Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Nanoporous chalcogenides for adsorption and gas separation

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Electronic Supporting information

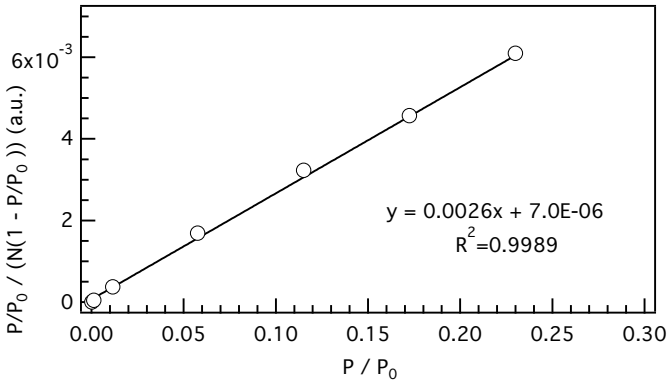

Fig. S1 BET plot for N_2 adsorption isotherm at 77 K in a bare g-GeS_2 pore with H = 4.8 nm. The linear segment indicates the linear regression of the BET plot and the range of data employed for the fit ($10^{-4} < P/P_0 < 0.25$).

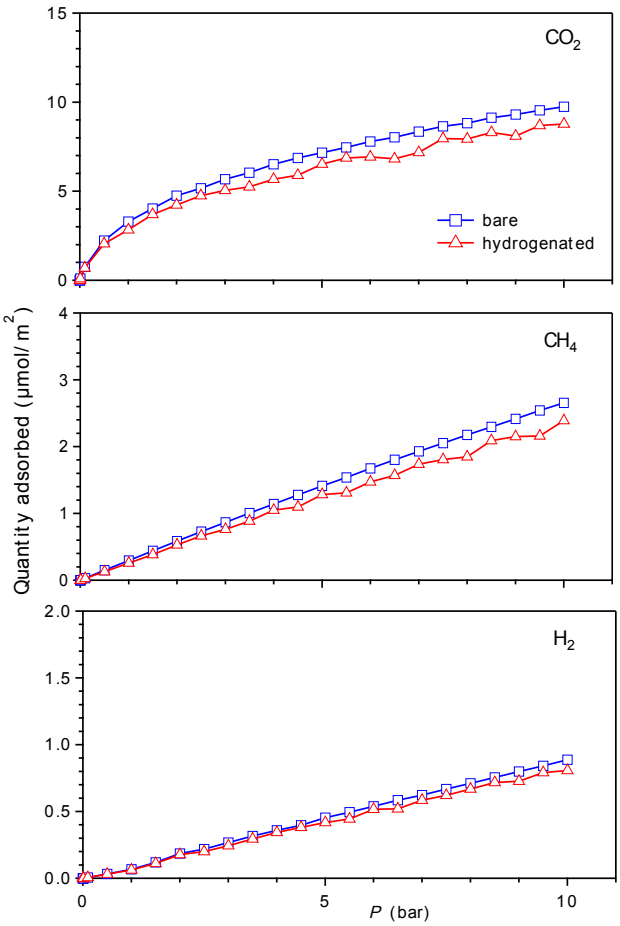

Fig. S2 (Color online) CO_2 (top), CH_4 (center), and H_2 (bottom) adsorption isotherms at T = 298 K for bare (squares) and hydrogenated (triangles) g-GeS_2 pores. The data are shown for the pores with H = 3.6 nm.

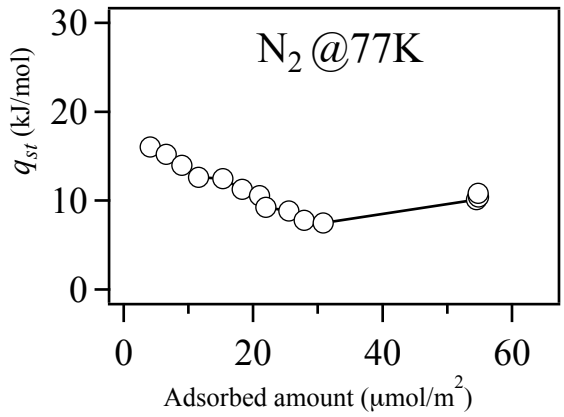

Fig. S3 (Color online) N_2 isosteric heat of adsorption at T = 77 K for a bare g-GeS_2 pore with H = 3.6 nm.

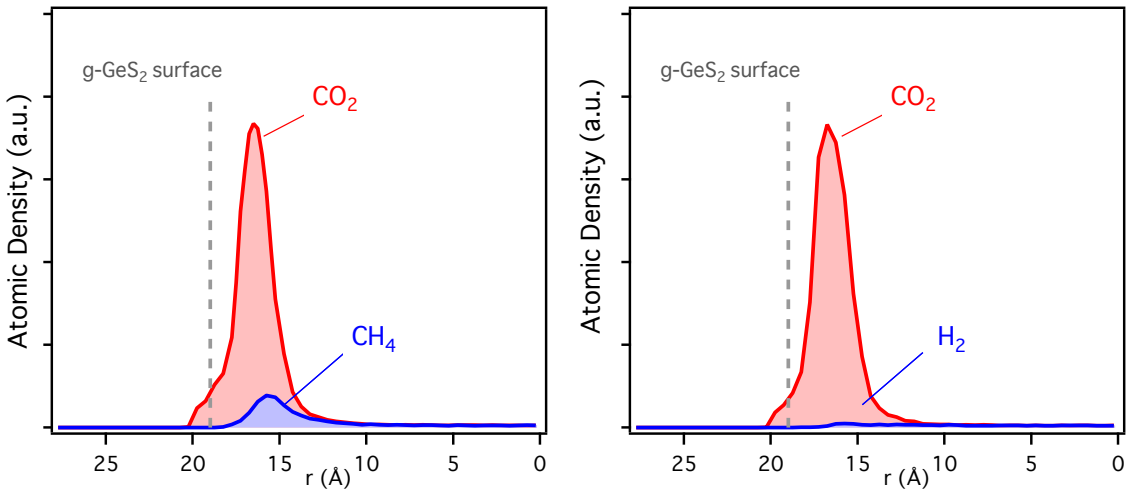

Fig. S4 (Color online) Density profiles of the center of masses of CO_2, CH_4, and H_2 in CO_2-CH_4 (right) and CO_2-H_2 (right) mixtures for 50-50% bulk compositions.