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Phase-controlled solvothermal syntheses and oxygen evolution reaction (OER) activity of nickel sulfide nanoparticles obtained from 1,2-bis(diphenylphosphino)ethane nickel(II) acetylacetonatedithiolate

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Fig. S1 (a) The d_{norm} and fingerprint plots for 1; (b) Perspective view of the energy framework calculations for 1.

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Fig. S2 iR uncompensated and iR compensated LSV plots for Ni-ODA and Ni-DT recorded at the scan rate of 1 mV/s.



Fig. S3. TEM images of Ni-DT at various resolutions (a-c) before and (d-f) after electrochemical study.



Fig. S4. TEM images of Ni-ODA at various resolutions (a-c) before and (d-f) after electrochemical study.



Fig. S5. XPS spectra of the nickel sulfide powders: (a, c) Ni 2p, (b, d) S 2p

Samples	Loading (mg/cm ²)	Onset Potential* (V)	η^{5} (mV)	$\eta^{10}(\mathrm{mV})$	Tafel slope (b) mV dec ⁻¹	Ref
Ni-DT	1.33	1.43	-	-	-	This
						work
Ni-ODA	1.33	1.43	581	698	-	This
			(at 1 mV Sec ⁻¹)	(at 20 mV		work
			377	Sec ⁻¹)		
			(at 20 mV Sec-			
			1)			
ⁱ Ni-NED	1.3	1.444	530	702	67.1	45
¹ Ni-ecda	1.3	1.436	533	732	60.9	45
ⁱ Ni- <i>i</i> -mnt	1.3	1.427	473	609	65.1	45
ⁱ Ni-CDC	1.3	1.417	222	251	44.2	45
NiS@SLS	~1	-	-	297	47	48
				(η^{11})		
NiS porous	0.7 ± 0.2	1.420	-	320	59	49
nollow				(η^{10})		
nicrospheres				$390(\eta^{20})$		
NiS@N/S-C	0.2	1 54	-	417	48	50

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