

Band Gap Engineered Zinc Oxide Nanostructures via a Sol-Gel Synthesis of Solvent Driven Shape-Controlled Crystal Growth

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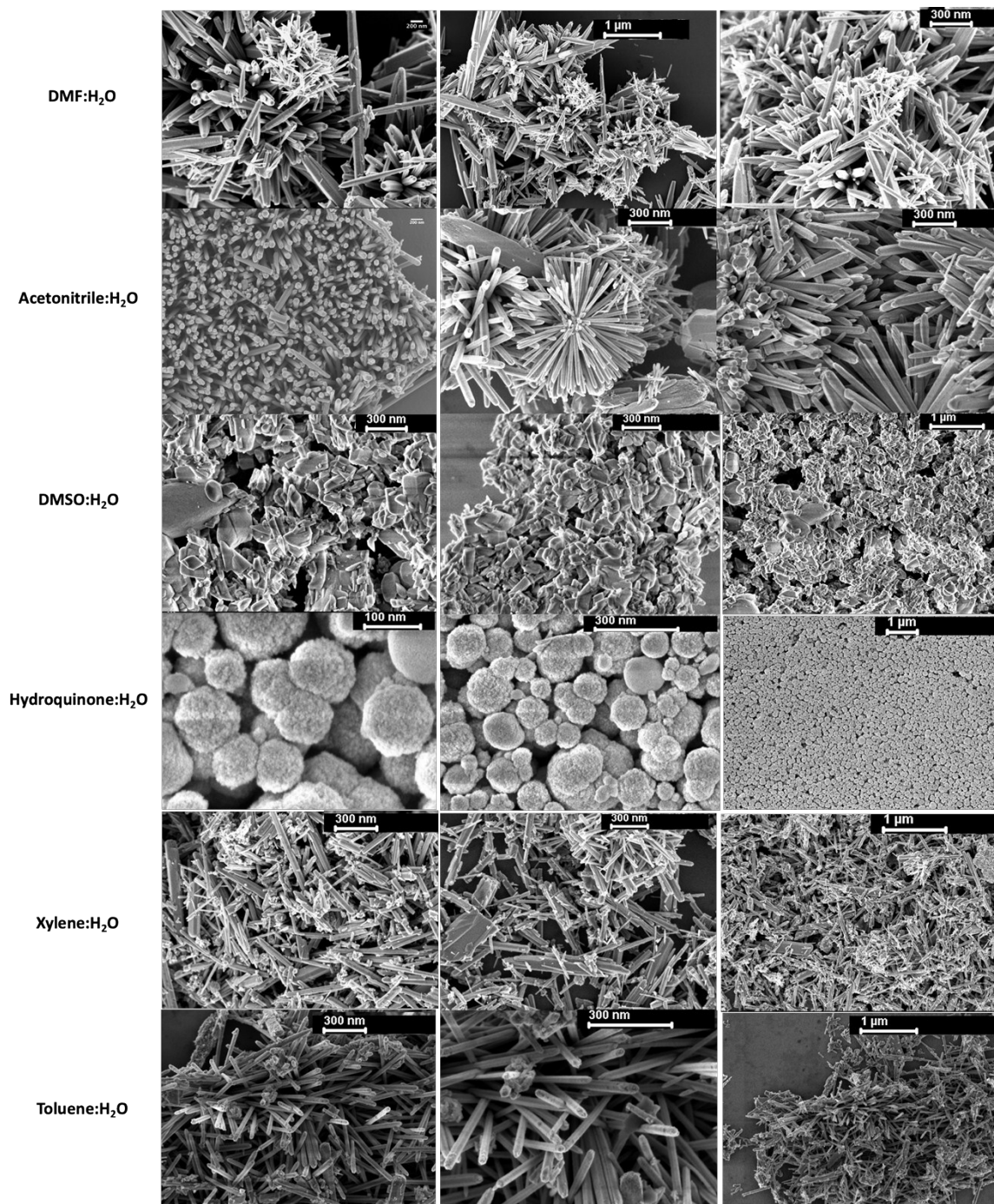


Figure S1: SEM images of ZnO nanostructures formed from each different solvent system.

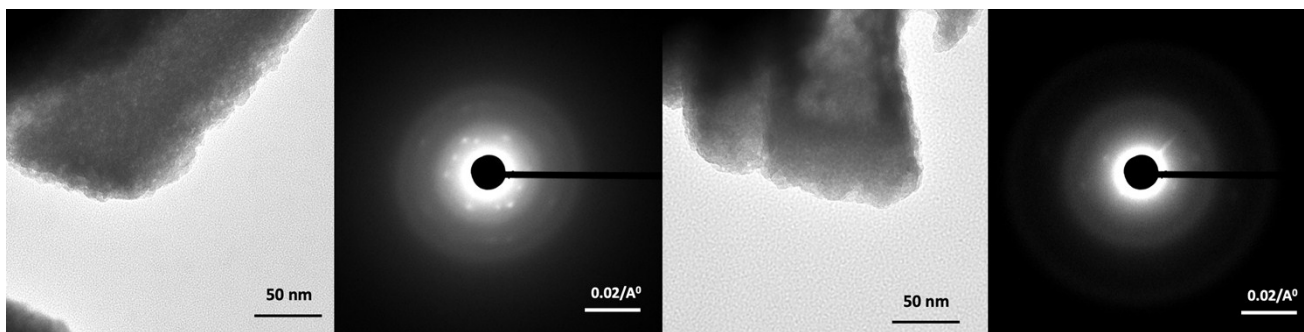


Figure S2: TEM images and SAED patterns of ZnO nanoslates formed in DMSO:water solvent system.

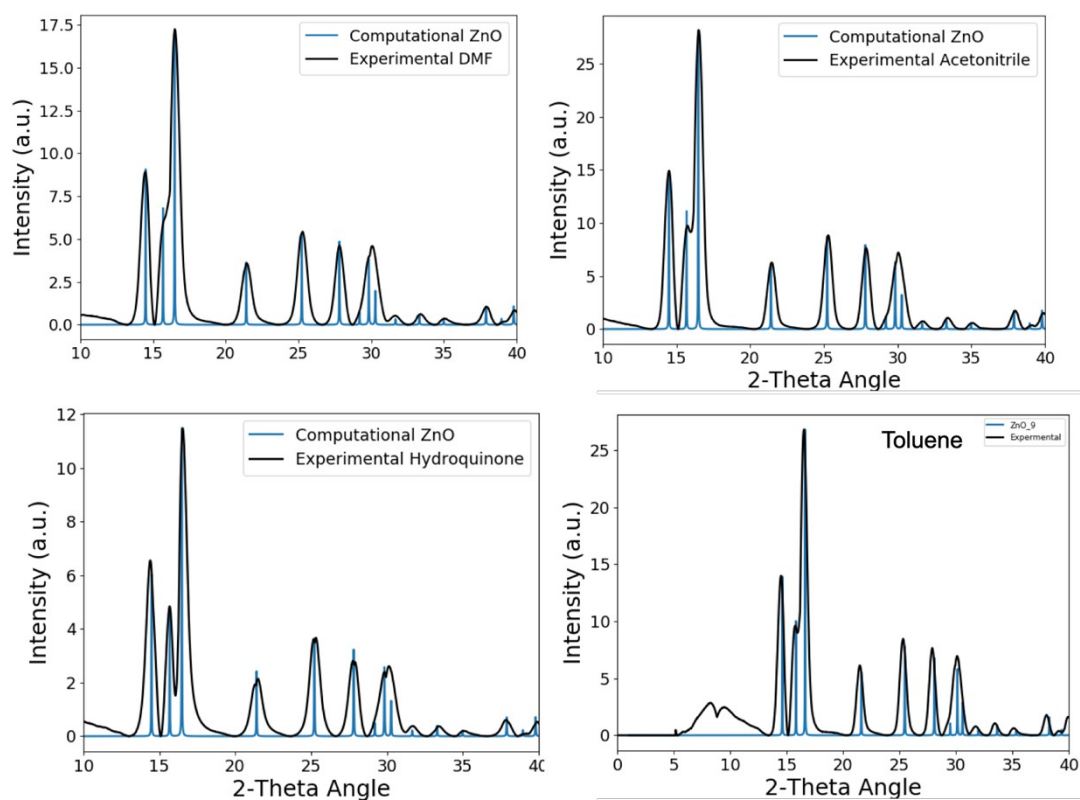


Figure S3: Experimental XRD traces and simulated XRD spectra of ZnO nanostructures with respect to the solvent type.

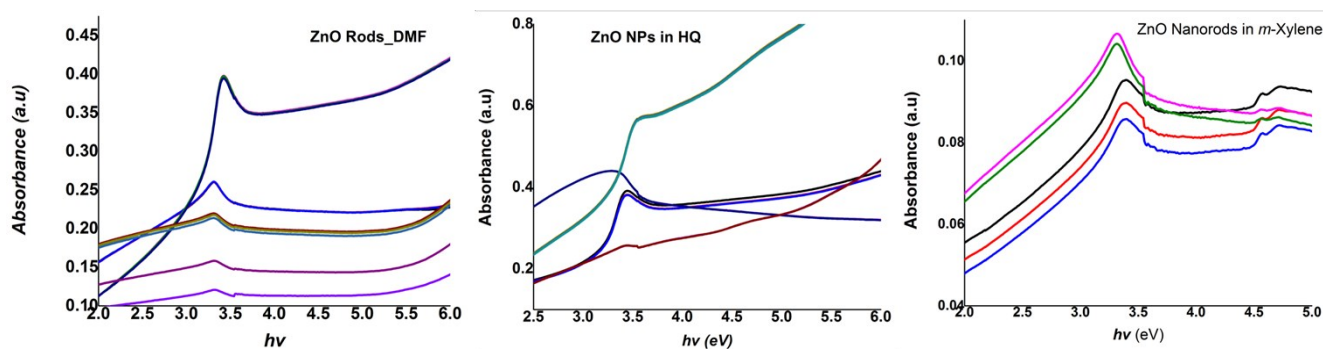


Figure S4: UV-vis spectral traces, collected from multiple sample trials of ZnO nanostructures-casted on thin films.

Table S1: XPS analysis of ZnO nanostructures for sol, nanorods, and nanoparticle morphologies.

Morphology	Peak	Position BE (eV) \pm 0.10 eV	FWHM (eV) \pm 0.20 eV	Atomic Con. (%)
ZnO sol (nanocrystals)	Zn 2p _{1/2} ; Zn 2p _{3/2}	1043.4; 1020.3	1.44	51.51
	O 1s	529.1; 530.5	1.18	47.85
	C 1s	283.8; 288.4	1.27	1.26
ZnO NRs (m-Xylene)	Zn 2p _{1/2} ; Zn 2p _{3/2}	1045.9; 1022.7	4.76	35.13
	O 1s	531.1	4.31	50.72
	C 1s	284.4; 289.8	3.93	4.80
ZnO NPs (Hydroquinone)	Zn 2p _{1/2} ; Zn 2p _{3/2}	1045.9; 1022.7	4.62	26.88
	O 1s	531.6	4.41	45.21
	C 1s	284.8; 288.9	5.65	27.90