Li, S.-Y., Duan, Z., Gao, J.-L., Hu, H., Wen, G., and Li, J.-W., 2023, Controls on metal fertility of dioritic intrusions in the Laiwu district, North China craton: Insights from whole-rock geochemistry and mineral compositions: GSA Bulletin, https://doi.org/10.1130/B36870.1.

Supplemental Material

Table S1. Major and trace elements geochemistry of whole-rock samples from the Fe-mineralized and barren dioritic intrusions in the Laiwu district.

Table S2. Sr-Nd isotopic compositions of whole-rock samples from the Fe-mineralized and barren plutons in the Laiwu district.

Table S3. Major and trace element compositions of amphibole from the Fe-mineralized and barren plutons in the Laiwu district.

Table S4. U-Pb age data and trace elements of zircon from the Fe-mineralized and barren plutons in the Laiwu district.

Table S5. Major and trace elements of apatite from the Fe-mineralized and barren plutons in the Laiwu district.

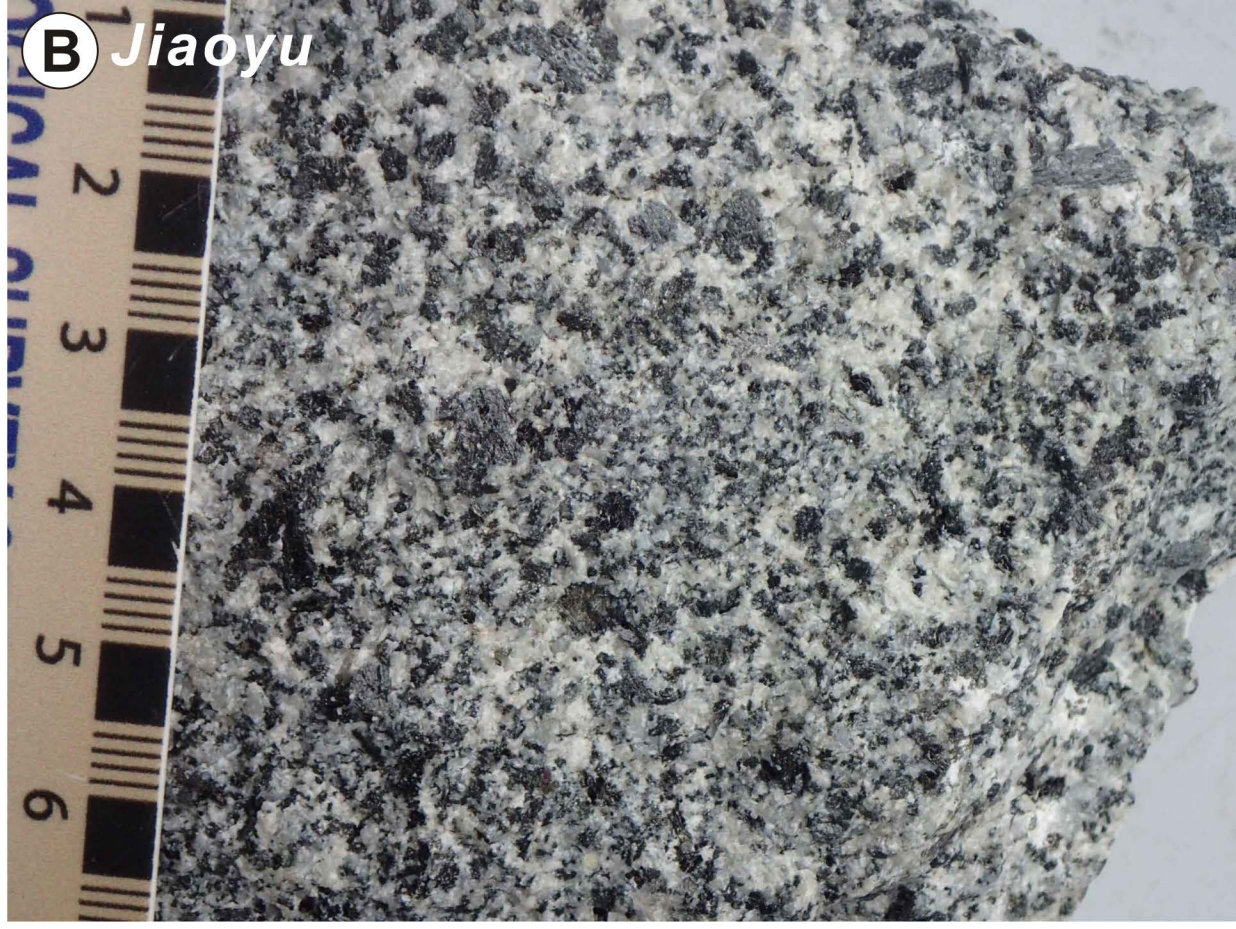
Figure S1. Hand specimens of diorites were collected from the Kuangshan (A), Jiaoyu (B), Jinniushan (C), and Tietonggou plutons (D).

Figure S2. CL images of representative zircons from the Kuangshan (A), Jiaoyu (B), Jinniushan (C), and Tietongggou diorite (D). Scale bar is 100 μm.

Figure S3. U-Pb Concordia diagrams of zircons from the Kuangshan (A), Jiaoyu (B), Jinniushan (C), and Tietongggou plutons (D). The insets in each diagram are the weighted mean 206Pb/238U age.

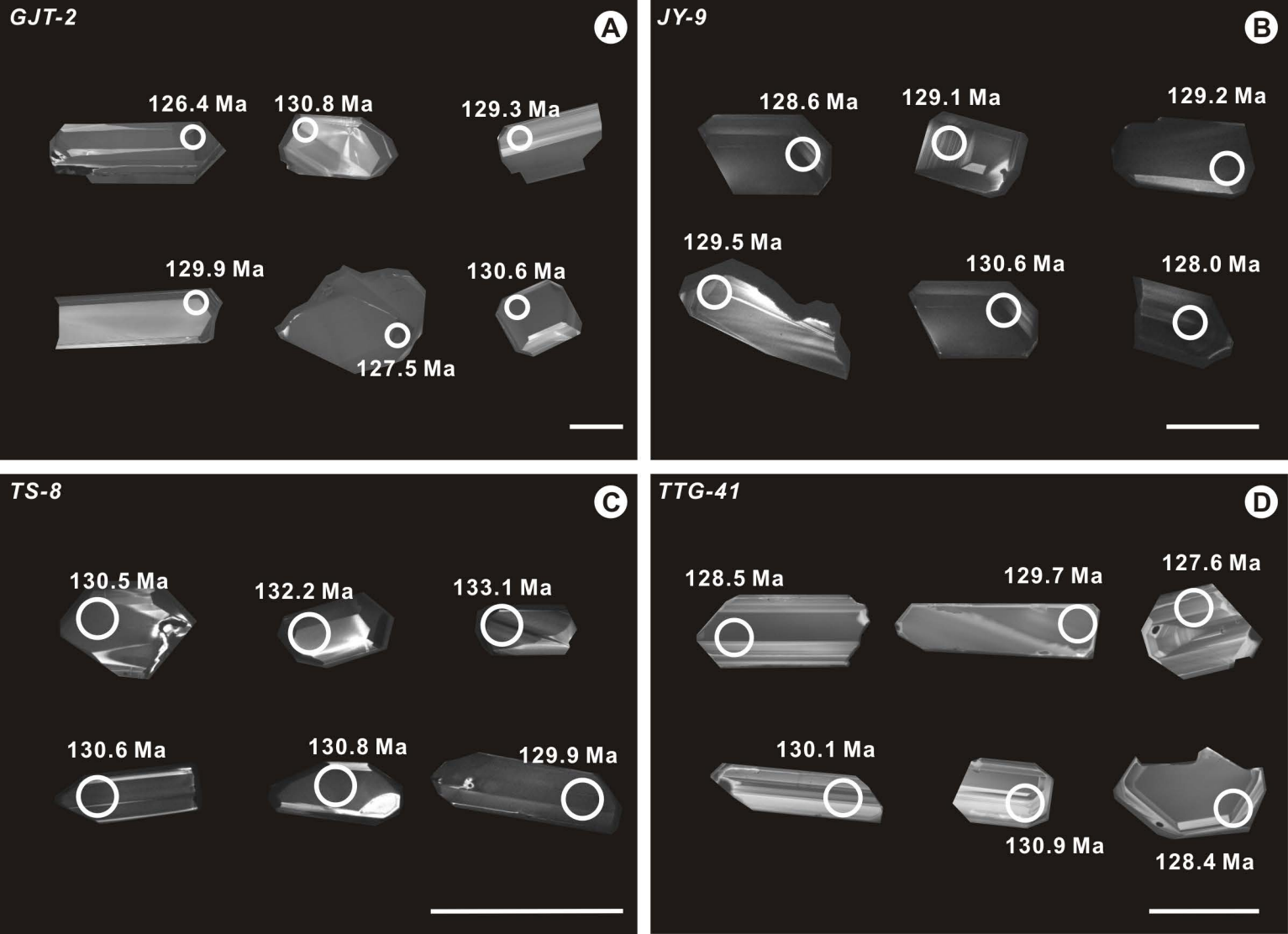
Figure S4. Selected oxide element Harker's plots for the Fe-mineralized and barren plutons in the Laiwu district.

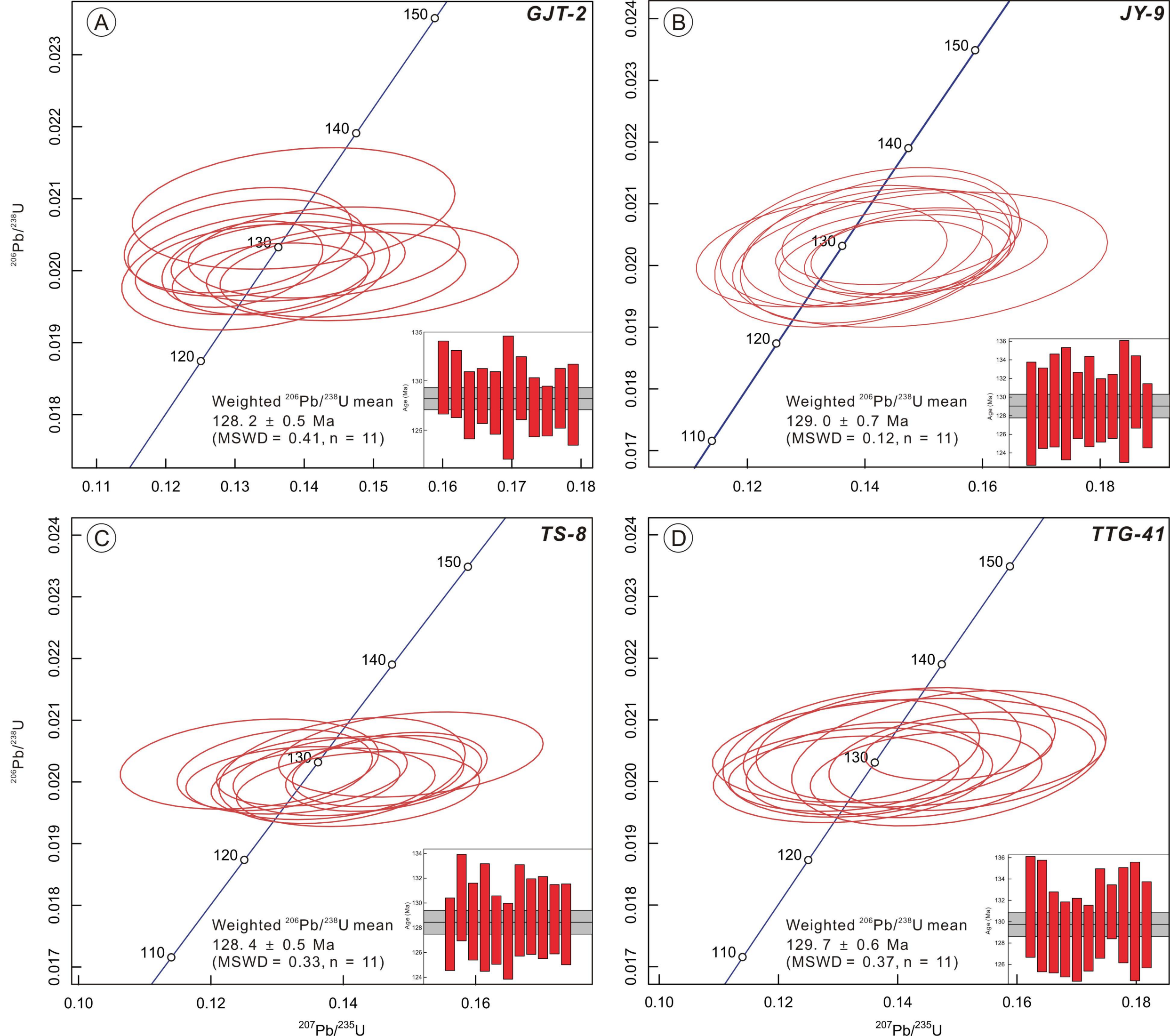

A Kuangshan

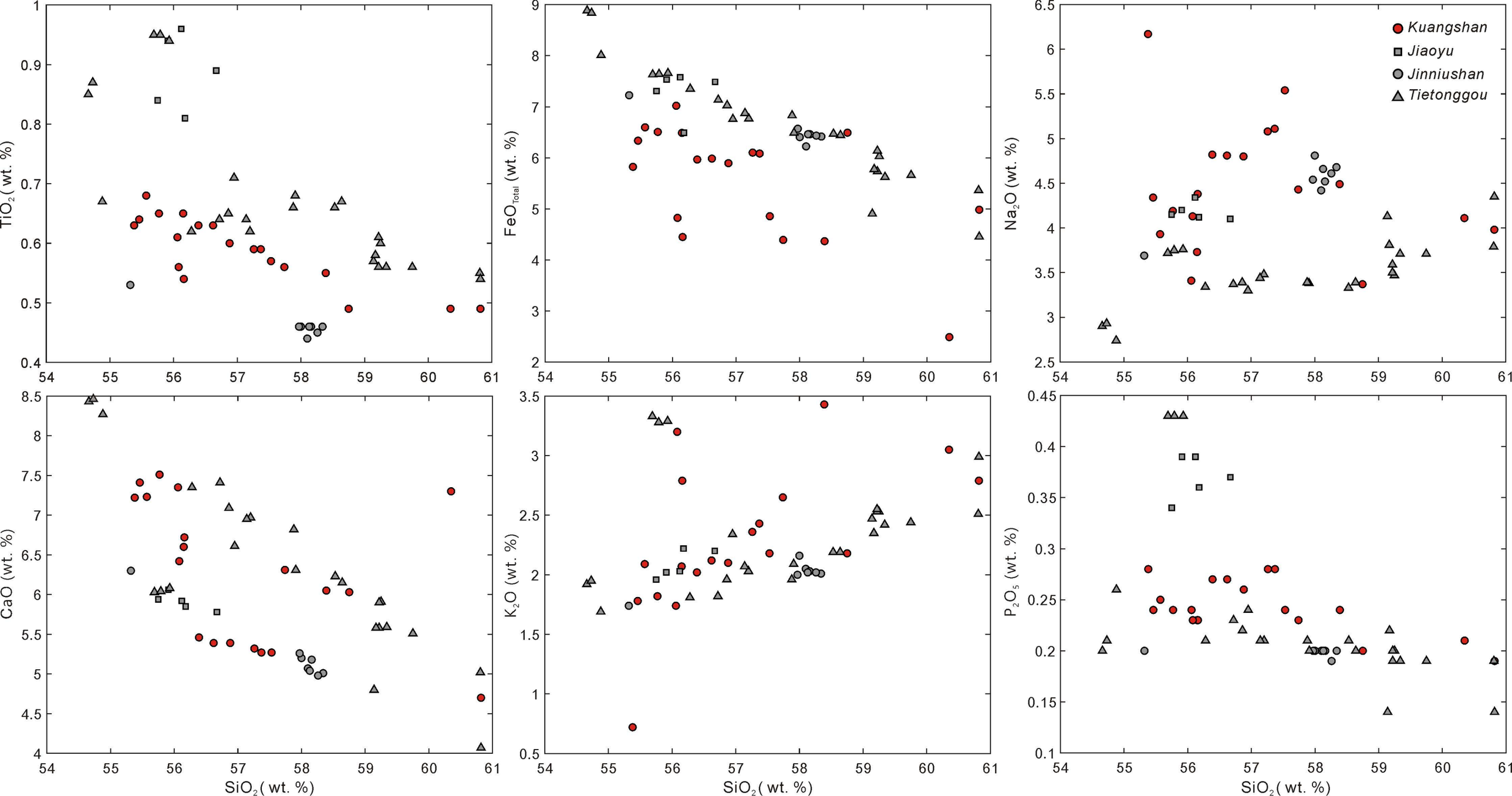

B Jiaoyu


C Jinniushan
OGICAL SURVEY OF CANADA


D Tietonggou


GJT-2
A
126.4 Ma
130.8 Ma
129.3 Ma
129.9 Ma
127.5 Ma
130.6 Ma
JY-9
B
128.6 Ma
129.1 Ma
129.2 Ma
129.5 Ma
130.6 Ma
128.0 Ma
TS-8
C
130.5 Ma
132.2 Ma
133.1 Ma
130.6 Ma
130.8 Ma
129.9 Ma
TTG-41
D
128.5 Ma
129.7 Ma
127.6 Ma
130.1 Ma
130.9 Ma
128.4 Ma


A
GJT-2
150
140
130
120
Weighted 206Pb/238U mean
128. 2 ± 0.5 Ma
(MSWD = 0.41, n = 11)
Age (Ma)
B
JY-9
150
140
130
120
110
Weighted 206Pb/238U mean
129. 0 ± 0.7 Ma
(MSWD = 0.12, n = 11)
Age (Ma)
C
TS-8
150
140
130
120
110
Weighted 206Pb/238U mean
128. 4 ± 0.5 Ma
(MSWD = 0.33, n = 11)
Age (Ma)
D
TTG-41
150
140
130
120
110
Weighted 206Pb/238U mean
129. 7 ± 0.6 Ma
(MSWD = 0.37, n = 11)
Age (Ma)
206Pb/238U
207Pb/235U


Kuangshan
Jiaoyu
Jinniushan
Tietonggou
TiO2 (wt. %)
FeOTotal (wt. %)
Na2O (wt. %)
CaO (wt. %)
K2O (wt. %)
P2O5 (wt. %)
SiO2 (wt. %)
SiO2 (wt. %)
SiO2 (wt. %)