Carbon nitride quantum dots modified TiO$_2$ inverse opal photonic crystal for solving indoor VOCs pollution

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Figure S1. SEM image of (a) PS template (b) TiO₂ IO

Table S1. The comparison of the photocatalytic degradation efficiencies of toluene into CO₂ (ηₜ, toluene) over different samples

| Concentration (ppm)     | TCN IO | TiO₂ IO | P25   | bulk-TiO₂ |
|-------------------------|--------|---------|-------|-----------|
| Initial CO₂             | 498    | 487     | 513   | 440       |
| Final CO₂               | 4675   | 4223    | 2156  | 3131      |
| Generated CO₂           | 4177   | 3736    | 1643  | 2691      |
| Photodegraded toluene   | 597    | 534     | 235   | 384       |
| Initial toluene         | 643    | 649     | 636   | 639       |
| ηₜ, toluene (%)         | 93     | 82      | 37    | 60        |

Figure S2. X-ray diffraction (XRD) of TCN IO
Figure S3. Reactor device