Supporting Information

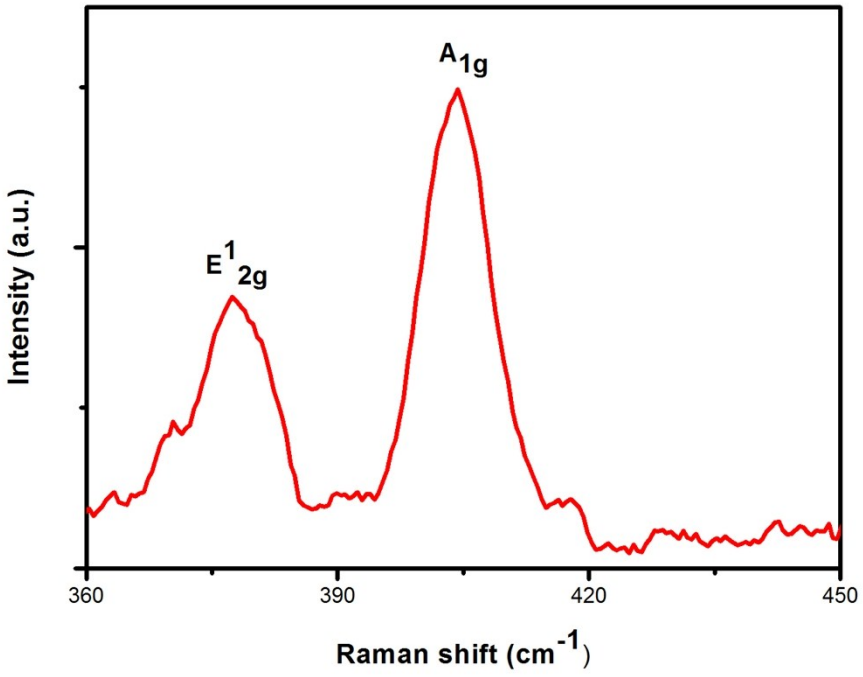
Copper Nanoparticles Interspersed MoS_2 Nanoflowers with Enhanced Efficiency for CO_2 Electrochemical Reduction to Fuel

Guodong Shi, Luo Yu, Xin Ba, Xiaoshu Zhang, Jianqing zhou and Ying Yu*

[a] Institute of Nanoscience and Nanotechnology, College of Physical Science and Technology, Central China Normal University, Wuhan 430079, China

* Corresponding author. Tel: 86-27-67867037; email: yuying01@mail.ccnu.edu.cn

Figure S1. Raman spectra of bare flower-like MoS_2.



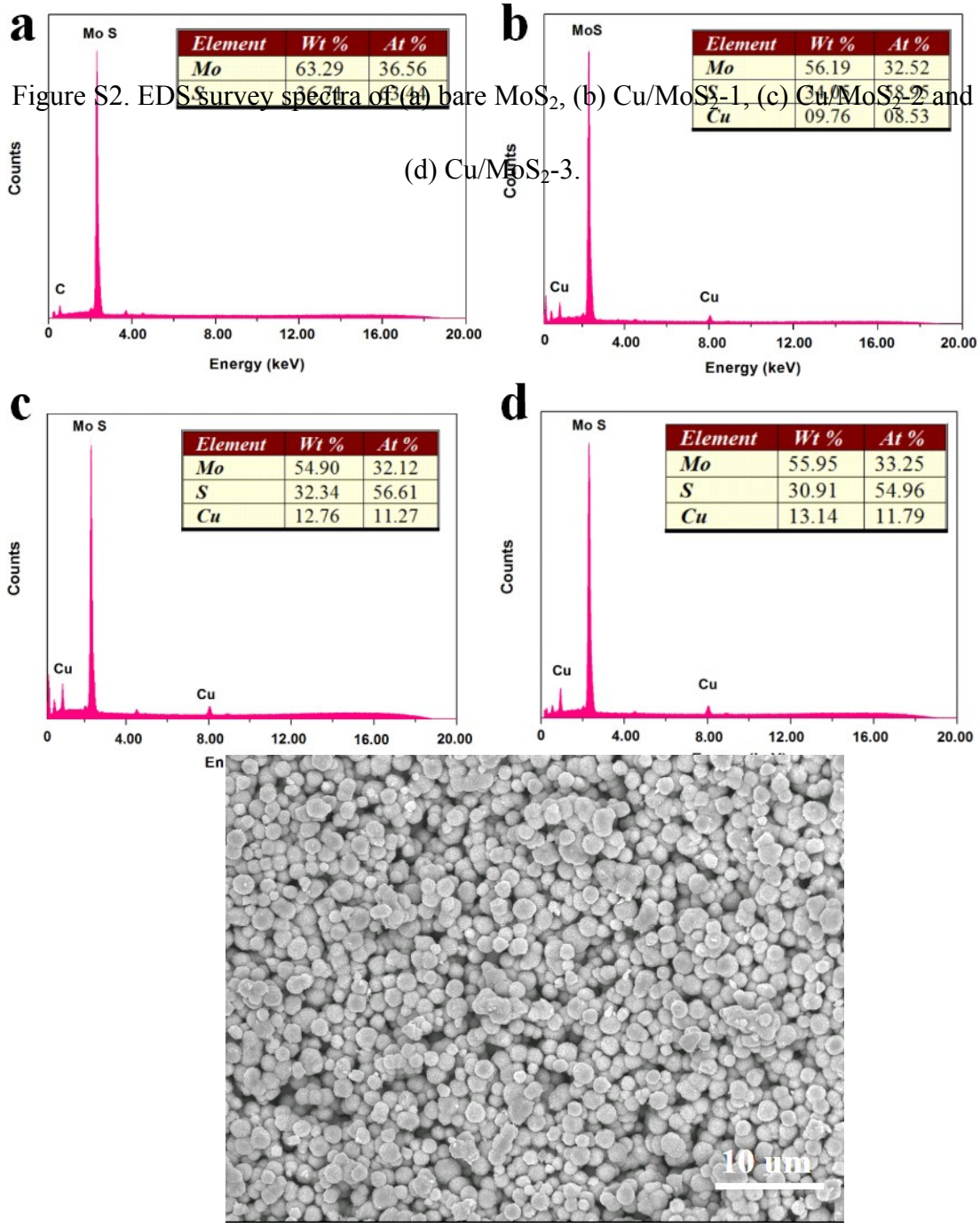


Figure S2. EDS survey spectra of (a) bare MoS_2, (b) Cu/MoS_2-1, (c) Cu/MoS_2-2 and (d) Cu/MoS_2-3.

Figure S3. Low magnification SEM image of Cu/MoS_2-2.

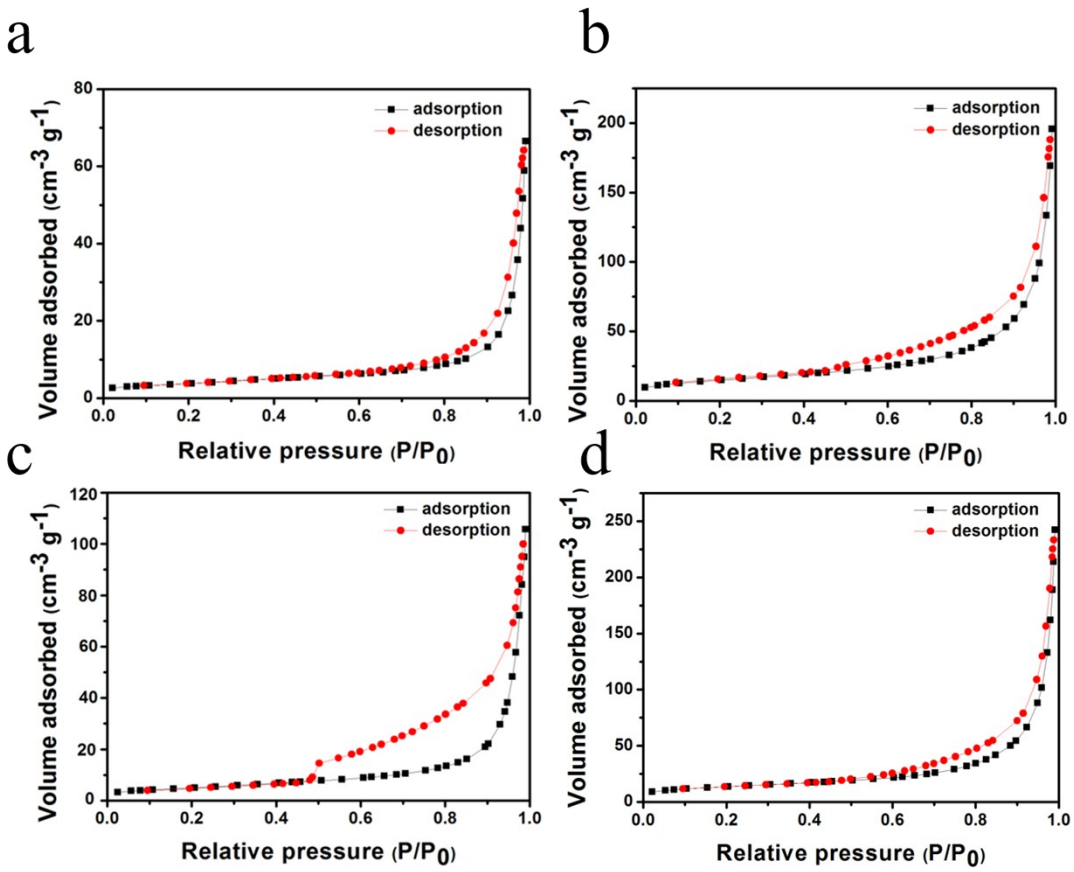


Figure S4. N_2 adsorption−desorption isotherm curves for all prepared samples: (a) bare MoS_2, (b) Cu/MoS_2-1, (c) Cu/MoS_2-2 and (d) Cu/MoS_2-3.

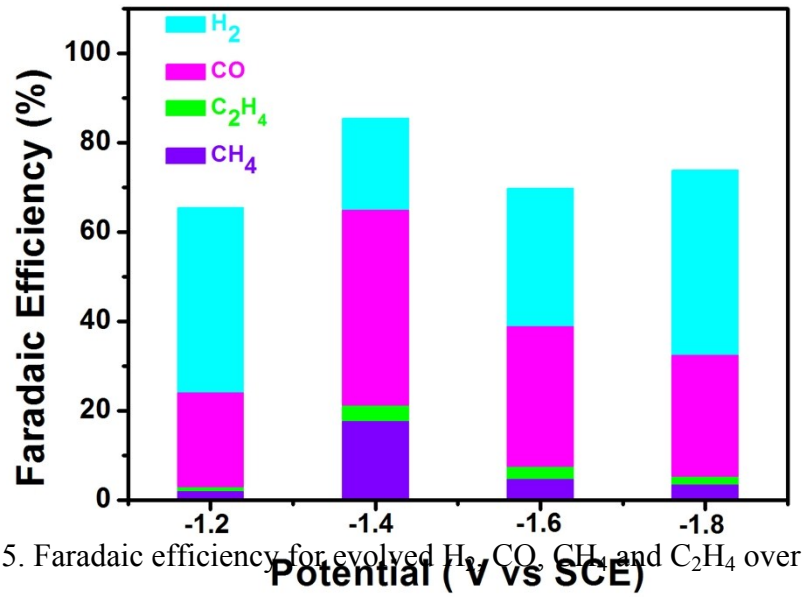


Figure S5. Faradaic efficiency for evolved H_2, CO, CH_4 and C_2H_4 over Cu/MoS_2-2 at different applied potentials.

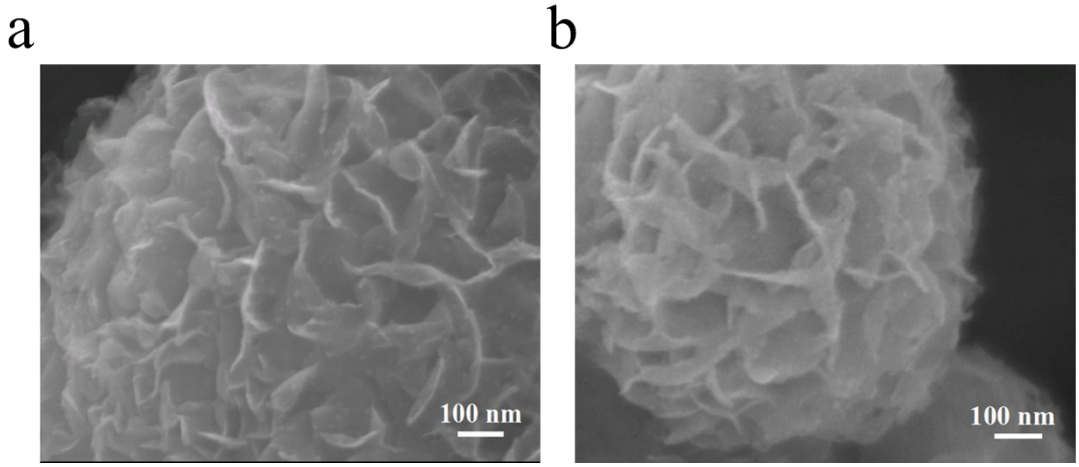


Figure S6. SEM images of Cu/MoS_2-2 (a) before and (b) after 48 h CO_2 electrochemical reduction.

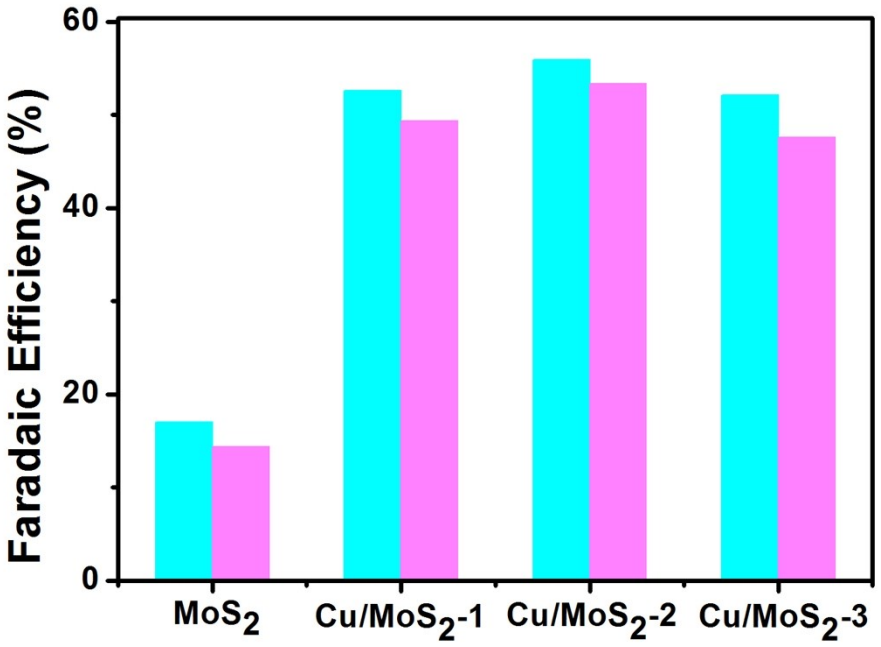


Figure S7. Faradaic efficiency of all prepared samples before (cyan) and after (magenta) 48 h electrochemical CO_2 reduction reaction.