

**Supplementary table S2 Whole-rock major–oxide (wt.%) compositions of the Wugongshan granites**

Sample No.	SiO <sub>2</sub>	TiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	FeO	MnO	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	LOI	TOTAL	TFe <sub>2</sub> O <sub>3</sub>	A/CNK	ALK	A/NK
CJZK05-1	70.83	0.33	14.25	0.58	1.77	0.060	1.02	1.91	3.06	4.49	0.110	1.30	99.91	2.55	18.35	2.93	6.26
CJZK05-2	70.98	0.33	14.51	0.49	1.93	0.061	1.23	2.70	3.17	3.75	0.110	0.46	99.92	2.63	14.05	3.93	3.58
DJFZK02-3	72.32	0.33	14.13	0.30	2.26	0.033	0.54	2.70	2.81	3.62	0.089	0.43	99.81	2.81	18.73	3.24	5.79
DJFZK02-4	71.56	0.37	13.80	0.49	2.35	0.045	0.70	1.63	2.99	3.72	0.094	1.80	99.80	3.10	23.89	2.33	10.25
DJFZK01-1	71.6954	0.36	14.3077	1.45	1.54	0.041	0.60	2.96	2.95	3.11	0.091	0.53	99.82	3.16	16.82	3.56	4.73
DJFZK01-2	72.8805	0.30	13.7155	0.26	2.28	0.048	0.56	2.34	2.91	3.67	0.081	0.55	99.86	2.80	20.56	2.90	7.08
XQZK11-1	74.52	0.04	14.35	0.25	0.38	0.103	0.13	0.62	4.36	4.26	0.150	0.77	99.98	0.67	69.53	0.75	92.57
XQZK11-2	75.15	0.23	12.60	0.33	1.54	0.034	0.48	2.15	2.41	3.76	0.052	0.98	99.89	2.04	23.59	2.64	8.95
XQZK12-3	72.35	0.22	14.84	0.53	1.10	0.047	0.57	2.12	3.66	3.31	0.130	0.94	99.92	1.75	21.83	2.69	8.12
XQZK13-2	66.95	0.59	14.93	0.88	3.14	0.058	1.40	3.31	2.24	3.00	0.128	2.88	99.86	4.37	11.17	4.71	2.37
XQZK13-4	65.77	0.45	12.16	1.14	1.95	0.063	1.05	5.90	2.54	2.64	0.114	5.91	99.89	3.30	8.00	6.94	1.15
XQZK12-5	73.35	0.17	14.34	0.35	0.81	0.044	0.36	0.89	3.75	4.69	0.196	0.90	99.95	1.26	44.99	1.25	36.09
CJZK06-2	69.63	0.39	14.70	0.81	2.02	0.073	1.34	2.67	3.18	3.75	0.112	1.00	99.92	3.06	13.30	4.02	3.31
CJZK06-4	69.24	0.33	15.46	0.62	1.53	0.045	1.00	1.09	3.16	4.95	0.099	2.23	99.93	2.33	23.82	2.09	11.39
WGS06027	75.82	0.02	14.18	0.23	0.30	0.047	0.08	0.40	4.46	3.60	0.051	0.75	99.97	0.56	116.30	0.48	241.05
WGS06028	72.37	0.27	14.60	0.72	1.59	0.046	0.63	0.95	3.51	3.37	0.068	1.49	99.80	2.49	33.58	1.59	21.18