

FeS₂ Crystal Lattice Promotes Nanostructure and Enhances Electrocatalytic Performance of WS₂ Nanosheet for Oxygen Evolution Reaction

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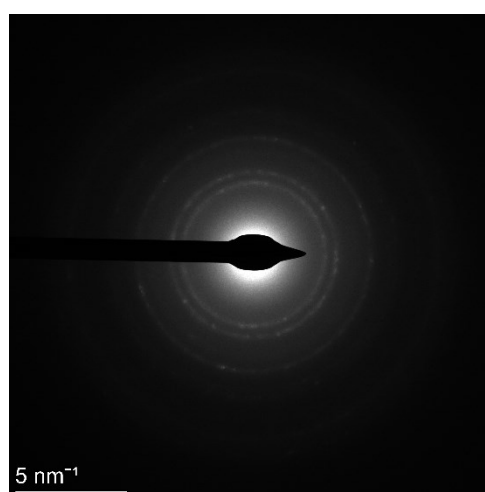
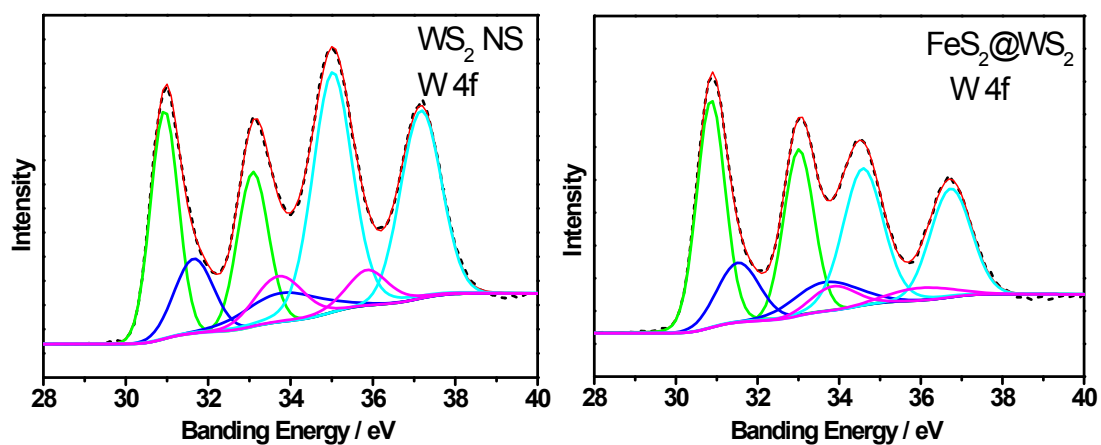


Figure S1 The selected area electron diffraction pattern of the FeS₂ CL@WS₂ NS composite



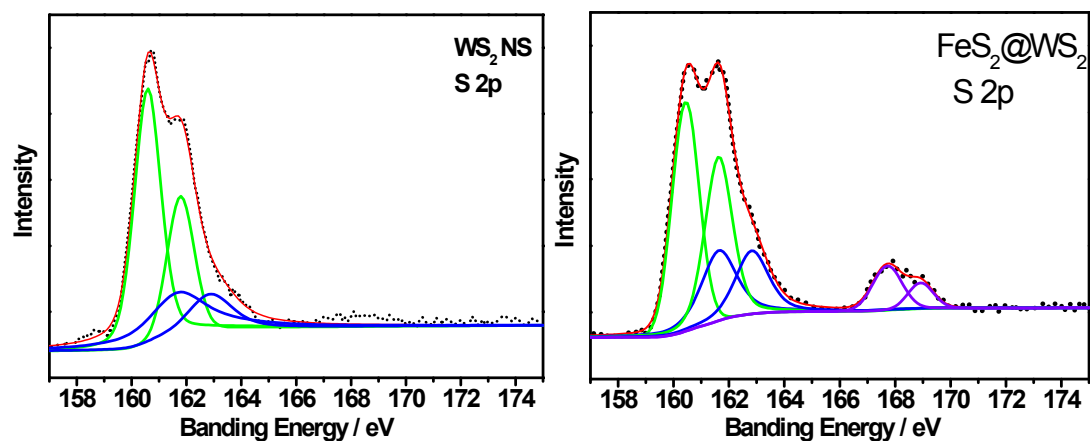


Figure S2. XPS fitting spectra of W 4f, S 2p in the WS₂ and FeS₂@WS₂ heterogeneous catalyst

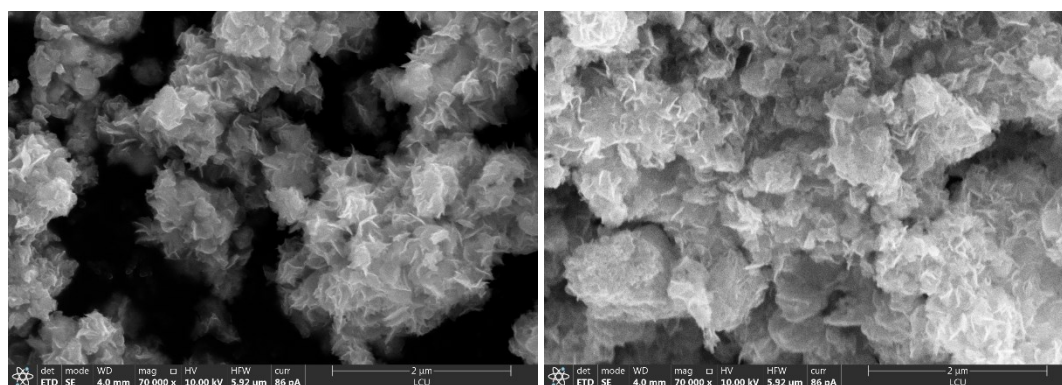


Figure S3 (a) The SEM of FeS₂ CL@WS₂ NS, (b) The SEM of FeS₂ CL@WS₂ NS after durability measurement

Table S1 XPS fitting data of W 4f, S 2p in the WS₂ and FeS₂/WS₂ heterogeneous catalyst

sample	Species	Electron type	Banding Energy	Content (%)
	W ²⁺	4f7/2	30.936	29.16%
		4f5/2	33.086	
	W ⁴⁺	4f7/2	31.653	13.37%

		W ⁴⁺	4f5/2	33.803	10.38%	
			4f7/2	33.715		
		W ⁶⁺	4f5/2	35.865	47.09%	
			4f7/2	35.018		
		S	S ²⁻	4f5/2	37.168	51.10%
				2p3/2	161.781	
	S		2p1/2	160.581	48.90%	
			2p3/2	161.670		
	FeS ₂ @WS ₂	W	W ²⁺	4f7/2	30.866	44.04%
				4f5/2	33.016	
W ⁴⁺			4f7/2	31.609	13.33%	
			4f5/2	33.753		
W ⁴⁺			4f7/2	33.908	4.90%	
			4f5/2	36.058		
W ⁵⁺			4f7/2	34.571	37.73%	
			4f5/2	36.721		
S ²⁻			2p3/2	160.435	49.18%	
			2p1/2	161.635		

		S	2p3/2	161.627	40.35%
			2p1/2	162.827	
		S ⁶⁺	2p3/2	167.720	10.47%
			2p1/2	168.920	

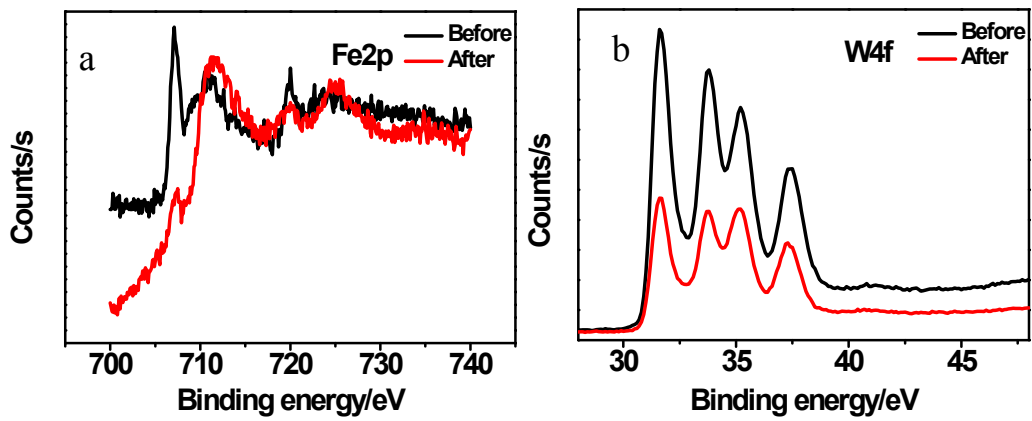


Figure S4 (a) The Fe2p curves of FeS₂ CL@WS₂ NS before and after durability measurement, (b) The W4f curves of FeS₂ CL@WS₂ NS after durability measurement

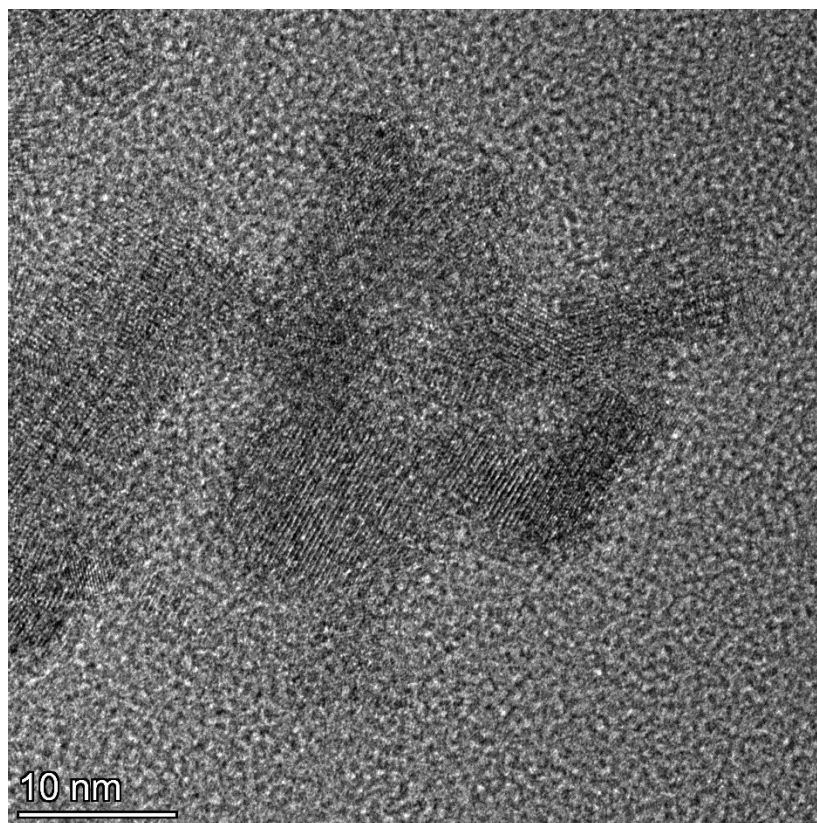


Figure S5 The HRTEM of FeS₂ CL@WS₂ NS after durability measurement