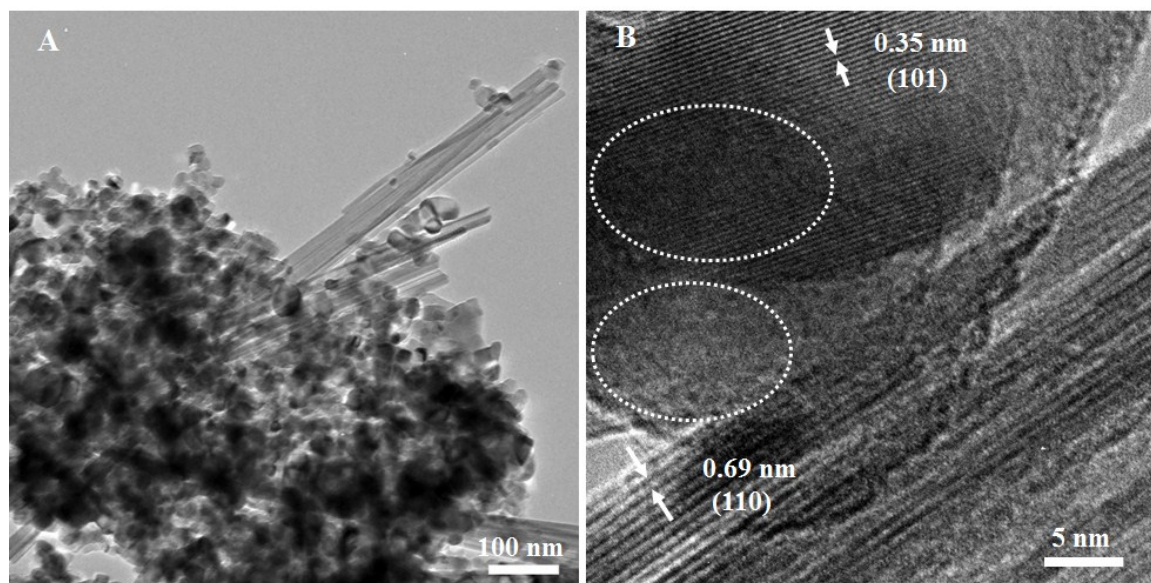
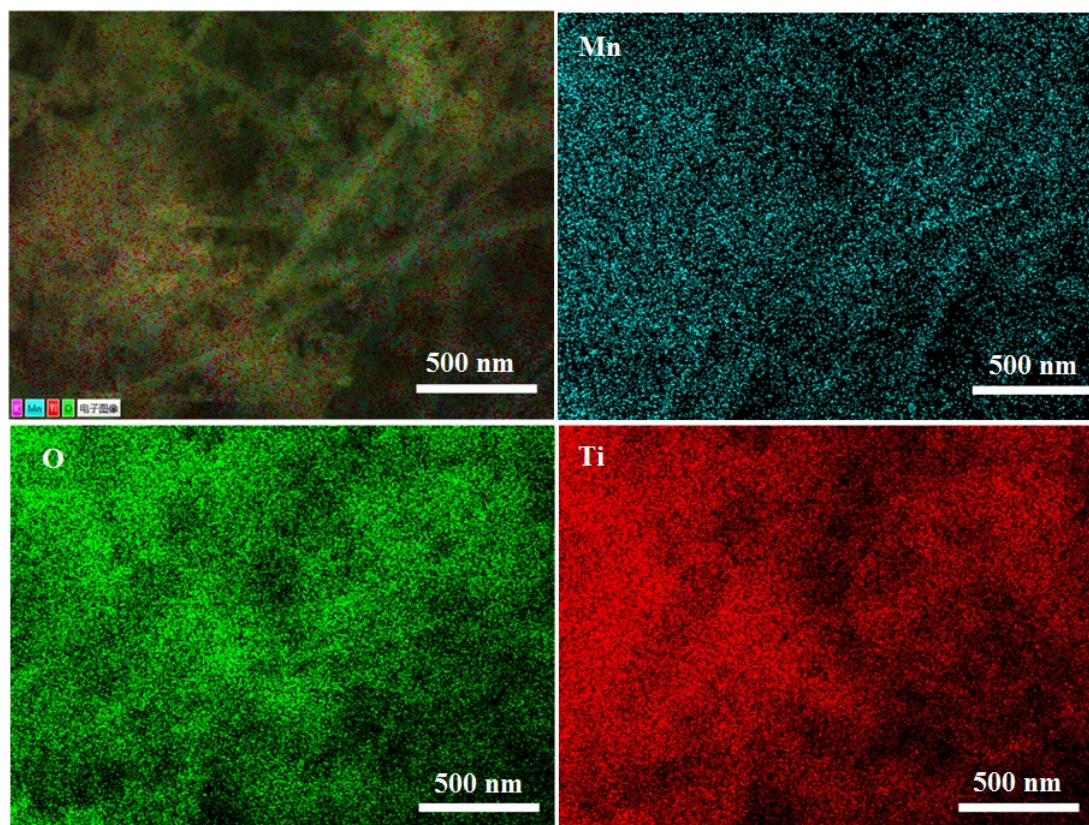


**Highly Efficient UV-Vis-Infrared Catalytic Purification of Benzene on  $\text{CeMn}_x\text{O}_y/\text{TiO}_2$   
Nanocomposite Caused by its High Thermocatalytic Activity and Strong Absorption in Full Solar  
Spectrum Region**

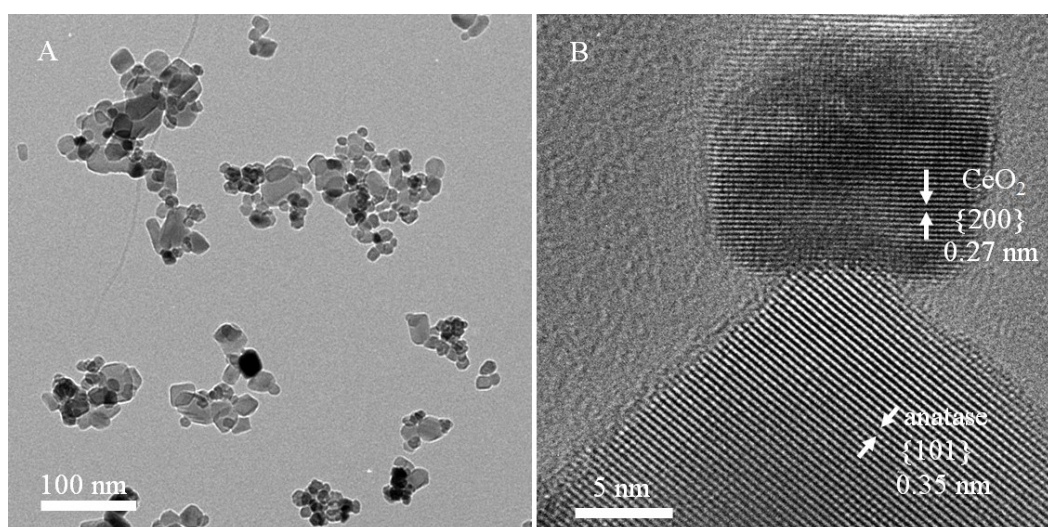
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**Figure S1.** TEM (A) and HRTEM (B) images of the  $\text{MnO}_x/\text{TiO}_2$  sample: the obscure area(white dotted circles) in HRTEM (B) indicates amorphous manganese oxide..

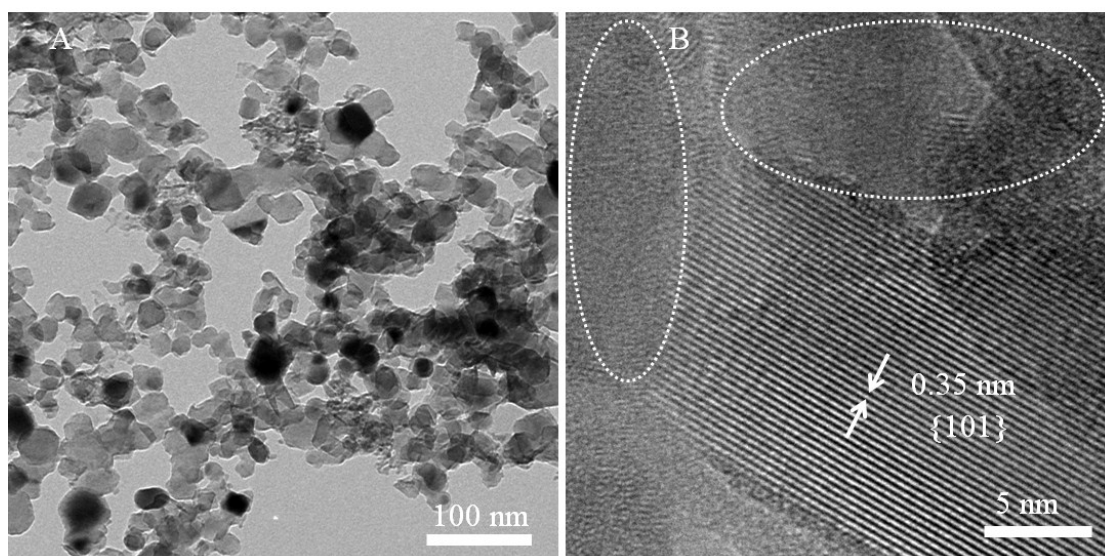


**Figure S2.** EDX element mapping of the  $\text{MnO}_x/\text{TiO}_2$  sample.

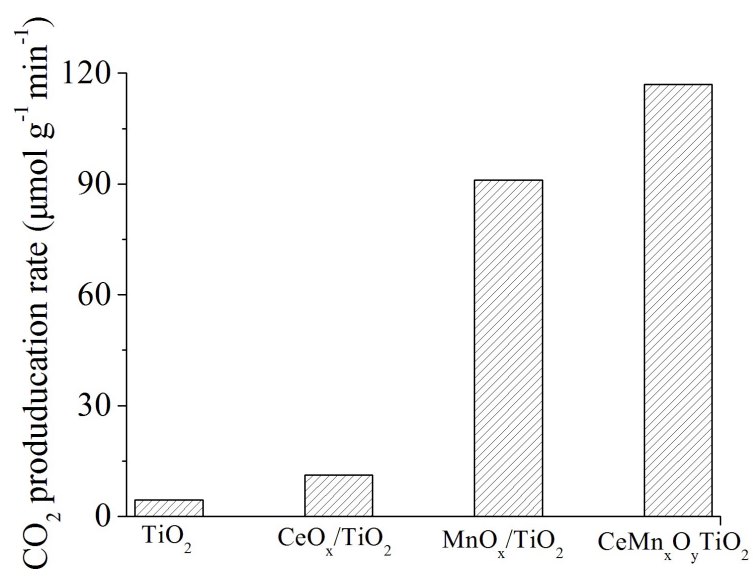


**Figure S3.** TEM (A) and HRTEM (B) images of the  $\text{CeO}_2/\text{TiO}_2$  sample.





**Figure S4.** TEM (A) and HRTEM (B) images of the used  $\text{CeMn}_x\text{O}_y/\text{TiO}_2$  sample after the catalytic durability test: the obscure area (white dotted circles) in HRTEM (B) indicates amorphous cerium manganese oxide.



**Figure S5.** The initial  $\text{CO}_2$  production rate of the samples benzene oxidation under the irradiation of the Xe lamp.