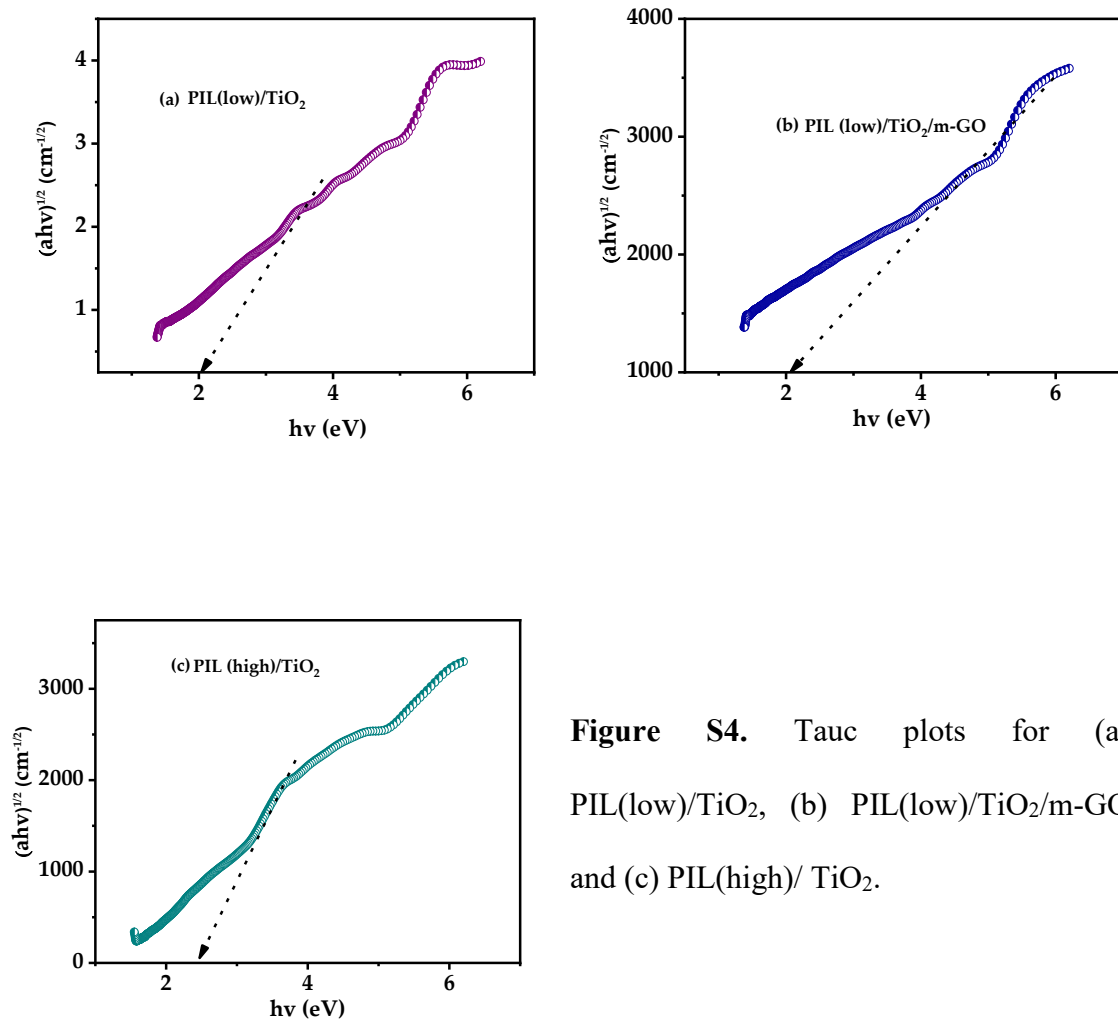


Figure S4. Tauc plots for (a) PIL(low)/TiO₂, (b) PIL(low)/TiO₂/m-GO and (c) PIL(high)/TiO₂.

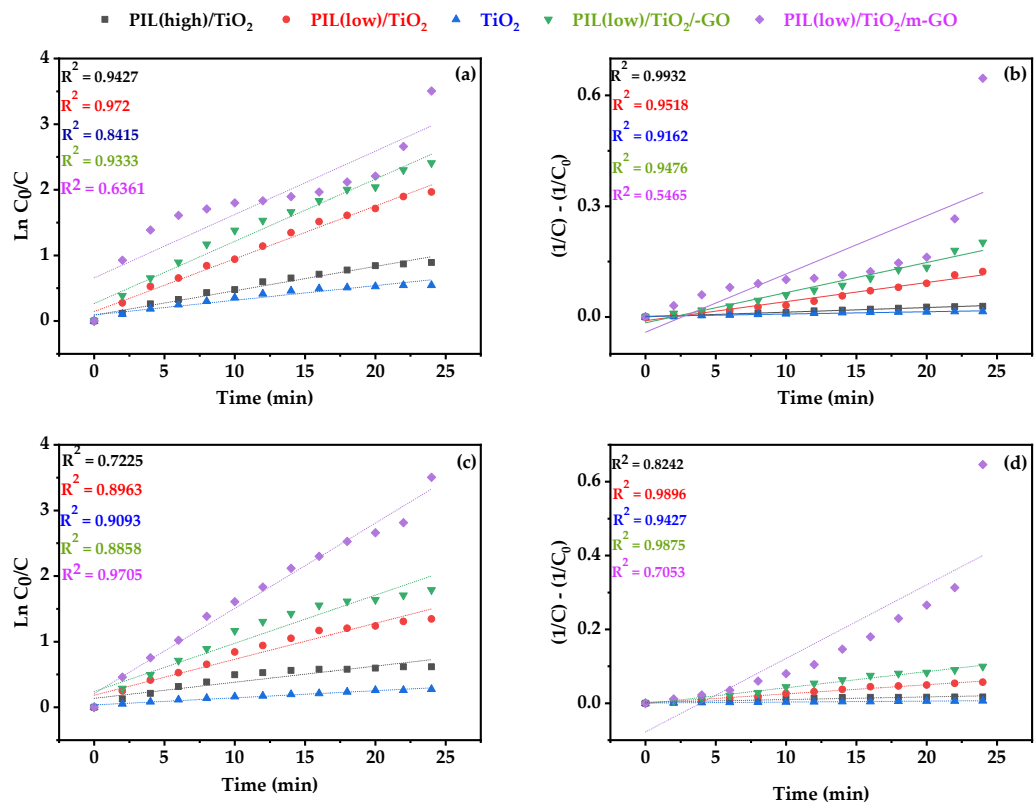


Figure S5. The plotted kinetics of first-order and second-order model for Benzene (a and b) and Toluene (c and d).

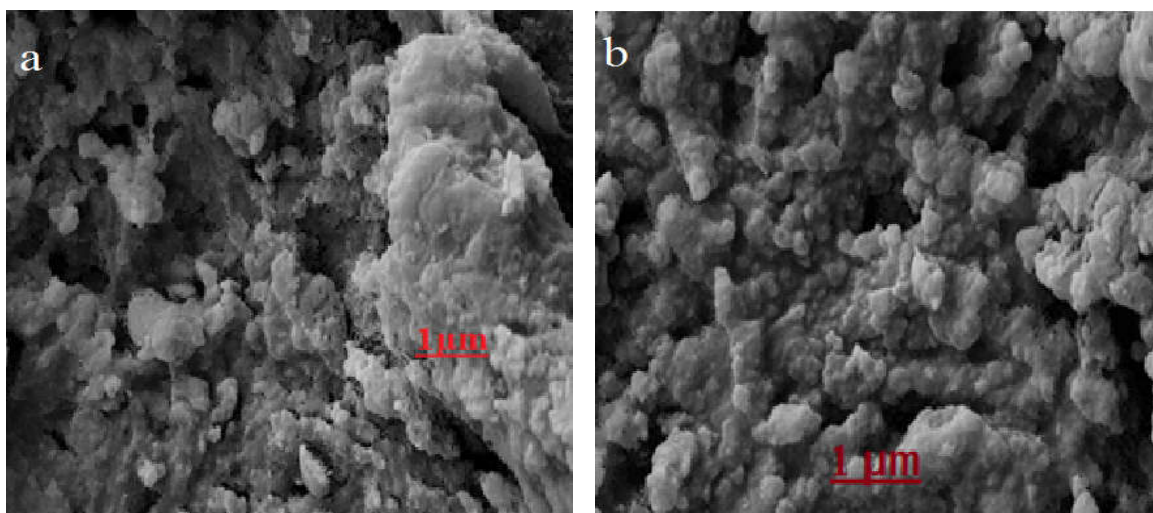


Figure S6. FESEM pictures with different magnifications of PIL(low)@TiO₂@m-GO after the photocatalytic reaction.

For the UV light photocatalytic activity test, an 8-W UV lamp (UV-C 2.4W, Philips) was used, UV lamp with an intensity of 3.0 mW/cm². In fact, the thin-film photocatalysts contribute to the apparent surface area of 50 cm². As the matter of fact, the vessel was placed under a UV lamp (8 W, OSRAM, Italy),