

Lampiran 1

Hasil XRD ZnO Merck

File: DINZNO.DI 27-Nov-2008 13:59
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 Philips Analytical X-Ray B.V. Department of Metallurgy UI

Sample identification: dinzno
 Data measured at: 21-Nov-2008 10:27:00

Diffraction type: PW1710 BASED
 Tube anode: Cu
 Generator tension [kV]: 40
 Generator current [mA]: 30
 Wavelength Alpha1 [Å]: 1.54056
 Wavelength Alpha2 [Å]: 1.54439
 Intensity ratio (alpha2/alpha1): 0.500
 Divergence slit: AUTOMATIC
 Irradiated length [mm]: 12
 Receiving slit: 0.2
 Monochromator used: YES

Start angle [°2θ]: 5.000
 End angle [°2θ]: 89.000
 Step size [°2θ]: 0.020
 Maximum intensity: 5041.000
 Time per step [s]: 1.000
 Type of scan: CONTINUOUS
 Intensities converted to: FIXED

Minimum peak tip width: 0.00
 Maximum peak tip width: 1.00
 Peak base width: 2.00
 Minimum significance: 0.75
 Number of peaks: 37

Angle [°2θ]	d-value a1 [Å]	d-value a2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
5.445	16.2169	16.2572	0.240	55	299	1.1	0.86
12.795	6.9130	6.9301	0.400	123	114	2.4	3.13
19.065	4.6513	4.6628	0.640	18	71	0.3	1.05
23.935	3.7148	3.7240	0.320	44	46	0.9	1.35
25.335	3.5126	3.5213	0.240	66	44	1.3	1.45
27.630	3.2258	3.2338	0.480	36	41	0.7	3.66
30.555	2.9233	2.9306	0.320	50	37	1.0	1.25
31.660	2.8238	2.8308	0.220	3069	36	60.9	28.86
33.085	2.7053	2.7121	0.120	110	34	2.2	1.05
34.325	2.6104	2.6169	0.180	2209	32	43.8	19.10
36.150	2.4827	2.4889	0.240	5041	31	100.0	51.88
36.260	2.4754	2.4816	0.040	2905	31	57.6	1.06
38.850	2.3161	2.3219	0.240	36	29	0.7	0.75
41.460	2.1762	2.1816	0.160	26	28	0.5	0.76
44.590	2.0304	2.0354	0.100	119	22	2.4	1.36
47.435	1.9150	1.9198	0.180	1170	22	23.2	15.29
47.560	1.9103	1.9150	0.080	702	22	13.9	1.60
49.785	1.8300	1.8346	0.400	7	21	0.1	0.93
51.700	1.7666	1.7710	0.480	8	24	0.2	1.71
53.010	1.7260	1.7303	0.480	10	27	0.2	1.33
56.505	1.6273	1.6313	0.160	1673	30	33.2	15.17
56.685	1.6225	1.6266	0.080	724	30	14.4	1.28

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Angle [°2θ]	d-value a1 [Å]	d-value a2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
59.570	1.5507	1.5545	0.280	37	27	0.7	2.19
62.765	1.4792	1.4829	0.120	1482	27	29.4	9.70
62.950	1.4753	1.4789	0.060	686	26	13.6	3.86
64.960	1.4344	1.4380	0.120	27	26	0.5	1.53
66.275	1.4091	1.4126	0.160	225	25	4.5	5.39
67.860	1.3800	1.3834	0.160	1176	25	23.3	14.31
68.070	1.3762	1.3797	0.100	534	24	10.6	2.26
68.995	1.3600	1.3634	0.120	581	24	11.5	5.45
69.210	1.3563	1.3597	0.100	276	24	5.5	2.03
72.505	1.3026	1.3058	0.080	94	19	1.9	0.91
76.740	1.2409	1.2440	0.060	121	15	2.4	0.82
76.875	1.2391	1.2421	0.100	177	15	3.5	2.50
77.130	1.2356	1.2387	0.040	81	15	1.6	1.04
78.120	1.2224	1.2254	0.160	16	15	0.3	0.75
81.310	1.1823	1.1853	0.080	92	15	1.8	0.85

Lampiran 2

Hasil XRD TiO₂ Merck

File: DINTIO2.DI

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Philips Analytical X-Ray B.V.

Department of Metallurgy UI

Sample identification: dintio2
Data measured at: 21-Nov-2008 9:03:00

Diffractometer type: PW1710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: AUTOMATIC
Irradiated length [mm]: 12
Receiving slit: 0.2
Monochromator used: YES

Start angle [°2θ]: 5.000
End angle [°2θ]: 89.000
Step size [°2θ]: 0.020
Maximum intensity: 1936.000
Time per step [s]: 1.000
Type of scan: CONTINUOUS

Intensities converted to: FIXED

Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 25

Angle [°2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
25.185	3.5331	3.5419	0.100	1490	34	77.0	1.65
25.360	3.5092	3.5179	0.180	1936	34	100.0	18.22
27.440	3.2477	3.2558	0.160	24	28	1.2	0.91
36.990	2.4282	2.4342	0.200	130	14	6.7	5.29
37.840	2.3756	2.3815	0.220	428	13	22.1	15.80
38.610	2.3300	2.3358	0.080	125	13	6.5	0.82
44.655	2.0276	2.0326	0.320	4	9	0.2	1.39
48.055	1.8918	1.8965	0.240	635	8	32.8	23.61
53.925	1.6989	1.7031	0.100	384	8	19.8	2.35
55.100	1.6654	1.6695	0.160	357	8	18.5	6.95
62.075	1.4940	1.4977	0.100	71	6	3.6	1.20
62.610	1.4825	1.4862	0.100	210	6	10.9	1.35
62.745	1.4796	1.4833	0.080	243	7	12.6	1.35
68.735	1.3645	1.3679	0.140	102	5	5.3	3.09
69.005	1.3599	1.3632	0.120	50	5	2.6	1.12
70.305	1.3379	1.3412	0.160	121	5	6.2	5.18
74.050	1.2792	1.2824	0.160	10	5	0.5	1.09
75.065	1.2644	1.2675	0.220	177	5	9.1	10.18
75.290	1.2612	1.2643	0.080	92	5	4.8	2.50
76.065	1.2502	1.2533	0.120	53	5	2.8	1.63
76.330	1.2466	1.2497	0.060	23	5	1.2	0.76
80.810	1.1884	1.1913	0.400	7	4	0.4	2.53

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File: DINTI02.DI

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Angle [°2θ]	d-value a1 [Å]	d-value a2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
82.180	1.1720	1.1749	0.120	17	4	0.9	0.76
82.625	1.1668	1.1697	0.160	81	4	4.2	4.30
83.415	1.1577	1.1606	0.080	19	4	1.0	0.75



Lampiran 3

Hasil XRD TiO₂ Merck Anneal

File: DINTIO2.DI

27-Nov-2008 13:58

Philips Analytical X-Ray B.V.

Department of Metallurgy UI

Sample identification: dintio2
Data measured at: 21-Nov-2008 9:03:00

Diffraction type: PW1710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: AUTOMATIC
Irradiated length [mm]: 12
Receiving slit: 0.2
Monochromator used: YES

Start angle [°2θ]: 5.000
End angle [°2θ]: 89.000
Step size [°2θ]: 0.020
Maximum intensity: 1936.000
Time per step [s]: 1.000
Type of scan: CONTINUOUS
Intensities converted to: FIXED

Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 25

Angle [°2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
25.185	3.5331	3.5419	0.100	1490	34	77.0	1.65
25.360	3.5092	3.5179	0.180	1936	34	100.0	18.22
27.440	3.2477	3.2558	0.160	24	28	1.2	0.91
36.990	2.4282	2.4342	0.200	130	14	6.7	5.29
37.840	2.3756	2.3815	0.220	428	13	22.1	15.80
38.610	2.3300	2.3358	0.080	125	13	6.5	0.82
44.655	2.0276	2.0326	0.320	4	9	0.2	1.39
48.055	1.8918	1.8965	0.240	635	8	32.8	23.61
53.925	1.6989	1.7031	0.100	384	8	19.8	2.35
55.100	1.6654	1.6695	0.160	357	8	18.5	6.95
62.075	1.4940	1.4977	0.100	71	6	3.6	1.20
62.610	1.4825	1.4862	0.100	210	6	10.9	1.35
62.745	1.4796	1.4833	0.080	243	7	12.6	1.35
68.735	1.3645	1.3679	0.140	102	5	5.3	3.09
69.005	1.3599	1.3632	0.120	50	5	2.6	1.12
70.305	1.3379	1.3412	0.160	121	5	6.2	5.18
74.050	1.2792	1.2824	0.160	10	5	0.5	1.09
75.065	1.2644	1.2675	0.220	177	5	9.1	10.18
75.290	1.2612	1.2643	0.080	92	5	4.8	2.50
76.065	1.2502	1.2533	0.120	53	5	2.8	1.63
76.330	1.2466	1.2497	0.060	23	5	1.2	0.76
80.810	1.1884	1.1913	0.400	7	4	0.4	2.53

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File: BROADNG.D1

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Angle [°2 θ]	d-value a_1 [Å]	d-value a_2 [Å]	Peak width [°2 θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
75.115	1.2637	1.2668	0.140	231	4	6.2	8.97
75.355	1.2602	1.2634	0.100	125	4	3.4	1.76
76.115	1.2495	1.2526	0.080	66	4	1.8	1.22
76.325	1.2466	1.2497	0.060	44	4	1.2	1.77
80.830	1.1881	1.1911	0.160	12	4	0.3	1.27
82.210	1.1716	1.1745	0.120	21	4	0.6	1.82
82.720	1.1657	1.1686	0.120	100	4	2.7	3.99
83.020	1.1622	1.1651	0.080	62	4	1.7	0.98
83.240	1.1597	1.1626	0.120	49	4	1.3	1.89
83.505	1.1567	1.1596	0.120	26	4	0.7	1.88

