

APPENDIX TABLE 2a. Annealing data for apatite RN

<i>t</i> (h)	<i>T</i> (°C)	Run	<i>n</i>	Cf	Measured		Fitted			Modeled	
					<i>l_m</i> (μm)	σ_m	<i>l_c</i> (μm)	<i>l_a</i> (μm)	σ_e	<i>l_{c,mod}</i> (μm)	$\sigma_{c,mod}$
1		0	110	n	16.29 (07)	0.77	16.41 (23)	16.23 (13)	0.77	16.57 (05)	0.56
1	125	61	111	n	16.30 (07)	0.70	16.44 (22)	16.24 (12)	0.70	16.58 (05)	0.50
1	150	62	108	n	16.05 (08)	0.79	16.45 (23)	15.89 (11)	0.78	16.41 (05)	0.56
1	150	64	111	n	15.86 (08)	0.82	16.31 (25)	15.70 (11)	0.81	16.30 (05)	0.57
1	175	10	110	n	15.80 (08)	0.84	16.24 (24)	15.64 (11)	0.83	16.25 (06)	0.58
1	176	43	110	n	15.54 (08)	0.81	16.26 (26)	15.28 (11)	0.78	16.07 (05)	0.54
1	202	4	110	n	15.42 (07)	0.71	15.56 (24)	15.36 (12)	0.71	15.97 (05)	0.51
1	225	9	110	n	15.22 (07)	0.73	15.95 (23)	14.91 (11)	0.69	15.84 (05)	0.48
1	249	5	110	n	14.36 (08)	0.79	14.90 (23)	14.12 (12)	0.77	15.23 (05)	0.55
1	250	34	110	n	14.61 (06)	0.67	15.36 (22)	14.25 (12)	0.62	15.39 (04)	0.44
1	250	35	110	n	14.83 (07)	0.73	15.89 (26)	14.46 (10)	0.65	15.60 (04)	0.46
1	276	19	110	n	14.05 (07)	0.76	15.02 (23)	13.59 (12)	0.68	15.00 (05)	0.48
1	301	20	110	n	13.01 (08)	0.78	14.32 (22)	12.38 (11)	0.60	14.27 (04)	0.44
1	326	21	109	n	10.50 (10)	1.09	12.69 (26)	9.59 (10)	0.77	12.65 (04)	0.45
1	350	63	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	351	22	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	376	28	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	400	29	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
2	126	51	110	n	16.01 (08)	0.87	16.41 (23)	15.81 (13)	0.86	16.37 (06)	0.62
2	150	52	127	n	15.86 (08)	0.86	16.07 (19)	15.77 (11)	0.85	16.27 (05)	0.61
10	100	53	110	n	16.20 (08)	0.80	16.37 (21)	16.10 (13)	0.80	16.49 (06)	0.58
10	125	54	113	n	15.86 (08)	0.90	16.24 (21)	15.67 (12)	0.89	16.26 (06)	0.64
10	151	32	110	n	15.81 (07)	0.72	16.32 (21)	15.56 (12)	0.69	16.23 (05)	0.50
10	175	12	111	n	15.25 (08)	0.80	15.67 (20)	15.04 (12)	0.78	15.83 (05)	0.56
10	200	65	110	n	15.32 (07)	0.70	15.93 (25)	15.06 (12)	0.67	15.90 (04)	0.46
10	202	2	110	n	15.36 (07)	0.71	16.24 (27)	15.03 (12)	0.66	15.95 (04)	0.46
10	225	11	112	n	14.59 (07)	0.77	15.16 (23)	14.36 (11)	0.75	15.40 (05)	0.52
10	250	36	110	n	13.99 (08)	0.80	15.02 (24)	13.57 (11)	0.72	14.99 (05)	0.49
10	251	1	110	n	13.80 (07)	0.77	15.02 (28)	13.42 (10)	0.69	14.91 (04)	0.47
10	251	37	110	n	14.12 (07)	0.76	15.14 (26)	13.70 (12)	0.69	15.08 (05)	0.48
10	275	23	110	n	12.41 (09)	0.94	14.44 (29)	11.76 (10)	0.74	13.96 (05)	0.50
10	300	*24	110	n	9.37 (23)	2.41	12.71 (29)	8.63 (17)	0.89	12.18 (05)	0.52
10	325	25	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
10	350	26	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
10	375	30	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	75	55	110	n	16.05 (09)	0.92	16.49 (20)	15.81 (12)	0.90	16.39 (06)	0.65
100	75	58	110	n	15.94 (08)	0.84	16.86 (26)	15.66 (10)	0.80	16.37 (05)	0.57
100	101	56	110	n	15.89 (07)	0.76	16.10 (22)	15.81 (11)	0.76	16.30 (05)	0.53
100	125	68	110	n	15.70 (08)	0.82	16.16 (23)	15.50 (12)	0.80	16.17 (06)	0.58
100	126	27	110	n	15.68 (07)	0.69	16.26 (29)	15.51 (11)	0.67	16.19 (04)	0.46
100	150	33	110	n	15.62 (07)	0.69	15.99 (24)	15.46 (12)	0.68	16.11 (04)	0.46
100	175	14	110	n	15.17 (08)	0.80	16.37 (23)	14.64 (11)	0.67	15.80 (05)	0.49
100	175	69	110	n	15.29 (07)	0.71	15.91 (26)	15.08 (11)	0.68	15.91 (04)	0.47
100	202	3	110	n	14.76 (07)	0.75	15.90 (28)	14.38 (11)	0.67	15.55 (04)	0.46
100	225	13	110	n	13.81 (07)	0.77	14.99 (27)	13.39 (11)	0.68	14.89 (04)	0.46
100	225	70	110	n	13.91 (08)	0.83	15.01 (28)	13.54 (11)	0.77	14.97 (05)	0.54
100	250	15	110	n	12.11 (09)	0.92	13.87 (22)	11.39 (10)	0.65	13.69 (04)	0.46
100	250	50	110	n	12.30 (08)	0.86	14.08 (27)	11.56 (11)	0.65	13.81 (04)	0.45
100	251	6	110	n	12.24 (08)	0.86	13.38 (20)	11.65 (11)	0.71	13.71 (05)	0.50
100	251	8	110	n	12.14 (09)	0.98	13.84 (25)	11.50 (10)	0.80	13.74 (05)	0.53
100	275	*16	110	n	8.71 (26)	2.75	12.17 (27)	8.49 (17)	0.89	11.96 (05)	0.51
100	275	*71	110	y	9.41 (15)	1.53	11.45 (24)	8.14 (19)	0.91	11.68 (05)	0.54
100	275	71	110	n	8.28 (23)	2.45	11.25 (29)	8.30 (27)	1.12	11.76 (05)	0.55
100	300	17	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	326	31	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	350	57	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	100	59	110	n	15.92 (08)	0.78	16.08 (28)	15.86 (11)	0.78	16.33 (05)	0.53
1000	125	39	110	n	15.59 (07)	0.78	16.29 (25)	15.24 (13)	0.75	16.08 (05)	0.54
1000	150	41	110	n	15.00 (07)	0.72	15.66 (25)	14.76 (11)	0.69	15.70 (04)	0.47
1000	175	42	110	n	14.85 (07)	0.69	15.89 (27)	14.46 (11)	0.63	15.60 (04)	0.44
1000	200	44	110	n	14.29 (08)	0.80	15.52 (22)	13.73 (11)	0.66	15.18 (05)	0.48
1000	225	45	110	n	12.17 (08)	0.82	13.64 (22)	11.50 (11)	0.62	13.70 (04)	0.43
1000	250	*48	110	n	9.09 (22)	2.27	12.60 (28)	8.18 (13)	0.73	11.99 (04)	0.39
1000	250	49	110	n	11.29 (11)	1.14	13.77 (24)	10.16 (10)	0.69	13.08 (05)	0.49
1000	250	*67	110	y	9.65 (17)	1.83	12.35 (25)	7.80 (16)	0.85	11.83 (05)	0.53
1000	251	*38	109	n	8.66 (25)	2.56	11.82 (31)	8.94 (34)	0.69	11.90 (04)	0.44
1000	275	**46	29	y	7.00 (38)	2.05	9.88 (182)	1.53 (115)	3.40	9.73 (09)	0.46
1000	275	66	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	300	47	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	

APPENDIX TABLE 2b. Annealing data for apatite DR

<i>t</i> (h)	<i>T</i> (°C)	Run	n	Cf	Measured		Fitted			Modeled	
					<i>l_m</i> (μm)	σ_m	<i>l_c</i> (μm)	<i>l_a</i> (μm)	σ_e	<i>l_{c,mod}</i> (μm)	$\sigma_{c,mod}$
1		0	110	n	16.21 (07)	0.75	16.49 (23)	16.09 (12)	0.75	16.52 (05)	0.52
1	125	61	116	n	16.02 (08)	0.81	16.70 (25)	15.77 (11)	0.78	16.40 (05)	0.55
1	150	62	110	n	15.94 (08)	0.80	16.44 (22)	15.74 (10)	0.78	16.34 (05)	0.54
1	150	64	110	n	15.99 (07)	0.78	16.28 (19)	15.84 (11)	0.77	16.35 (05)	0.56
1	175	10	110	n	15.72 (07)	0.72	16.43 (21)	15.35 (12)	0.67	16.17 (05)	0.49
1	176	43	110	n	15.71 (07)	0.75	16.21 (22)	15.48 (12)	0.73	16.17 (05)	0.51
1	202	4	110	n	15.52 (07)	0.70	15.82 (18)	15.36 (11)	0.68	16.01 (05)	0.49
1	225	9	110	n	15.27 (07)	0.71	15.97 (22)	14.90 (12)	0.66	15.84 (04)	0.47
1	249	5	110	n	14.94 (07)	0.75	15.64 (22)	14.64 (11)	0.70	15.64 (05)	0.49
1	250	34	110	n	15.00 (08)	0.81	15.71 (21)	14.63 (12)	0.77	15.65 (05)	0.54
1	250	35	110	n	15.23 (07)	0.77	15.86 (20)	14.89 (12)	0.73	15.81 (05)	0.55
1	276	19	110	n	14.31 (07)	0.76	15.23 (20)	13.87 (11)	0.67	15.18 (04)	0.46
1	301	20	110	n	13.46 (08)	0.83	14.52 (19)	12.92 (11)	0.69	14.57 (05)	0.51
1	326	21	110	n	11.87 (09)	0.97	13.43 (24)	11.28 (10)	0.81	13.57 (05)	0.52
1	350	63	110	y	10.03 (15)	1.53	11.94 (20)	8.43 (19)	0.79	11.91 (05)	0.54
1	350	**63	110	n	8.29 (25)	2.66	10.49 (23)	9.22 (32)	1.74	11.79 (05)	0.54
1	351	**22	109	n	8.14 (26)	2.72	11.02 (22)	8.70 (30)	0.82	11.61 (05)	0.54
1	376	28	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	400	29	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
2	126	51	110	n	15.96 (07)	0.72	16.32 (24)	15.81 (11)	0.71	16.35 (05)	0.49
2	150	52	110	n	16.00 (07)	0.73	16.26 (23)	15.90 (11)	0.73	16.38 (05)	0.50
10	100	53	110	n	16.18 (08)	0.81	16.25 (19)	16.14 (12)	0.81	16.48 (06)	0.58
10	125	54	110	n	16.12 (08)	0.87	16.20 (25)	16.09 (12)	0.87	16.46 (06)	0.60
10	151	32	110	n	15.83 (08)	0.80	16.22 (22)	15.68 (11)	0.79	16.26 (05)	0.56
10	175	12	111	n	15.39 (08)	0.87	16.08 (19)	15.01 (12)	0.82	15.93 (06)	0.62
10	200	65	110	n	15.28 (08)	0.85	15.86 (22)	15.03 (11)	0.82	15.88 (06)	0.60
10	202	2	110	n	15.12 (08)	0.82	15.98 (23)	14.76 (11)	0.77	15.77 (05)	0.53
10	225	11	113	n	14.96 (07)	0.76	15.74 (20)	14.60 (11)	0.70	15.64 (05)	0.50
10	250	36	110	n	14.29 (07)	0.73	15.25 (26)	13.95 (11)	0.66	15.22 (04)	0.46
10	251	1	111	n	14.07 (06)	0.67	15.17 (30)	13.70 (11)	0.61	15.08 (04)	0.42
10	251	37	110	n	14.35 (07)	0.75	14.62 (22)	14.22 (12)	0.75	15.21 (05)	0.54
10	275	23	110	n	13.30 (08)	0.81	14.67 (26)	12.80 (11)	0.68	14.54 (04)	0.45
10	300	24	110	n	11.44 (09)	0.98	13.28 (25)	10.68 (11)	0.75	13.23 (05)	0.49
10	325	*25	110	y	9.37 (16)	1.69	11.74 (24)	8.14 (14)	0.89	11.84 (05)	0.55
10	350	26	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
10	375	30	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	75	55	110	n	15.99 (09)	0.92	16.49 (22)	15.78 (11)	0.90	16.37 (06)	0.63
100	75	58	110	n	16.03 (07)	0.71	16.25 (24)	15.95 (11)	0.71	16.40 (05)	0.49
100	101	56	110	n	16.07 (08)	0.79	16.57 (23)	15.86 (12)	0.77	16.43 (05)	0.54
100	125	68	111	n	15.76 (07)	0.75	16.35 (21)	15.52 (11)	0.72	16.21 (05)	0.52
100	126	27	110	n	15.84 (07)	0.70	16.23 (21)	15.67 (11)	0.69	16.26 (05)	0.49
100	150	33	110	n	15.77 (07)	0.74	16.33 (22)	15.53 (11)	0.71	16.22 (05)	0.50
100	175	14	110	n	15.28 (07)	0.77	15.77 (19)	15.01 (12)	0.75	15.84 (05)	0.53
100	175	69	110	n	15.36 (07)	0.71	16.01 (25)	15.12 (11)	0.68	15.95 (04)	0.47
100	202	3	110	n	14.55 (07)	0.70	14.86 (20)	14.40 (12)	0.69	15.34 (05)	0.50
100	225	13	110	n	14.44 (06)	0.67	15.12 (22)	14.07 (12)	0.62	15.25 (04)	0.44
100	225	70	109	n	14.30 (07)	0.73	15.10 (26)	14.01 (11)	0.69	15.22 (04)	0.46
100	250	15	110	n	13.01 (08)	0.79	14.07 (24)	12.50 (12)	0.70	14.27 (04)	0.47
100	250	50	110	n	13.40 (07)	0.78	14.44 (20)	12.88 (11)	0.65	14.53 (04)	0.47
100	251	6	110	n	13.59 (08)	0.81	14.63 (21)	13.08 (11)	0.71	14.67 (05)	0.50
100	251	8	110	n	13.08 (09)	0.89	14.42 (23)	12.49 (11)	0.75	14.34 (05)	0.53
100	275	16	110	n	11.12 (10)	1.07	13.16 (24)	10.15 (11)	0.76	12.95 (05)	0.52
100	275	71	110	n	11.40 (09)	0.96	13.01 (23)	10.75 (10)	0.76	13.22 (05)	0.49
100	300	*17	111	y	7.16 (25)	2.68	10.53 (28)	6.57 (44)	0.93	10.78 (05)	0.53
100	326	31	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	350	57	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	100	59	110	n	15.99 (08)	0.82	16.35 (20)	15.81 (11)	0.81	16.35 (06)	0.58
1000	125	39	110	n	15.72 (08)	0.80	15.95 (21)	15.61 (12)	0.79	16.17 (05)	0.55
1000	150	41	110	n	15.24 (07)	0.73	15.49 (21)	15.12 (11)	0.72	15.83 (05)	0.52
1000	175	42	110	n	15.12 (07)	0.70	15.76 (20)	14.78 (12)	0.66	15.73 (04)	0.47
1000	200	44	110	n	14.55 (06)	0.65	15.11 (21)	14.29 (11)	0.62	15.35 (04)	0.45
1000	225	45	110	n	13.16 (08)	0.86	14.40 (22)	12.59 (11)	0.71	14.39 (05)	0.49
1000	250	48	110	n	11.65 (09)	0.99	13.15 (22)	10.99 (10)	0.81	13.35 (06)	0.58
1000	250	49	110	n	12.68 (08)	0.80	13.96 (20)	11.94 (12)	0.60	13.98 (04)	0.44
1000	250	67	110	n	10.83 (10)	1.02	12.51 (26)	10.18 (11)	0.87	12.88 (05)	0.54
1000	251	38	110	n	11.19 (09)	0.98	13.15 (25)	10.42 (10)	0.71	13.09 (04)	0.46
1000	275	*46	111	y	8.76 (24)	2.53	11.43 (22)	8.02 (22)	0.93	11.53 (06)	0.59
1000	275	*66	110	y	9.49 (16)	1.66	10.88 (16)	7.56 (36)	0.78	11.09 (07)	0.71
1000	275	**66	58	n	7.44 (42)	3.16	11.74 (47)	7.75 (70)	0.45	11.31 (07)	0.54
1000	300	47	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	

APPENDIX TABLE 2c. Annealing data for apatite B3

<i>t</i> (h)	<i>T</i> (°C)	Run	n	Cf	Measured		Fitted			Modeled	
					<i>l_m</i> (μm)	σ_m	<i>l_c</i> (μm)	<i>l_a</i> (μm)	σ_a	<i>l_{c,mod}</i> (μm)	$\sigma_{c,mod}$
		0	110	n	16.93 (08)	0.86	17.43 (13)	16.46 (12)	0.79	17.04 (06)	0.67
1	125	61	110	n	16.75 (08)	0.82	17.05 (13)	16.45 (13)	0.79	16.88 (06)	0.65
1	150	62	110	n	16.53 (08)	0.87	16.84 (14)	16.29 (12)	0.85	16.72 (06)	0.66
1	150	64	111	n	16.56 (08)	0.87	16.81 (13)	16.32 (13)	0.86	16.73 (06)	0.66
1	175	10	108	n	16.38 (09)	0.90	17.01 (16)	15.96 (11)	0.83	16.63 (06)	0.65
1	176	43	110	n	16.29 (08)	0.79	16.65 (16)	16.05 (12)	0.77	16.55 (06)	0.59
1	202	4	110	n	16.30 (07)	0.77	16.42 (14)	16.21 (12)	0.77	16.53 (06)	0.58
1	225	9	110	n	15.97 (07)	0.76	16.32 (15)	15.65 (13)	0.73	16.28 (05)	0.56
1	249	5	110	n	15.66 (08)	0.78	16.01 (14)	15.39 (12)	0.76	16.07 (05)	0.57
1	250	34	110	n	15.52 (08)	0.87	16.04 (16)	15.17 (11)	0.83	15.99 (06)	0.61
1	250	35	110	n	15.49 (07)	0.74	15.87 (13)	15.13 (12)	0.69	15.91 (05)	0.54
1	276	19	112	n	15.03 (09)	0.95	15.39 (15)	14.74 (12)	0.93	15.60 (07)	0.69
1	301	20	110	n	14.50 (09)	0.98	15.24 (14)	13.85 (12)	0.87	15.19 (06)	0.68
1	326	21	110	n	13.36 (10)	0.99	14.34 (15)	12.54 (12)	0.81	14.35 (06)	0.61
1	350	63	114	y	11.82 (09)	0.98	12.67 (14)	11.05 (12)	0.82	13.17 (06)	0.65
1	350	63	67	n	11.93 (15)	1.18	13.16 (19)	11.04 (14)	0.94	13.34 (08)	0.68
1	351	22	110	n	12.13 (11)	1.10	13.31 (15)	11.10 (12)	0.84	13.42 (06)	0.62
1	376	*28	110	y	9.49 (22)	2.36	11.96 (20)	8.56 (27)	0.92	11.89 (06)	0.64
1	400	29	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
2	126	51	109	n	16.79 (09)	0.96	17.02 (13)	16.54 (14)	0.95	16.90 (07)	0.75
2	150	52	109	n	16.55 (08)	0.83	16.80 (14)	16.36 (12)	0.82	16.73 (06)	0.61
10	100	53	110	n	16.59 (09)	0.92	16.91 (15)	16.33 (12)	0.91	16.76 (07)	0.70
10	125	54	111	n	16.75 (09)	0.95	16.99 (15)	16.56 (12)	0.94	16.88 (07)	0.73
10	151	32	110	n	16.31 (09)	0.93	16.70 (14)	16.01 (11)	0.89	16.57 (07)	0.72
10	175	12	110	n	16.06 (09)	0.96	16.53 (14)	15.65 (12)	0.92	16.37 (07)	0.73
10	200	65	111	n	16.07 (08)	0.83	16.36 (15)	15.83 (13)	0.81	16.37 (06)	0.61
10	202	2	110	n	15.92 (08)	0.86	16.46 (15)	15.50 (12)	0.80	16.27 (06)	0.61
10	225	11	111	n	15.41 (08)	0.80	15.95 (15)	14.92 (13)	0.74	15.87 (05)	0.57
10	250	36	110	n	14.93 (08)	0.84	15.67 (14)	14.34 (12)	0.71	15.54 (05)	0.54
10	251	1	110	n	14.77 (08)	0.83	15.50 (16)	14.30 (11)	0.74	15.46 (05)	0.55
10	251	37	110	n	14.93 (07)	0.73	15.32 (16)	14.65 (12)	0.70	15.54 (05)	0.51
10	275	23	108	n	14.19 (10)	1.04	15.25 (14)	13.36 (11)	0.81	15.00 (06)	0.64
10	300	24	110	n	12.96 (08)	0.89	13.87 (15)	12.28 (12)	0.73	14.08 (05)	0.54
10	325	25	111	n	11.75 (12)	1.30	13.05 (14)	10.45 (12)	1.02	13.07 (07)	0.79
10	350	*26	108	y	9.31 (24)	2.50	11.76 (17)	6.77 (30)	1.07	11.39 (07)	0.72
10	375	30	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	75	55	109	n	16.73 (09)	0.89	17.14 (15)	16.39 (13)	0.86	16.87 (06)	0.67
100	75	58	109	n	16.61 (07)	0.76	17.00 (16)	16.32 (12)	0.73	16.79 (05)	0.57
100	101	56	110	n	16.60 (09)	0.91	16.87 (14)	16.37 (12)	0.89	16.77 (06)	0.68
100	125	68	110	n	16.31 (09)	0.91	16.81 (15)	15.93 (12)	0.87	16.56 (06)	0.63
100	126	27	110	n	16.30 (08)	0.88	16.46 (14)	16.15 (13)	0.87	16.53 (06)	0.66
100	150	33	110	n	16.23 (08)	0.81	16.68 (14)	15.81 (13)	0.76	16.49 (06)	0.59
100	175	14	110	n	15.85 (09)	0.94	16.32 (13)	15.41 (12)	0.89	16.20 (06)	0.68
100	175	69	111	n	15.76 (08)	0.84	15.79 (16)	15.74 (12)	0.84	16.15 (06)	0.62
100	202	3	110	n	15.37 (08)	0.82	16.18 (17)	14.86 (11)	0.71	15.90 (05)	0.51
100	225	13	110	n	14.80 (09)	0.97	15.36 (13)	14.18 (13)	0.90	15.36 (06)	0.67
100	225	70	110	n	14.88 (09)	0.89	15.55 (15)	14.41 (12)	0.81	15.52 (06)	0.60
100	250	15	110	n	14.28 (10)	1.10	15.36 (15)	13.51 (11)	0.93	15.09 (07)	0.73
100	250	50	110	n	14.00 (09)	0.91	14.85 (17)	13.49 (11)	0.81	14.91 (06)	0.59
100	251	6	110	n	13.95 (08)	0.87	14.61 (15)	13.45 (12)	0.79	14.81 (06)	0.60
100	251	8	110	n	13.94 (08)	0.83	14.71 (15)	13.32 (12)	0.71	14.79 (05)	0.54
100	275	16	109	n	13.02 (10)	1.03	13.97 (15)	12.22 (12)	0.88	14.10 (06)	0.64
100	275	71	112	n	13.11 (11)	1.14	14.01 (13)	12.25 (12)	0.98	14.12 (07)	0.73
100	300	17	105	n	11.36 (12)	1.18	12.83 (16)	10.11 (12)	0.82	12.87 (06)	0.59
100	326	*31	115	y	9.60 (24)	2.52	11.93 (17)	7.20 (37)	1.23	11.51 (08)	0.91
100	350	57	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	100	59	114	n	16.35 (07)	0.75	16.41 (14)	16.30 (12)	0.75	16.56 (05)	0.57
1000	125	39	110	n	16.25 (08)	0.89	16.82 (14)	15.79 (12)	0.82	16.52 (06)	0.64
1000	150	41	110	n	15.72 (09)	0.94	16.35 (15)	15.28 (11)	0.88	16.14 (07)	0.70
1000	175	42	110	n	15.41 (09)	0.89	15.95 (14)	14.98 (12)	0.83	15.89 (06)	0.66
1000	200	44	110	n	15.01 (08)	0.89	15.44 (14)	14.59 (13)	0.85	15.54 (06)	0.65
1000	225	45	110	n	14.02 (07)	0.76	14.59 (15)	13.49 (13)	0.68	14.80 (05)	0.55
1000	250	48	110	n	13.04 (10)	1.01	14.22 (16)	12.17 (12)	0.81	14.16 (06)	0.61
1000	250	49	110	n	13.60 (09)	0.95	14.55 (15)	12.73 (13)	0.78	14.50 (06)	0.61
1000	250	67	111	n	12.97 (11)	1.10	14.10 (14)	11.98 (12)	0.85	14.05 (06)	0.65
1000	251	38	110	n	12.92 (10)	1.07	14.07 (16)	12.13 (11)	0.89	14.09 (06)	0.63
1000	275	46	110	n	11.93 (11)	1.16	13.13 (14)	10.85 (12)	0.90	13.26 (06)	0.65
1000	275	66	115	y	11.38 (13)	1.44	13.20 (15)	9.98 (11)	0.99	12.95 (07)	0.70
1000	275	66	111	n	11.53 (13)	1.37	13.11 (16)	10.37 (11)	1.05	13.09 (07)	0.70
1000	300	*47	109	y	10.12 (18)	1.89	11.59 (15)	7.33 (29)	1.02	11.40 (08)	0.82
1000	325	60	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	

APPENDIX TABLE 2d. Annealing data for apatite HS

t (h)	T (°C)	Run	n	Cf	Measured		Fitted			Modeled	
					l_m (μm)	σ_m	l_c (μm)	l_a (μm)	σ_a	$l_{c,\text{mod}}$ (μm)	$\sigma_{c,\text{mod}}$
1	125	0	79	n	16.38 (09)	0.78	16.63 (17)	16.21 (13)	0.77	16.61 (06)	0.57
1	125	61	111	y	16.59 (09)	0.90	16.93 (18)	16.44 (10)	0.89	16.79 (06)	0.64
1	150	62	110	y	16.45 (08)	0.78	16.53 (16)	16.40 (10)	0.78	16.66 (06)	0.58
1	150	64	108	y	15.99 (09)	0.92	16.55 (15)	15.63 (11)	0.86	16.35 (06)	0.65
1	175	10	110	n	15.43 (10)	1.00	15.63 (15)	15.28 (12)	0.99	15.89 (07)	0.75
1	176	43	110	n	15.62 (08)	0.82	15.61 (14)	15.63 (11)	0.82	16.03 (06)	0.66
1	202	4	110	n	15.38 (08)	0.85	15.66 (15)	15.21 (11)	0.84	15.88 (06)	0.62
1	225	9	110	n	15.05 (08)	0.82	15.53 (16)	14.77 (11)	0.77	15.66 (06)	0.58
1	249	5	110	n	14.56 (08)	0.83	15.16 (15)	14.15 (11)	0.75	15.28 (05)	0.57
1	250	34	110	y	14.62 (06)	0.64	15.09 (18)	14.39 (11)	0.60	15.39 (04)	0.43
1	250	35	110	y	14.82 (08)	0.83	15.27 (16)	14.55 (11)	0.79	15.49 (05)	0.56
1	276	19	110	n	13.71 (08)	0.84	14.11 (15)	13.43 (11)	0.81	14.65 (06)	0.66
1	301	20	110	n	12.16 (08)	0.84	12.84 (16)	11.75 (11)	0.76	13.59 (06)	0.61
1	326	21*	110	y	7.75 (18)	1.94	9.10 (17)	6.37 (73)	0.97	10.22 (09)	0.95
1	350	63	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	351	22	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	376	28	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1	400	29	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
2	126	51	110	y	16.04 (08)	0.86	16.42 (16)	15.84 (10)	0.84	16.39 (06)	0.60
2	150	52	110	y	16.01 (08)	0.84	16.41 (16)	15.80 (10)	0.82	16.37 (05)	0.56
10	100	53	110	y	16.45 (08)	0.89	16.60 (15)	16.36 (11)	0.88	16.66 (06)	0.66
10	125	54	110	y	16.09 (10)	1.01	16.17 (16)	16.05 (11)	1.01	16.40 (07)	0.78
10	151	32	110	y	15.81 (09)	0.91	16.44 (19)	15.54 (10)	0.86	16.25 (06)	0.60
10	175	12	110	n	15.29 (08)	0.85	15.61 (15)	15.08 (11)	0.83	15.81 (06)	0.64
10	200	65	114	y	15.22 (08)	0.81	15.61 (15)	14.99 (11)	0.78	15.78 (05)	0.58
10	202	2	111	n	14.99 (08)	0.83	15.45 (16)	14.72 (11)	0.80	15.62 (06)	0.59
10	225	11	110	n	14.24 (08)	0.88	14.85 (16)	13.91 (10)	0.83	15.10 (06)	0.60
10	250	36	112	y	13.41 (07)	0.76	14.16 (19)	13.08 (10)	0.69	14.56 (05)	0.51
10	251	1	110	n	13.17 (08)	0.79	13.77 (17)	12.84 (10)	0.73	14.33 (05)	0.56
10	251	37	110	n	13.75 (08)	0.81	14.23 (15)	13.43 (11)	0.77	14.69 (06)	0.59
10	275	23	110	y	11.87 (09)	0.96	12.84 (16)	11.34 (10)	0.82	13.41 (06)	0.63
10	300	24*	110	y	7.78 (22)	2.31	9.72 (16)	6.53 (36)	1.07	10.64 (08)	0.84
10	325	25	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
10	350	26	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
10	375	30	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	75	55	110	y	16.39 (09)	0.94	16.63 (15)	16.24 (11)	0.93	16.62 (07)	0.69
100	75	58	112	y	16.65 (09)	0.90	17.29 (22)	16.44 (10)	0.87	16.84 (06)	0.60
100	101	56	110	y	16.13 (07)	0.77	16.32 (16)	16.03 (11)	0.76	16.44 (05)	0.57
100	125	68	111	y	15.95 (08)	0.87	16.05 (15)	15.89 (11)	0.87	16.29 (06)	0.66
100	126	27	110	y	15.93 (08)	0.82	16.30 (16)	15.73 (10)	0.79	16.31 (06)	0.59
100	150	33	110	y	15.56 (07)	0.73	15.98 (16)	15.33 (11)	0.70	16.04 (05)	0.53
100	175	14	110	n	15.08 (08)	0.81	15.36 (14)	14.85 (12)	0.80	15.61 (06)	0.62
100	175	69	110	y	15.20 (08)	0.83	15.65 (16)	14.96 (10)	0.80	15.78 (06)	0.58
100	202	3	110	n	14.17 (07)	0.78	14.56 (15)	13.94 (11)	0.75	15.01 (05)	0.57
100	225	13	110	n	13.44 (08)	0.84	13.90 (14)	13.08 (12)	0.79	14.41 (06)	0.64
100	225	70	112	y	13.65 (08)	0.87	13.70 (13)	13.60 (12)	0.87	14.53 (08)	0.81
100	250	15	111	n	11.76 (10)	1.06	12.86 (15)	11.01 (11)	0.85	13.26 (06)	0.63
100	250	50	83	n	11.34 (09)	0.84	12.29 (19)	10.83 (12)	0.69	13.05 (06)	0.56
100	251	6	110	n	11.36 (11)	1.11	12.46 (15)	10.60 (11)	0.90	12.97 (06)	0.64
100	251	8	111	n	11.42 (11)	1.12	12.44 (15)	10.56 (12)	0.93	12.93 (07)	0.73
100	275	16*	110	y	9.12 (19)	1.96	11.01 (19)	8.38 (50)	0.94	11.70 (07)	0.73
100	275	71	30	y	8.54 (35)	1.92	9.53 (20)	6.77 (58)	1.09	9.99 (19)	1.05
100	300	17	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	326	31	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
100	350	57	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	100	59	111	y	16.28 (08)	0.83	16.74 (16)	16.00 (11)	0.80	16.55 (06)	0.59
1000	125	39	84	n	15.36 (09)	0.82	15.75 (17)	15.07 (13)	0.79	15.85 (06)	0.58
1000	150	41	110	n	15.08 (08)	0.82	15.58 (15)	14.78 (11)	0.78	15.68 (06)	0.58
1000	175	42	110	n	14.81 (07)	0.74	15.37 (13)	14.31 (12)	0.63	15.41 (05)	0.49
1000	200	44	110	y	13.70 (08)	0.82	14.09 (17)	13.50 (10)	0.80	14.71 (06)	0.65
1000	225	45	110	y	11.82 (09)	0.90	12.55 (16)	11.36 (11)	0.81	13.32 (06)	0.66
1000	250	48*	47	y	8.10 (35)	2.39	9.80 (25)	7.15 (101)	0.79	10.63 (11)	0.78
1000	250	49*	112	y	9.52 (16)	1.75	11.38 (19)	9.33 (22)	0.85	12.06 (06)	0.60
1000	250	67**	27	y	8.38 (38)	2.00	10.26 (39)	3.49 (64)	0.58	10.31 (16)	0.81
1000	251	38	0	n	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	275	46	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	275	66	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	
1000	300	47	0	y	0.00 (00)		0.00 (00)	0.00 (00)		0.00 (00)	