crystals

Supplementary Materials: From Rate Measurements to Mechanistic Data for Condensed Matter Reactions: A Case Study Using the Crystallization of $[Zn(OH_2)_6][ZnCl_4]$

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Table S1. M-KJMA parameters for all methods.

Method	T (K)	k (sec^{-1})	n	k′ (sec^{-1})	n′	t_0 (sec)	Weight (mg)	Volume (mL)	d/h	a_c	v_{pb} (μm/sec)
DSC pan											
	270	0.00261(2)	2.55(6)	0.00271(7)	2.629	290.9(8)	43	0.022	4.4	0.827	9.22
	270	0.002115(11)	2.18(3)	0.00216(7)	2.629	32(1.4)	43	0.022	4.4	0.827	7.35
	268	0.002513(4)	2.198(11)	0.00256(2)	2.569	16(2)	38	0.020	5.0	0.798	8.69
	268	0.002608(2)	2.07(5)	0.00269(2)	2.569	17(3)	38	0.020	5.0	0.798	9.13
	268	0.002402(5)	2.27(13)	0.00245(3)	2.569	19(3)	38	0.020	5.0	0.798	8.29
	268	0.003629(8)	2.12(15)	0.00362(15)	2.629	241.0(2)	43	0.022	4.4	0.827	12.3
	268	0.003179(2)	2.60(3)	0.003184(7)	2.629	250.(5)	43	0.022	4.4	0.827	10.8
	266	0.004985(6)	2.16(8)	0.00508(5)	2.532	31(1.4)	35	0.018	5.4	0.798	17.1
	266	0.004315(2)	2.45(3)	0.00437(12)	2.569	164.(5)	38	0.020	5.0	0.798	14.8
	266	0.004709(2)	2.41(4)	0.00475(15)	2.569	161.(5)	38	0.020	5.0	0.798	16.1
	266	0.003687(7)	2.34(15)	0.00370(2)	2.569	18(1.2)	38	0.020	5.0	0.798	12.5
	263	0.007458(6)	2.67(7)	0.00769(15)	2.532	307.(2)	35	0.018	5.4	0.779	26.0
	263	0.006077(8)	2.35(10)	0.00613(3)	2.532	626.(8)	35	0.018	5.4	0.779	20.7
	263	0.006796(3)	2.49(3)	0.006827(14)	2.569	159.(3)	38	0.020	5.0	0.798	23.1
	263	0.006906(4)	2.63(5)	0.00699(15)	2.569	160.(2)	38	0.020	5.0	0.798	23.7
	263	0.004842(3)	2.62(8)	0.00481(12)	2.629	304.(4)	43	0.022	4.4	0.827	16.4
	258	0.009094(8)	2.43(8)	0.00905(2)	2.532	1074.(2)	35	0.018	5.4	0.779	30.6
	258	0.007268(9)	2.38(9)	0.00744(7)	2.629	2332.(9)	43	0.022	4.4	0.827	25.3
	258	0.005702(4)	2.93(14)	0.00609(4)	2.629	387.(8)	43	0.022	4.4	0.827	20.8
	253	0.00882(2)	2.74(2)	0.00922(7)	2.532	2298.(6)	35	0.018	5.4	0.779	31.1

	248	0.01003(14)	2.95(15)	0.01094(6)	2.532	338.(4)	35	0.018	5.4	0.779	36.9
	248	0.009723(2)	2.39(14)	0.0099(10)	2.66	1387.(8)	46	0.024	4.1	0.845	34.1
	248	0.009093(3)	2.64(3)	0.00911(10)	2.66	1335.(1)	46	0.024	4.1	0.845	31.1
	248	0.009092(8)	2.62(8)	0.00913(2)	2.66	597.(2)	46	0.024	4.1	0.845	31.2
DSC Capillary											
	243	0.018795(11)	2.14(3)	0.01829(2)	2.268	297.5(4)	-	0.003	0.12	0.803	33.8
	243	0.010318(2)	2.5(2)	0.01043(9)	2.268	474.(6)	-	0.003	0.12	0.803	19.3
	243	0.018996(3)	2.21(9)	0.01912(9)	2.268	465.(2)	-	0.003	0.12	0.803	35.4
	243	0.015094(13)	2.21(6)	0.01529(5)	2.268	352.(15)	-	0.003	0.12	0.803	29.0
Video											
	241	-	-	-	-	-	-	-	-	-	25.4
	242	-	-	-	-	-	-	-	-	-	36.1
	242	-	-	-	-	-	-	-	-	-	23.7
	242	-	-	-	-	-	-	-	-	-	36.9
	247	-	-	-	-	-	-	-	-	-	38.3
	246	-	-	-	-	-	-	-	-	-	45.4
	247	-	-	-	-	-	-	-	-	-	38.0
	245	-	-	-	-	-	-	-	-	-	41.4
	250	-	-	-	-	-	-	-	-	-	26.3
X-Ray											
	243	0.024(10)	3	-	-	126.(2)	-	1.82E-04	1	-	13.6
	238	0.042(6)	3	-	-	64.8(2)	-	1.82E-04	1	-	24.2
	243	0.051(2)	3	-	-	107.(1)	-	1.82E-04	1	-	29.1
	244	0.052(4)	3	-	-	11(2)	-	1.82E-04	1	-	29.7
Neutron											
	233	0.0028(12)	3	-	-	1(11)	-	0.12469	1	-	14.0
	233	0.003(3)	3	-	-	16(8)	-	0.12469	1	-	16.1
	238	0.00196(3)	3			28(7)					9.79
	238	0.0049(11)	3	-	-	15(4)	-	0.12469	1	-	24.7
	238	0.004252(9)	3	-	-	20(5)	-	0.12469	1	-	21.2

Table S2. Raw data for single peak analysis and solved KJMA parameters.

x	y	Q	Final Intensity	k	t_0
112	625	6.384	397036.4	0.103(0.007)	66(0.5)
273	1595	5.930	212270.7	0.138(0.006)	70(0.2)
304	1425	5.245	274288.2	0.128(0.003)	68.6(0.14)
334	1256	4.699	270776.9	0.102(0.004)	67(0.3)
348	615	5.154	394336.4	0.14(0.014)	69(0.5)
478	1749	5.649	334171.1	0.080(0.004)	66(0.6)
507	1578	4.771	213793.6	0.12(0.014)	66(0.6)
566	1241	3.323	409874.7	0.080(0.004)	67(0.3)
580	603	4.060	373308.2	0.100(0.004)	66(0.3)
711	1732	4.784	217256.7	0.075(0.004)	71(0.6)
803	909	1.826	325078.8	0.081(0.004)	65(0.5)
983	109	5.789	442157.2	0.084(0.006)	64(0.6)
1097	1890	5.235	179258.7	0.072(0.006)	74(0.9)
1177	1380	2.216	487945.8	0.084(0.005)	64(0.5)
1212	897	1.315	575650.5	0.102(0.006)	66(0.6)
1386	1215	2.287	509772.5	0.100(0.008)	66(0.5)
1405	578	3.602	381144.6	0.076(0.001)	69(0.2)
1793	730	4.928	293514.9	0.09(0.05)	70(4)

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