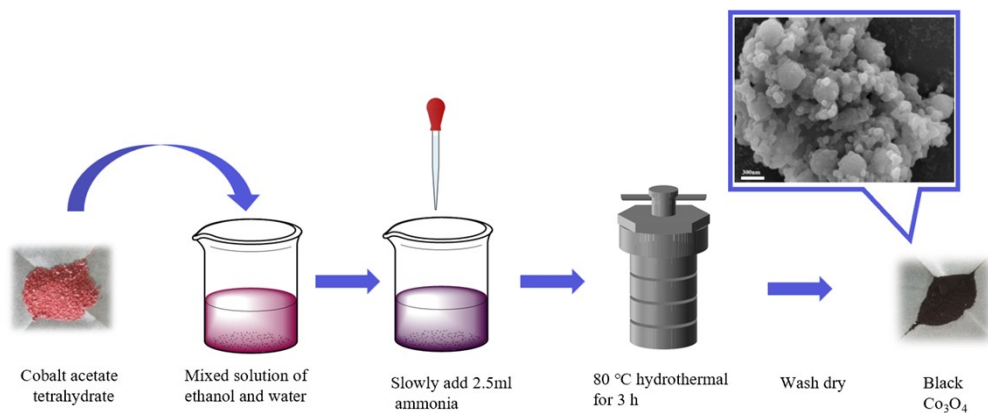


Anchoring  $\text{Co}_3\text{O}_4$  nanoparticles on conjugated polyimide ultrathin  
nanosheets: construction of a Z-scheme nano-heterostructure for  
Enhanced photocatalytic performance

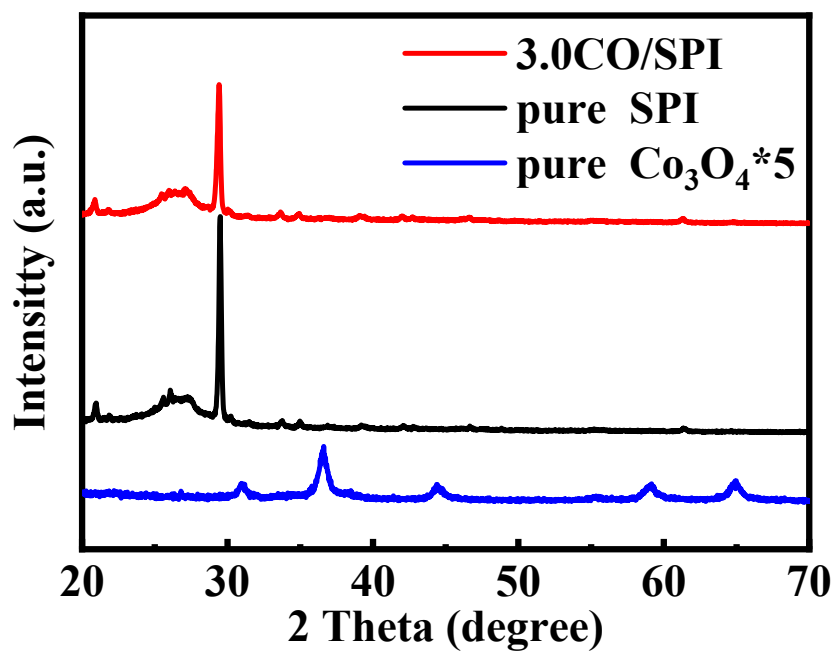
Duoping Zhang <sup>a</sup>, Chenghai Ma <sup>a,\*</sup>, Zhiang Luo <sup>a</sup>, Meitong Zhu <sup>a</sup>, Binhao Li <sup>a</sup>, Lian Zhou <sup>b</sup>,  
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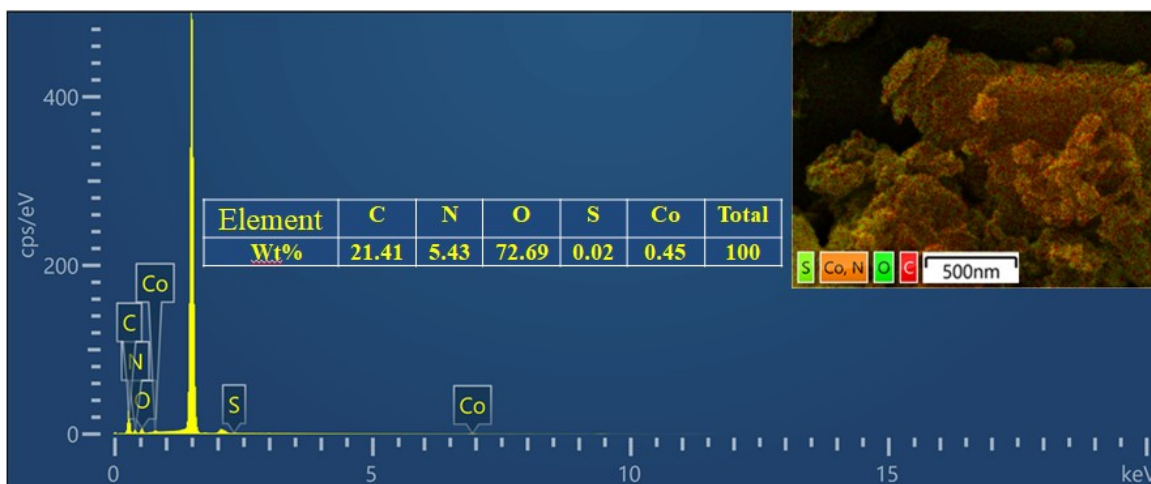
*<sup>b</sup>New Energy (Photovoltaic) Industry Research Center, Qinghai University, Xining 810016,  
China*



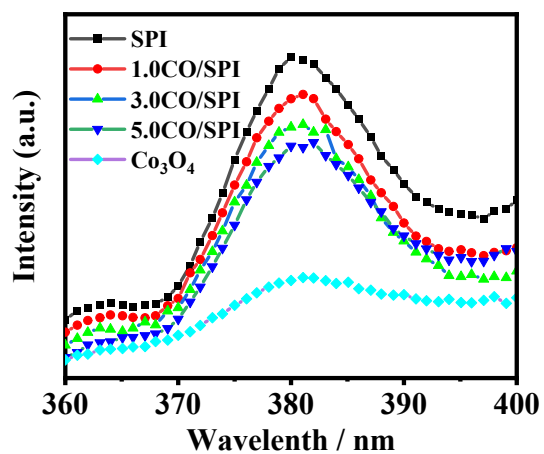
**Scheme S1.** preparation process of  $\text{Co}_3\text{O}_4$  nanoparticles



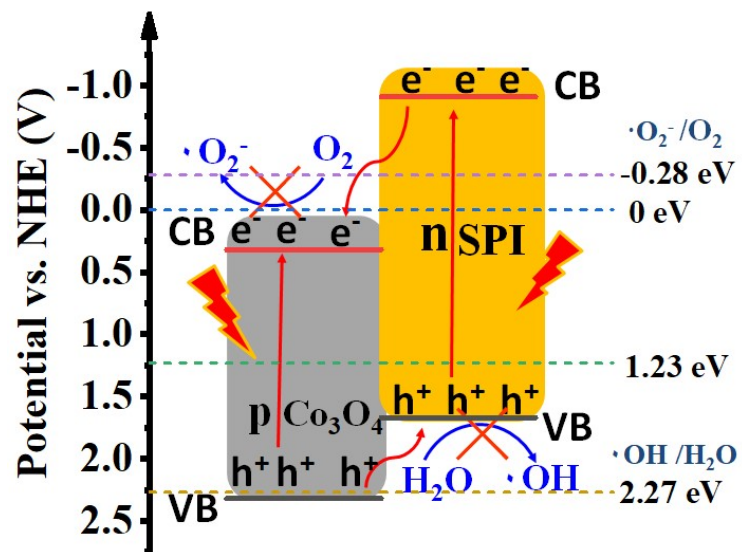
**Fig. S1.** XRD patterns of pure  $\text{Co}_3\text{O}_4$ , SPI, and 3.0COs/SPI powder samples.



**Fig. S2.** Element distribution of 3.0CO/SPI composite.



**Figure S3.** Comparison of photoluminescence (PL) spectra of pure SPI, pure  $\text{Co}_3\text{O}_4$ , and CO/SPI composites with different CO contents.



**Fig. S4.** Schematic illustration of the traditional type-II heterojunction charge transfer mechanism.