

Figure S1 (a) The water vapor introducing device used in the experiment. The size is 10 cm × 6 cm × 6 cm. S1-S3 are three switches. The rubber tube with a clip is used to add water into the device. The red arrows indicate the Helium flow direction. Close S1-S2 and open S3 will bypass the water vapor introducing device. (b-c) showing the amount of consumed water under Helium flowing through with a speed of 400 ml/min after a period of about 5 hours. (d-e) are the enlarged water surface to show the change of water height. Room temperature is 20 °C and the estimated water vapor flow speed is around 5 ml/min.

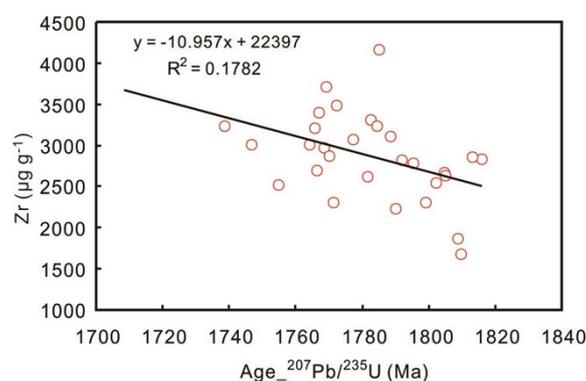


Figure S2 The plot of Zr contents vs age_ $^{207}\text{Pb}/^{235}\text{U}$ for titanite from the Manjinggou marble.