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**Genesis of post-collisional calc-alkaline and alkaline granitoids in Qiman Tagh,****East Kunlun, China**Yu Miao<sup>a,b</sup>, Feng Chengyou<sup>a,\*</sup>, Zhao Yiming<sup>a</sup>, Li Daxin<sup>a</sup><sup>a</sup>Institute of Mineral Resources, CAGS, Beijing 100037, China School of the Earth Sciences and Resources,<sup>b</sup>School of Earth and Space Sciences, Peking University, Beijing 100871, China**Abstract**

The post-collisional magmatism of Qiman Tagh is characterized by the intrusion of voluminous intermediate to felsic granitoids, including syenogranite, monzogranite, granodiorite, tonalite and diorite. The granitoids can be divided into two magmatic suites: Calc-alkaline (CA) and alkaline (Alk), which were emplaced from ~236 Ma to ~204 Ma. The CA suite contains metaluminous granodiorites and monzogranites. Typical Qiman Tagh CA granodiorites show moderately fractionated REE patterns ( $(La/Yb)_N = 4.35 \sim 25.11$ ) with significant negative Eu anomalies ( $Eu/Eu^* = 0.54 \sim 1.34$ ), and the primitive mantle-normalized spidergrams show strong depletion of Nb and Sr. The Qiman Tagh CA monzogranites show similar fractionated REE patterns ( $(La/Yb)_N = 2.70 \sim 13.5$ ) with less prominent negative Eu anomalies, and the chondrite-normalized spidergrams show strongly depleted Ba, Nb and Sr. The Alk suite, including syenogranite, is highly potassic ( $K_2O/Na_2O = 1.09 \sim 3.56$ ) and peraluminous ( $A/CNK = 0.91 \sim 1.06$ ). Compared to typical Qiman Tagh CA granodiorites, the Qiman Tagh Alk granitoids can be distinguished by their higher Rb, Nb, Ga/Al,  $FeO^*/MgO$ , Y/Sr and Rb/Sr, as well as their lower  $Mg^\#$ , MgO, CaO,  $Al_2O_3$ , Sr, Co, V,  $Eu/Eu^*$ , Ba/Nb, La/Nb, Ba/La and Ce/Nb. The Qiman Tagh CA

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