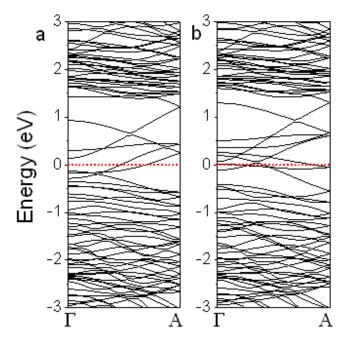
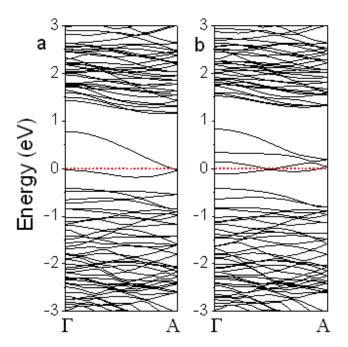


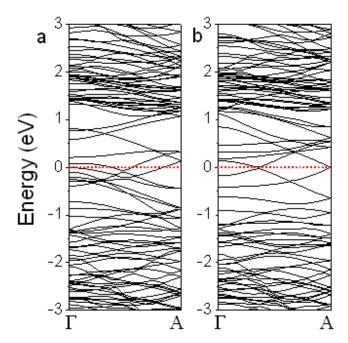
S-1, The calculated band structures of  $MoS_2$ : (a) bulk and (b) monolayer.



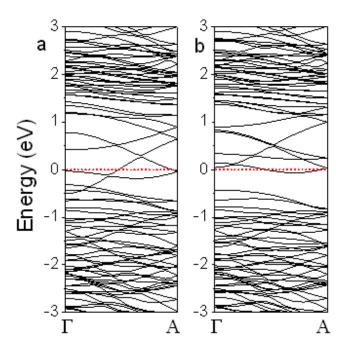
S-2, The calculated band structures of zz-MoS<sub>2</sub>-NR-u: (a) spin-up and (b) spin-down.



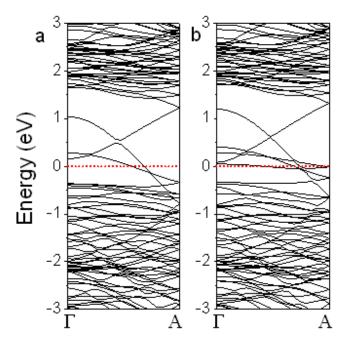
S-3, The calculated band structures of H-saturated zz-MoS $_2$ -NR-u: (a) spin-up and (b) spin-down.



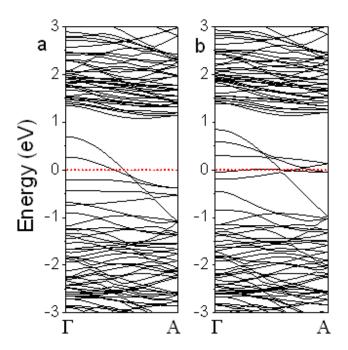
S-4, The calculated band structures of zz-MoS<sub>2</sub>-NR-Mo-u: (a) spin-up and (b) spin-down.



S-5, The calculated band structures of H-saturated zz-MoS $_2$ -NR-Mo-u: (a) spin-up and (b) spin-down.



S-6, The calculated band structures of zz-MoS<sub>2</sub>-NR-S-u: (a) spin-up and (b) spin-down.



S-7, The calculated band structures of H-saturated zz-MoS<sub>2</sub>-NR-S-u: (a) spin-up and (b) spin-down.