

Table S1: Electron probe microanalysis was performed using a Cameca SX-5FE electron probe microanalyser equipped with 5 WDS spectrometers housed at the MMU (Microscopy and Microanalysis Unit) of the University of the Witwatersrand. Analytical conditions were 15 kV acceleration voltage and 20 nA beam current with a 5 µm diameter electron beam. Natural and synthetic standards were used for calibration.

Sample	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	FeO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	Total	Si	Al	Fe	Ca	Na	K	Total	Ab	An	Or
<b>071 – groundmass</b>																	
Core	48.25	32.29	0.17	15.18	2.54	0.09	98.52	2.238	1.765	0.007	0.754	0.228	0.005	4.997	23.12	76.34	0.54
Rim	48.49	32.96	0.16	15.93	2.38	0.05	99.96	2.219	1.778	0.006	0.781	0.211	0.003	4.999	21.22	78.49	0.29
<b>071 – hosted within orthopyroxene</b>																	
Core	48.53	33.02	0.09	15.93	2.39	0.09	100.05	2.219	1.780	0.003	0.780	0.212	0.005	5.000	21.24	78.23	0.53
	47.43	33.33	0.17	16.26	2.12	0.05	99.37	2.188	1.812	0.007	0.804	0.190	0.003	5.002	19.03	80.67	0.30
Rim	46.28	34.14	0.26	17.09	1.52	0.04	99.34	2.141	1.861	0.010	0.847	0.136	0.002	4.998	13.83	85.93	0.24
	46.84	31.21	5.32	15.55	1.31	0.01	100.26	2.188	1.718	0.208	0.778	0.119	0.001	5.012	13.22	86.71	0.07
<b>072 – groundmass</b>																	
Core	48.05	32.62	0.25	15.91	2.30	0.13	99.26	2.218	1.774	0.010	0.787	0.206	0.008	5.002	20.58	78.66	0.77
	49.11	31.86	0.30	15.39	2.72	0.14	99.52	2.258	1.726	0.012	0.758	0.242	0.008	5.004	24.04	75.15	0.81
Rim	48.23	32.79	0.24	16.33	2.52	0.07	100.19	2.210	1.771	0.009	0.802	0.224	0.004	5.019	21.74	77.86	0.40
	48.69	32.72	0.22	16.24	2.38	0.06	100.30	2.224	1.761	0.008	0.795	0.211	0.003	5.003	20.89	78.76	0.35
	47.73	32.60	0.27	16.10	2.32	0.11	99.14	2.209	1.778	0.010	0.798	0.208	0.006	5.010	20.55	78.81	0.64
<b>072 – hosted within large orthopyroxene oikocryst</b>																	
Core	48.08	32.56	0.17	15.90	2.39	0.13	99.23	2.220	1.771	0.007	0.786	0.214	0.008	5.006	21.22	78.02	0.76
	48.64	31.96	0.23	15.20	2.91	0.12	99.06	2.247	1.740	0.009	0.752	0.261	0.007	5.017	25.55	73.75	0.69
	48.29	32.26	0.23	15.74	2.55	0.10	99.17	2.230	1.756	0.009	0.779	0.228	0.006	5.009	22.54	76.88	0.58
	50.63	31.85	0.27	15.14	3.13	0.16	101.18	2.286	1.695	0.010	0.733	0.274	0.009	5.008	26.98	72.11	0.91
	48.11	32.54	0.19	15.94	2.53	0.04	99.36	2.219	1.769	0.007	0.788	0.226	0.002	5.011	22.26	77.51	0.23
Rim	47.68	33.56	0.25	16.87	2.18	0.02	100.58	2.178	1.807	0.010	0.826	0.193	0.001	5.015	18.93	80.95	0.11