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LAMPIRAN

Lampiran 1. Dokumentasi Penelitian



Gambar 1. Proses pengeringan daun kacang kalopo (*Calopogonium mucunoides*)



Gambar 2. Ekstrak daun kacang kalopo (*Calopogonium mucunoides*)



Gambar 3. Sintesis komposit ZnO/TiO₂

Lampiran 2. Analisis Data

Tabel 1. Analisis data XRD untuk ukuran kristal komposit ZnO/TiO₂

ZnO/TiO ₂ (2,5g) 500°C						ZnO/TiO ₂ (2,5g) 600 °C					
2θ (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (nm)	2θ (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (nm)
31,83	15,91	0,28	0,37	0,01	22,36	32,23	16,12	0,28	0,61	0,01	13,61
34,48	17,24	0,30	0,40	0,01	20,59	34,87	17,44	0,30	0,78	0,01	10,71
36,32	18,16	0,32	0,38	0,01	22,02	36,67	18,34	0,32	0,61	0,01	13,71
42,91	21,46	0,37	0,44	0,01	19,62	43,21	21,60	0,38	0,74	0,01	11,55
47,66	23,83	0,42	0,56	0,01	15,64	47,97	23,98	0,42	0,73	0,01	11,90
56,66	28,33	0,49	0,43	0,01	21,12	56,87	28,44	0,50	0,75	0,01	12,10
62,89	31,45	0,55	0,50	0,01	18,57	62,99	31,50	0,55	0,98	0,02	9,53
Rata-rata					19,99	Rata-rata					11,87

ZnO/TiO ₂ (2,5g) 700°C						ZnO/TiO ₂ (2,5g) 800°C					
2θ (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (nm)	2θ (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (nm)
32,20	16,10	0,28	1,56	0,03	5,32	31,94	15,97	0,28	0,54	0,01	15,45
34,71	17,35	0,30	1,21	0,02	6,89	34,64	17,32	0,30	0,54	0,01	15,56
36,54	18,27	0,32	1,02	0,02	8,22	36,41	18,21	0,32	0,49	0,01	17,16
43,12	21,56	0,38	0,89	0,02	9,55	42,91	21,45	0,37	0,46	0,01	18,59
47,88	23,94	0,42	1,00	0,02	8,73	47,91	23,95	0,42	0,45	0,01	19,32
56,86	28,43	0,50	1,12	0,02	8,07	56,59	28,30	0,49	0,53	0,01	16,88
62,90	31,45	0,55	1,41	0,02	6,61	63,02	31,51	0,55	0,45	0,01	20,88
Rata-rata						Rata-rata					
ZnO/TiO₂ (5g) 500°C						ZnO/TiO₂ (5g) 600°C					
20 (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (nm)	20 (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (nm)
32,03	16,01	0,28	0,47	0,01	17,69	32,14	16,07	0,28	0,48	0,01	17,18
34,66	17,33	0,30	0,56	0,01	14,89	34,83	17,41	0,30	0,62	0,01	13,45
36,50	18,25	0,32	0,52	0,01	16,13	36,62	18,31	0,32	0,50	0,01	16,86
43,10	21,55	0,38	0,59	0,01	14,43	43,22	21,61	0,38	0,58	0,01	14,66
47,84	23,92	0,42	0,61	0,01	14,18	47,94	23,97	0,42	0,59	0,01	14,86
56,79	28,40	0,50	0,63	0,01	14,25	56,90	28,45	0,50	0,60	0,01	15,14
63,08	31,54	0,55	0,50	0,01	18,52	63,14	31,57	0,55	0,65	0,01	14,32
Rata-rata						Rata-rata					
15,73						15,21					

ZnO/TiO ₂ (5g) 700°C						ZnO/TiO ₂ (5g) 800°C					
20 (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (mm)	20 (°)	θ (°)	θ (rad)	FWHM (°)	FWHM (rad)	D (mm)
32,02	16,01	0,28	1,11	0,02	7,45	31,91	15,96	0,28	1,34	0,02	6,16
34,89	17,44	0,30	1,04	0,02	7,99	35,14	17,57	0,31	1,58	0,03	5,28
36,62	18,31	0,32	0,85	0,01	9,85	36,68	18,34	0,32	0,81	0,01	10,32
43,21	21,60	0,38	0,80	0,01	10,68	43,19	21,59	0,38	0,77	0,01	11,12
47,89	23,94	0,42	0,90	0,02	9,69	47,94	23,97	0,42	0,78	0,01	11,10
56,82	28,41	0,50	1,00	0,02	9,03	56,92	28,46	0,50	0,95	0,02	9,51
62,75	31,37	0,55	1,27	0,02	7,35	62,59	31,30	0,55	1,03	0,02	9,07
Rata-rata					8,86	Rata-rata					8,94

Tabel 2. Analisis data UV-Vis untuk persentase degradasi *congo red*

Sampel	Suhu (°C)	C ₀	C _t							%D=[(C ₀ -C _t)/C ₀].100						
			5 min	10 min	15 min	20 min	25 min	30 min	5 min	10 min	15 min	20 min	25 min	30 min		
ZnO/TiO ₂ (2,5 g)	500	1,08	0,15	0,06	0,04	0,04	0,03	0,03	86,31	94,61	96,52	96,63	96,85	97,17		
	600	1,08	0,10	0,05	0,04	-	-	-	90,48	95,06	96,31	-	-	-		
	700	1,08	0,13	0,06	-	-	-	-	87,82	94,35	-	-	-	-		
ZnO/TiO ₂ (5 g)	800	1,08	0,14	0,12	0,05	-	-	-	87,36	88,93	95,39	-	-	-		
	500	1,08	0,08	0,06	0,05	0,04	0,04	0,04	92,48	94,83	95,74	96,41	96,63	96,63		
	600	1,08	0,09	0,07	0,05	-	-	-	91,73	93,67	95,29	-	-	-		
ZnO/TiO ₂ (5 g)	700	1,08	0,05	0,04	-	-	-	-	95,26	96,56	-	-	-	-		
	800	1,08	0,04	0,02	-	-	-	-	95,92	98,26	-	-	-	-		

