

Supporting information

A heterostructured TiO₂-C₃N₄ support for gold catalysts: a superior preferential oxidation of CO in the presence of H₂ under visible light irradiation or not

**Kai Yang, Chao Meng, Liulu Lin, Xiaoying Peng, Xun Chen, Xuxu Wang, Wenxin Dai*,
Xianzhi Fu**

*Research Institute of Photocatalysis, State Key Laboratory of Photocatalysis on Energy and
Environment, Fuzhou University, Fuzhou, 350002, China*

*Corresponding author: Wenxin Dai

Tel & Fax: +86-591-83779083

E-mail: daiwenxin@fzu.edu.cn

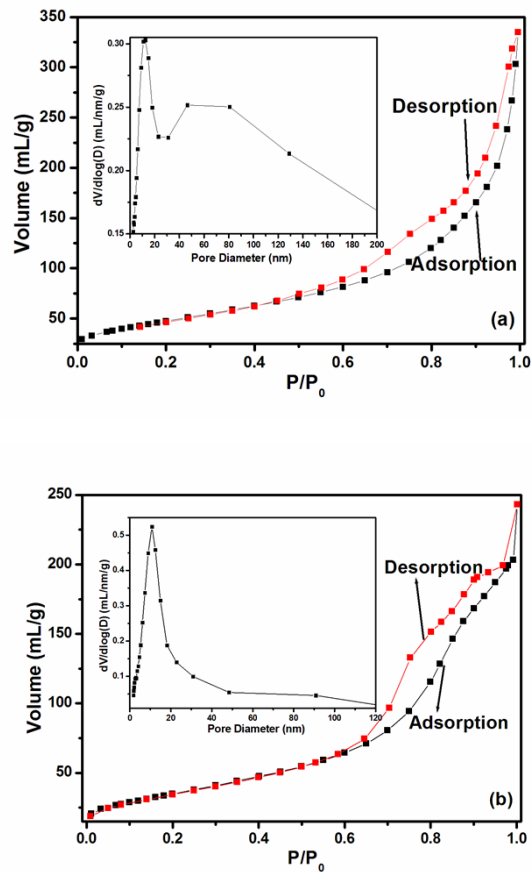


Fig. 1s N₂ adsorption–desorption isotherms and the BJH pore size distributions (inset) plots of Au/TiO₂ (a) and Au/TiO₂-C₃N₄ (b) samples.

Table 1s The results of N₂ physical adsorption of Au/TiO₂ and Au/TiO₂-C₃N₄ samples.

Samples	BET Surface Area (m ² /g)	Pore Radius (nm)
Au/TiO ₂	142.9	11.7
Au/TiO ₂ -C ₃ N ₄	128.4	11.4

The Barrett–Joyner–Halenda (BJH) pore size distribution (inset of Fig.1s) obtained from the isotherm indicates the pores ranging from 10 nm to 20 nm. Table 1s shows that the Au/TiO₂ and Au/TiO₂-C₃N₄ have higher values of specific surface areas, specific pore volumes. N₂ adsorption analysis and the BET specific surface area of Au/TiO₂ after the C₃N₄ composition decreased,