Supporting Information

Surfactant-free 2D/2D Pd/g- C_3N_4 for enhanced photocatalytic CO_2 reduction

Zhijun Huang,*a Jie Wu,a Chunliang Yang,^b Fengwen Yan,*a Guoqing Yuan^a

^a Beijing National Laboratory of Molecular Sciences, Key Laboratory of Green

Printing, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, P.R.

China

^bNingbo Kingfa Advanced Material Co., Ltd., Ningbo, Zhejiang, 315803, P.R. China



Fig. S1 a) SEM and b) TEM images of CN obtained by heating urea at 550 °C.



Fig. S2 Zeta potential of CN and Pd NSs/CN-50.



Fig. S3 TEM image of agglomerated Pd NSs prepared from Na_2PdCl_4 using CO as the reducing agent without the addition of CN.



Fig. S4 TEM image of Pd NSs/CN prepared from Na_2PdCl_4 and CN using CO as the

reducing agent under stirring.



Fig. S5 TEM image of PVP-Pd NSs/CN.



Fig. S6 a) XPS survey spectrum of PVP-Pd NSs/CN.



Fig. S7 a) C 1s, b) N 1s, and c) O 1s XPS spectra of Pd NSs/CN.



Fig. S8 a) TEM image and b) UV-vis-NIR diffuse reflection spectrum of Pd NSs.



Fig. S9 TEM images of a) Pd NSs/TiO₂ nanoplates and b) Pd NSs/GO.



Fig. S10 UV-vis-NIR diffuse reflection spectra of TiO₂ nanoplates and Pd NSs/TiO₂.