

Sheng-Kai Qin, Ze-Ming Zhang, Richard M. Palin, Hui-Xia Ding, Xin Dong, and Zuo-Lin Tian, 2021, Tectonic burial of sedimentary rocks drives the building of juvenile crust of magmatic arc: GSA Bulletin, <https://doi.org/10.1130/B36271.1>.

## Supplemental Material

**Table S1.** Chemical compositions of garnet from the studied pelitic migmatites (wt%).

**Table S2.** Representative chemical compositions of main minerals from the studied pelitic migmatites (wt%).

**Table S3.** Whole rock Sr-Nd isotopes and major element compositions of the studied pelitic migmatites, the Late Cretaceous arc magmatic rocks and Neo-Tethyan ophiolites.

**Table S4.** Zircon U-Pb dating and trace element compositions of the pelitic migmatites and zircon standards.

**Table S5.** Zircon Lu-Hf isotope and oxygen isotope compositions of the pelitic and mafic migmatites.