

Supporting Information:

Table S1: Variation of microstructural parameter obtained from Rietveld analysis with different reaction time of ZnO nanorod

(hkl)	Particle Size variation with stirring time					Microstrain variation with stirring time $\times 10^{-3}$				
	2h	5h	6h	10h	20h	2h	5h	6h	10h	20h
100	27.66	36.30	15.39	25.09	48.10	3.05	1.97	2.97	3.69	2.32
002	32.99	40.09	41.66	30.42	42.15	1.60	0.88	0.87	1.11	0.95
101	30.44	38.29	31.40	27.93	45.22	2.91	1.97	2.83	3.52	2.33
102	31.99	39.41	37.89	29.48	43.40	2.52	1.72	2.37	2.95	2.02
110	24.99	54.67	17.78	20.39	35.84	2.16	1.82	2.55	2.85	1.64
103	32.49	39.78	39.82	29.97	42.78	2.41	1.63	2.19	2.73	1.9
200	27.65	36.30	15.39	25.09	48.10	3.05	1.97	2.96	3.69	2.32
112	38.76	49.99	35.87	30.91	41.74	2.07	1.56	2.48	2.71	2.02
201	28.80	37.14	23.17	26.30	46.97	3.24	2.2	3.23	4.01	2.6
004	32.99	40.09	41.66	30.41	42.15	1.6	0.88	0.88	1.11	0.95
202	30.43	38.29	31.40	27.93	45.22	2.91	1.97	2.83	3.52	2.33

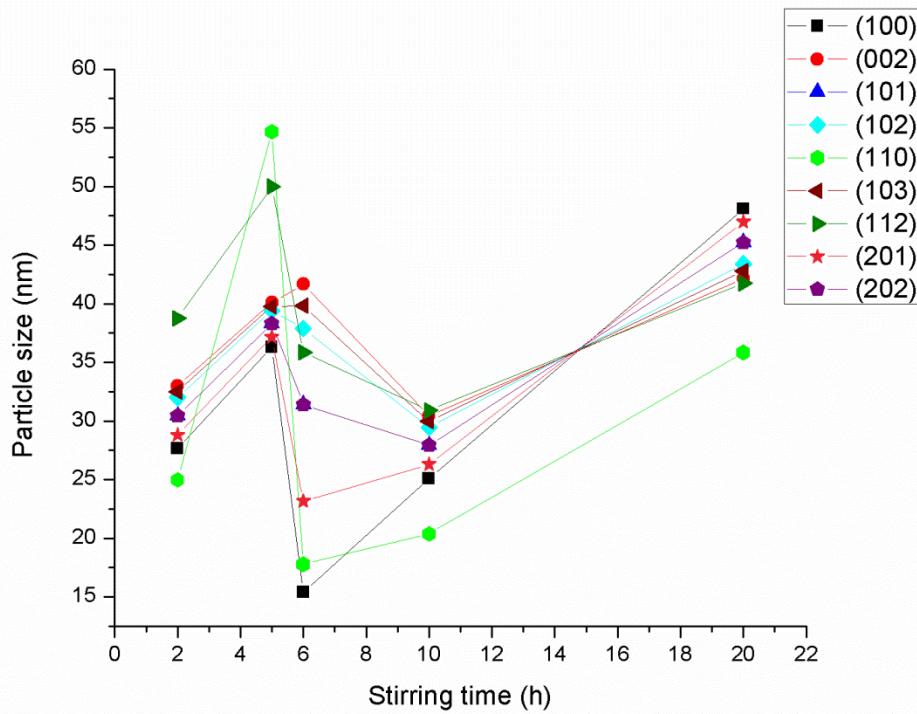


Figure S1. Variation of particle sizes with stirring time in different lattice planes of ZnO nanorod synthesized for different reaction time.

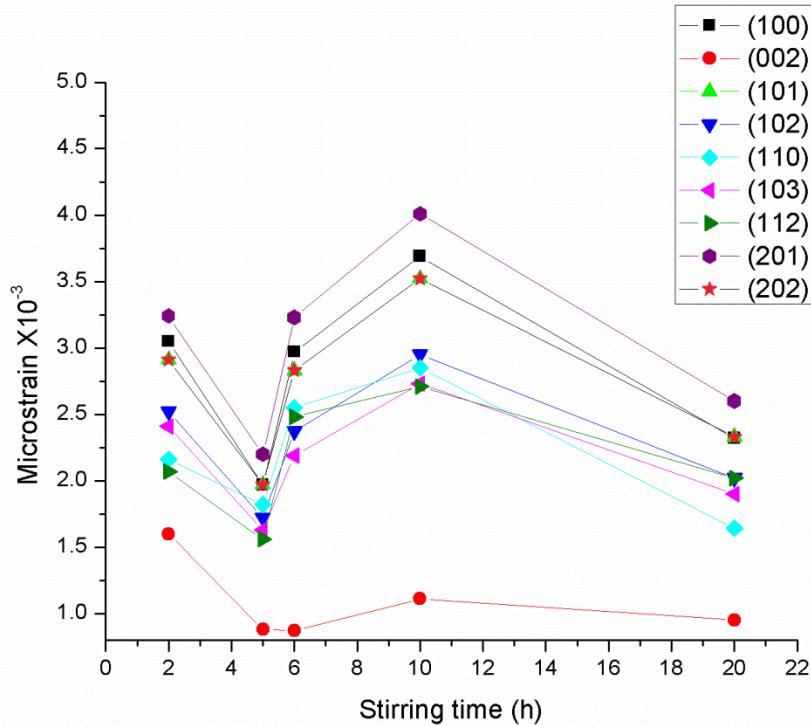


Figure S2. Variation of lattice strain with stirring time in different lattice planes of ZnO nanorod synthesized for different reaction time.

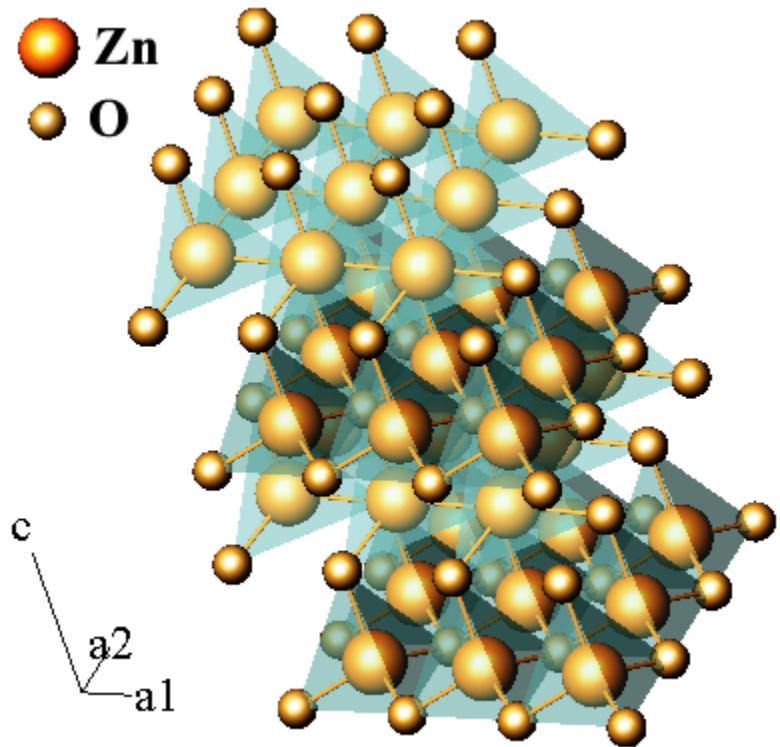


Figure S3. Atomic structure modelling of hexagonal ZnO (ICSD Database no. 65121)

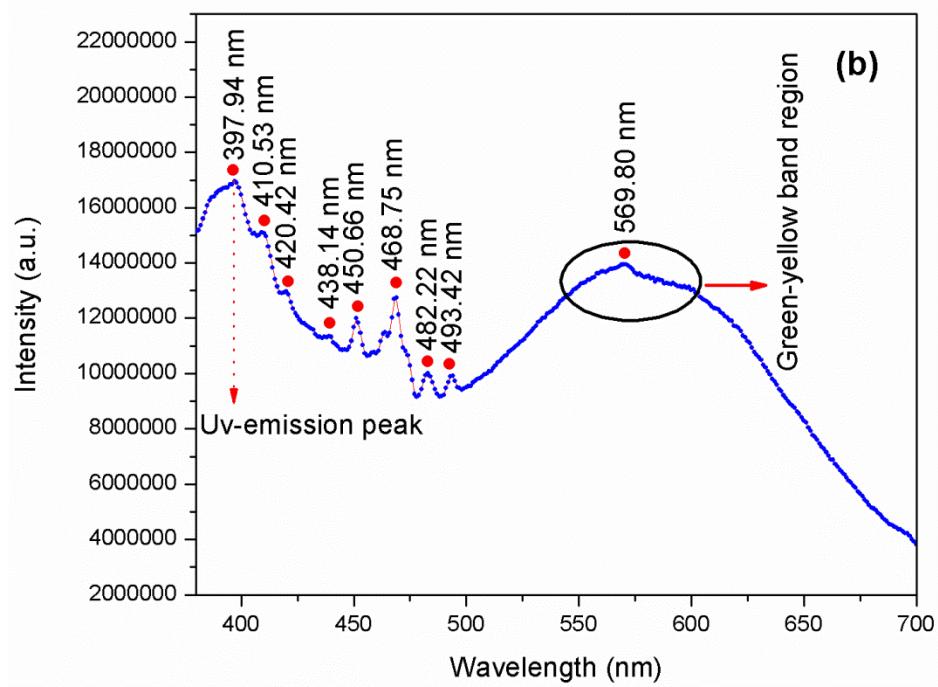
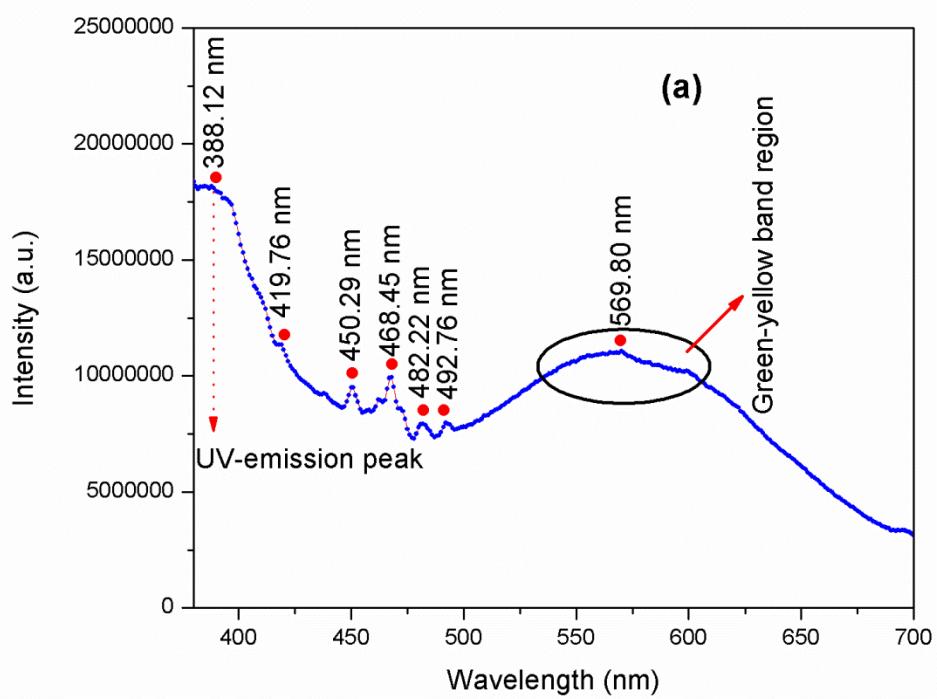


Figure S4. Photoluminescence spectra of ZnO nanorod synthesized through reaction time (a) 5h and (b) 20 h, excited at 365 nm wavelength.