

Electronic Supplementary Information

Titanium dioxide functionalized silicon carbide phases as heterogeneous epoxidation catalysts

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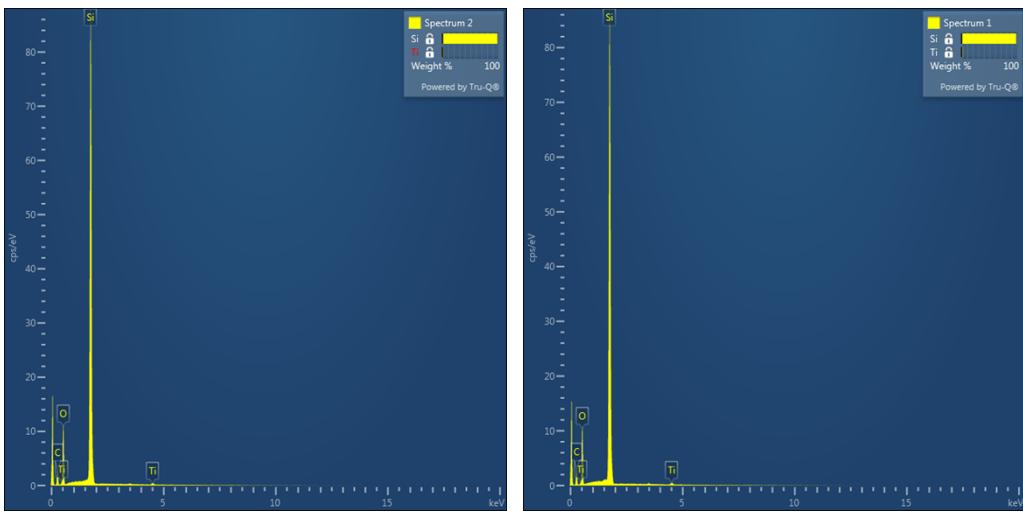


Figure S1 EDX spectra of the material $\text{TiO}_2@\text{SiC}/\text{SiO}_2\text{-p}$

Table S1 Ti and Si contents of material $\text{TiO}_2@\text{SiC}/\text{SiO}_2\text{-p}$ measured by EDX

Spectrum Label	Spectrum 1	Spectrum 2
Si	98.83	99.02
Ti	1.17	0.98
Total	100.00	100.00
Statistics	Si	Ti
Max	99.02	1.17
Min	98.83	0.98
Average	98.93	1.07
Standard Deviation	0.13	0.13

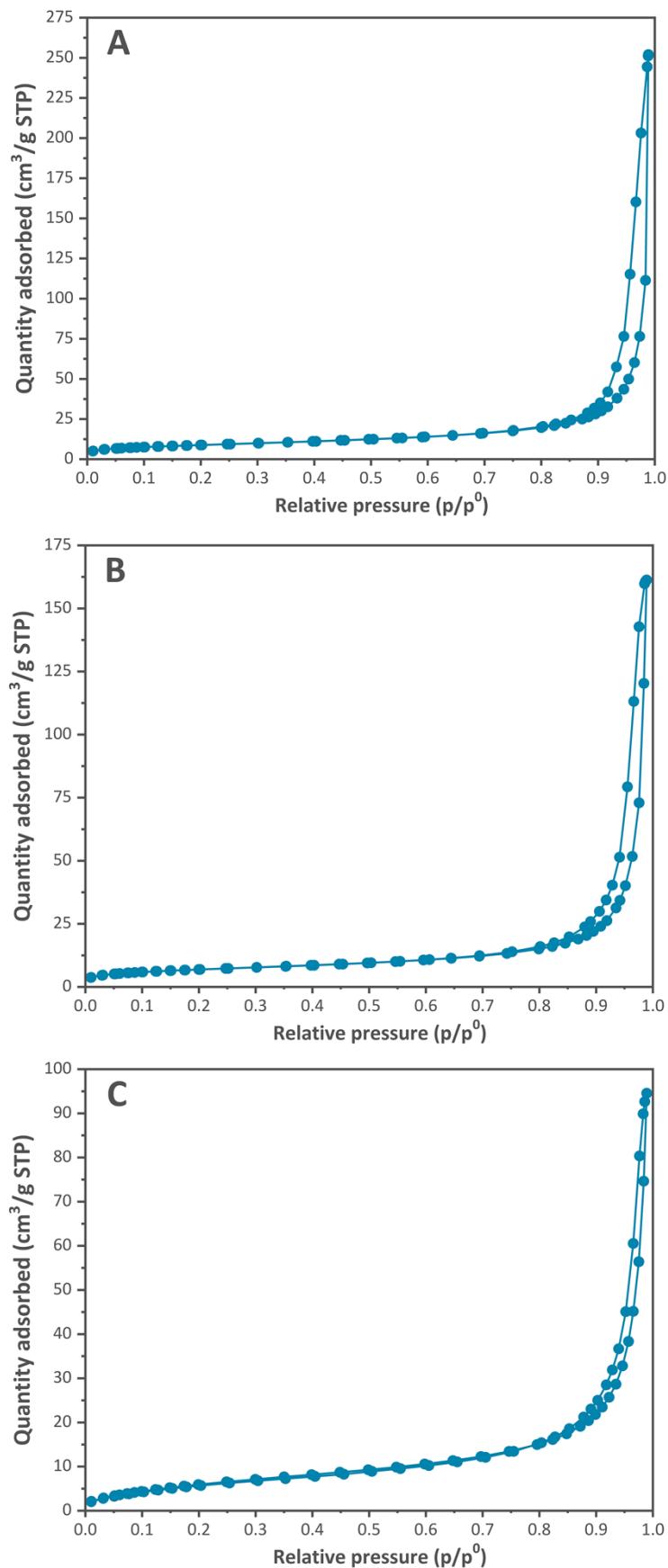


Figure S2: Nitrogen sorption isotherms of the materials (A) SiC, (B) SiC/SiO₂ and (C) TiO₂@SiC/SiO₂-p

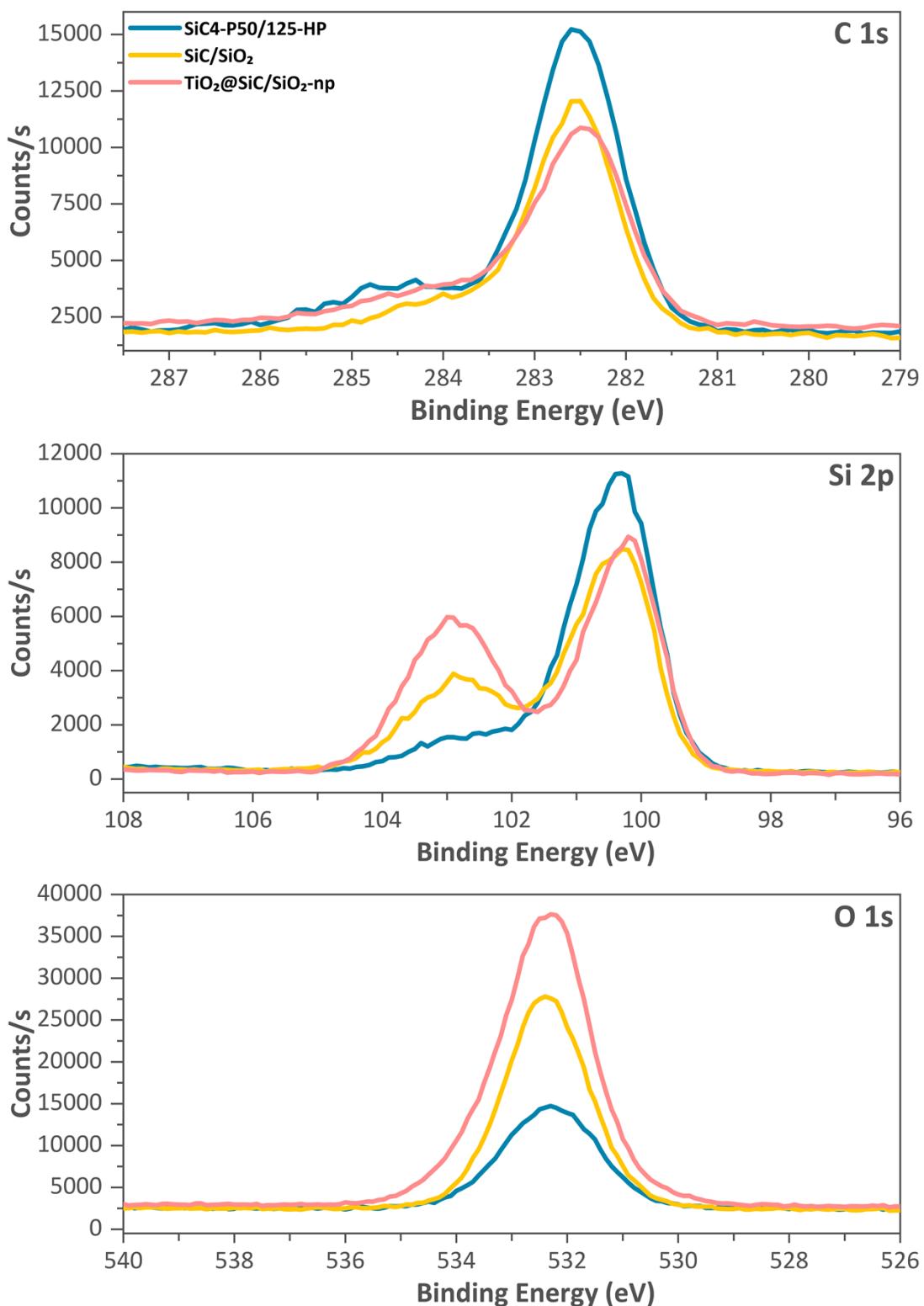


Figure S3 XPS spectra of the commercial SiC material (SiC4-P50/125-HP) before (blue) and after oxidation (SiC/SiO₂, yellow) at 1000°C under air during 2h and after titanium-grafting “TiO₂@SiC/SiO₂-np” (pink)

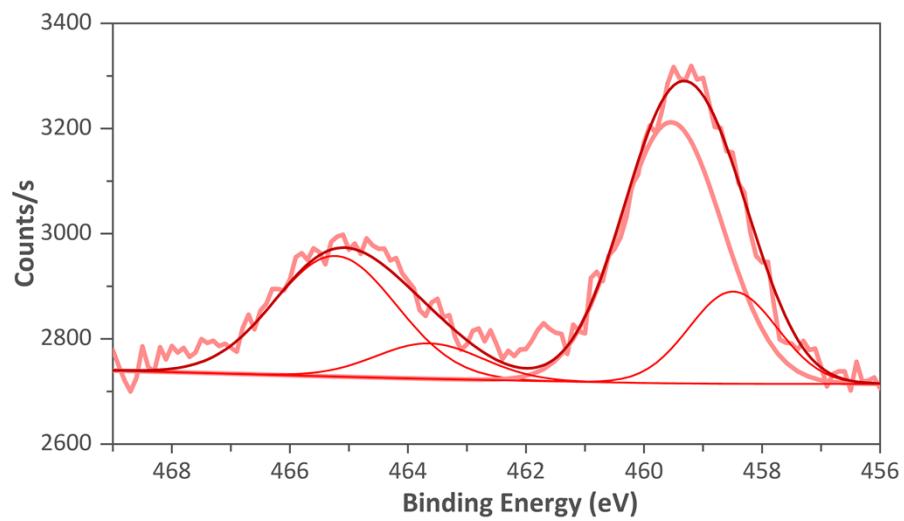


Figure S4 XPS Ti 2p spectra of “ $\text{TiO}_2@\text{SiC}/\text{SiO}_2\text{-np}$ ”

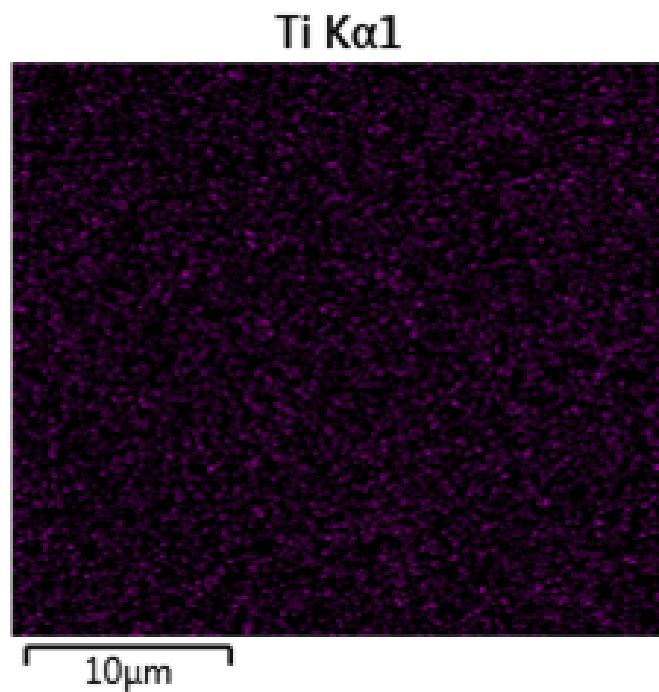


Figure S5 EDX mapping of the $\text{TiO}_2@\text{SiC}/\text{SiO}_2\text{-p}$ material