

Table S4. Statistical factor analysis for major and trace elements of the ferromanganese nodule.

	Factor1	Factor2	Factor3
	44.90%	39.80%	11.00%
Mn	0.856	0.429	0.231
Fe	0.913	0.358	0.195
Al	0.156	-0.876	-0.449
Ca	0.916	0.312	-0.181
P	-0.648	-0.183	-0.739
K	0.918	-0.392	-0.051
Ti	-0.913	0.248	0.282
Mg	0.425	0.628	0.289
Na	0.831	0.455	0.279
Li	0.136	-0.814	-0.565
Be	0.178	-0.749	-0.630
Sc	-0.885	-0.347	-0.240
V	-0.989	-0.138	-0.048
Co	-0.230	0.614	0.755
Ni	0.786	0.401	0.385
Cu	0.406	-0.841	0.358
Zn	-0.937	-0.273	-0.125
Ga	0.516	-0.436	-0.733
Rb	0.088	-0.904	-0.340
Sr	-0.995	-0.095	0.025
Zr	-0.589	-0.664	-0.334
Nb	-0.806	-0.480	-0.004
Mo	-0.977	-0.178	-0.079
Cd	-0.958	-0.276	0.007
Cs	-0.315	-0.856	0.060
Ba	0.907	-0.083	-0.335
Hf	0.984	0.028	-0.004
Ta	0.793	0.336	0.120
W	0.600	0.653	0.386
Tl	-0.929	0.066	0.185
Pb	-0.923	0.317	0.066
Bi	0.968	0.232	-0.090
Th	-0.423	0.703	0.372
U	-0.777	0.493	0.384
La	0.739	0.656	0.153
Ce	0.960	0.239	0.074
Pr	0.255	0.921	0.176
Nd	0.425	0.877	0.164
Sm	0.212	0.926	0.250
Eu	0.641	0.764	0.039

Gd	0.295	0.909	-0.281
Tb	0.362	0.913	0.133
Dy	0.296	0.914	0.245
Y	-0.172	-0.376	-0.856
Ho	0.034	0.987	0.151
Er	0.243	0.945	0.202
Tm	0.229	0.939	0.235
Yb	0.118	0.966	0.215
Lu	0.144	0.970	0.160
