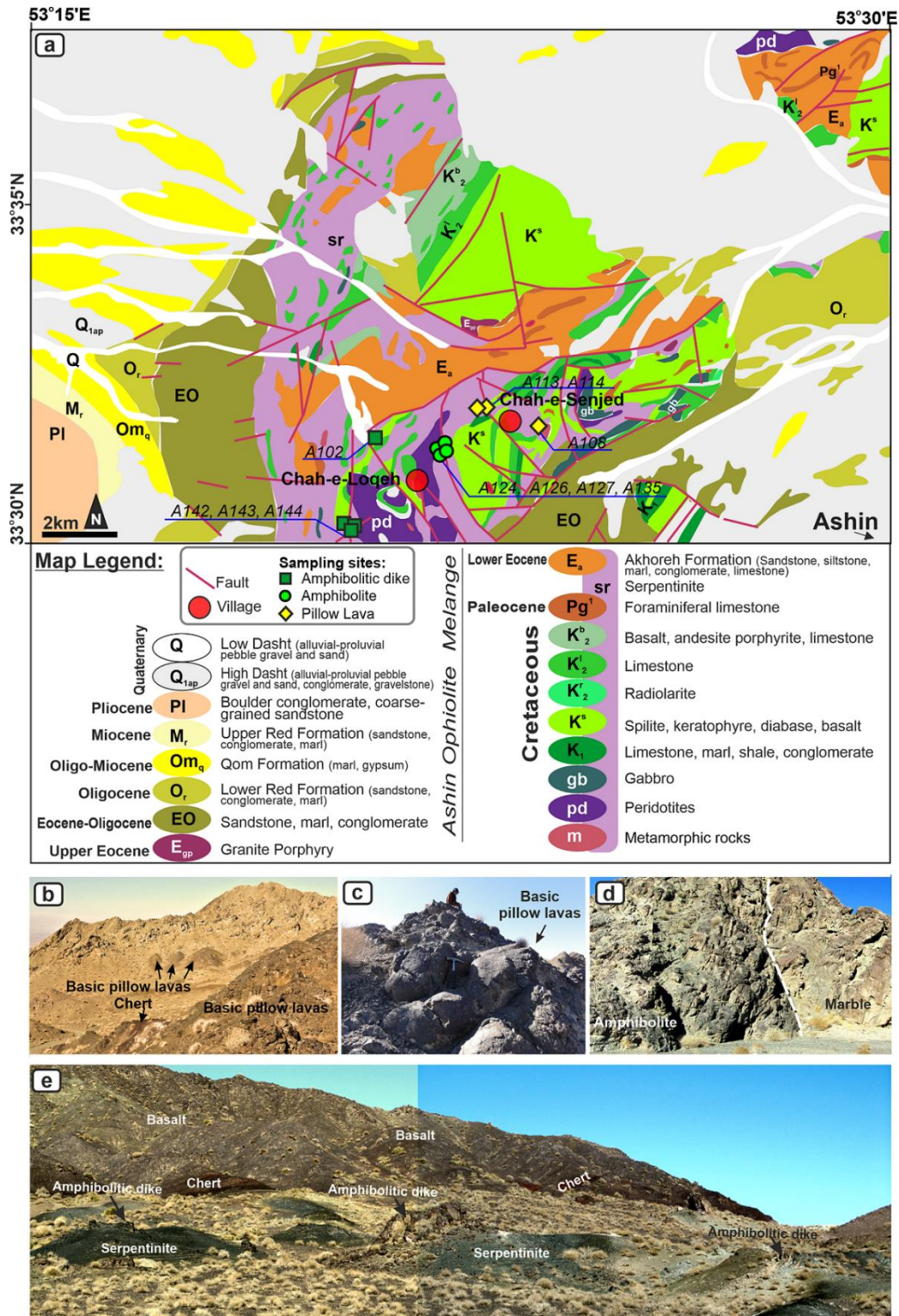
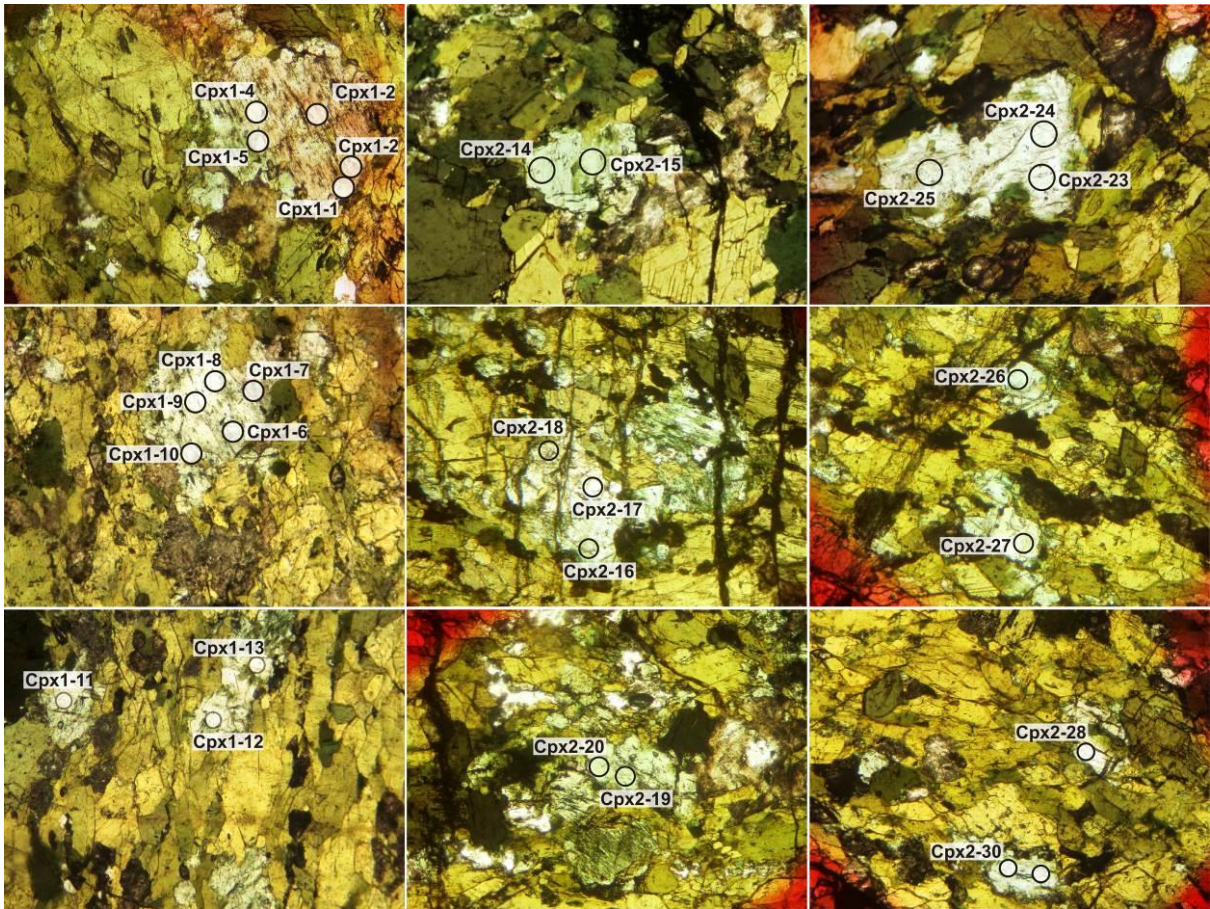


Fig. 1S



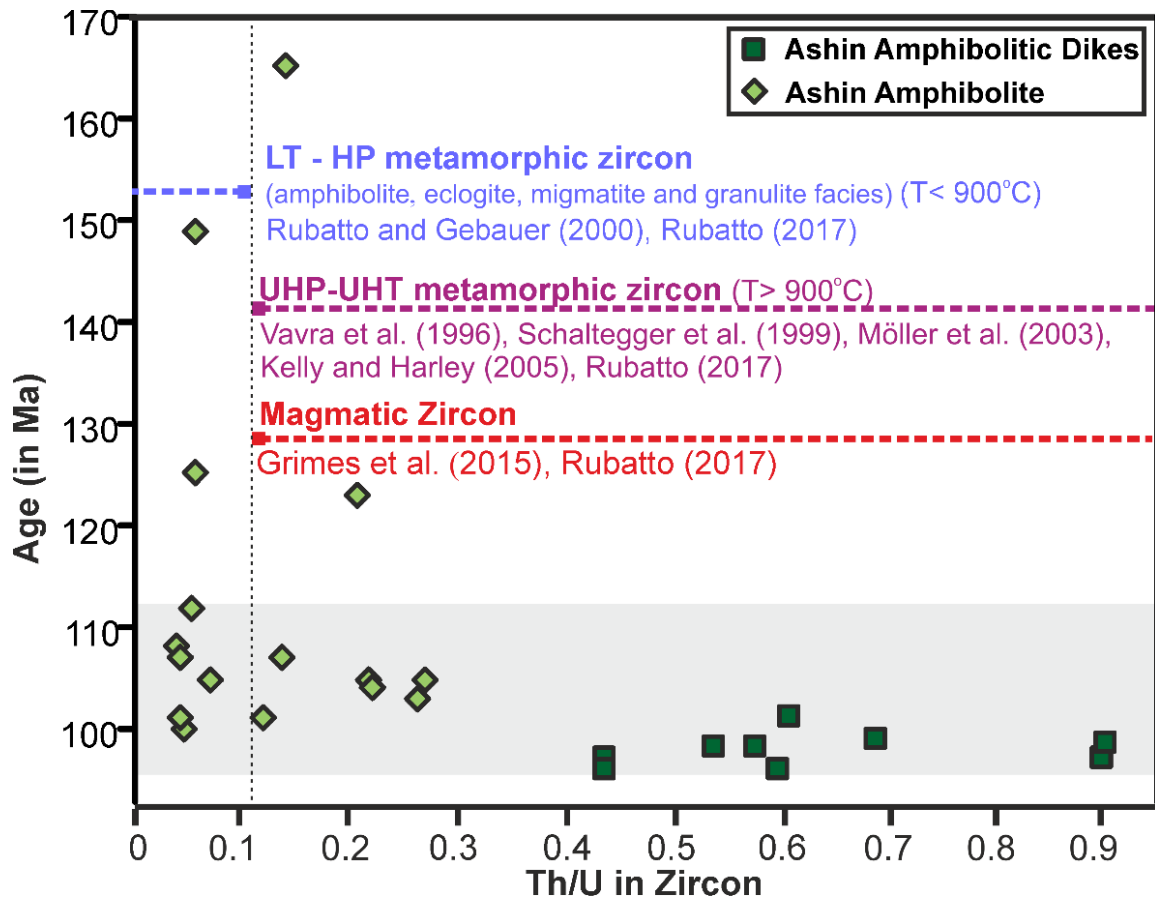
(a) Simplified geological map of Ashin ophiolitic melange (based on Sorkhshad 1:100000 map by Geological Survey of Iran) and locations of sampling; (b, c, d, e) different rock units in Ashin ophiolite including the pillow lavas, chert layers, amphibolite, marble, and amphibolitic dikes (metamorphosed diabasic dikes) within serpentinitized mantle peridotites.

Fig. 2S



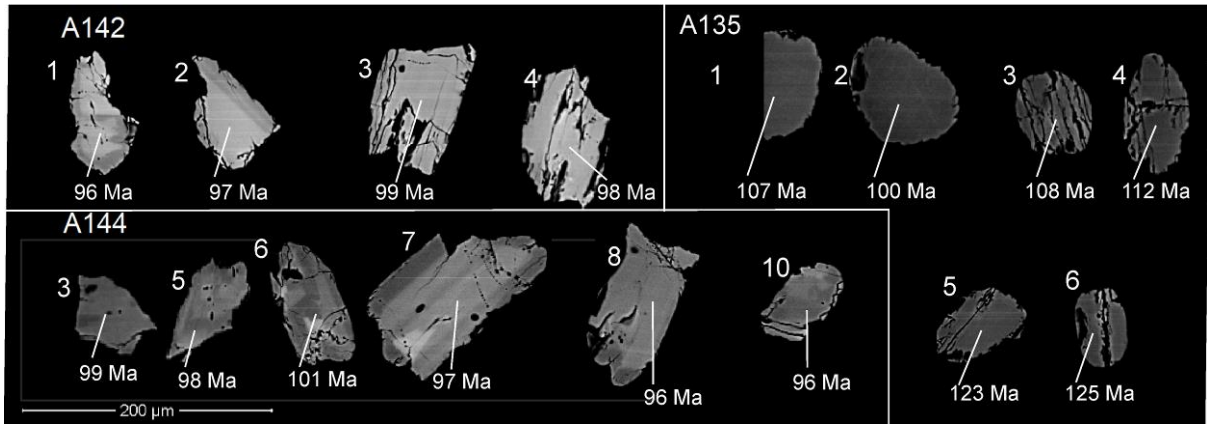
Locations of laser ablation spots marked on the clinopyroxene crystal relics in the amphibolite (Spot diameter ~100 μ m).

Fig. 3S



U-Pb age versus Th/U ratios in zircons from the Ashin samples and different magmatic to metamorphic zircons (LT-HP: Rubatto and Gebauer 2000; Rubatto, 2017; UHP-UHT: Vavra et al., 1996; Schaltegger et al., 1999; Möller et al., 2003; Kelly and Harley, 2005; Rubatto, 2017; Magmatic zircons: Grimes et al., 2015; Rubatto, 2017; Hoskin and Schaltegger 2003). References are reported in Supplementary Text 2.

Fig. 4S



Representative cathodoluminescence images of zircon crystals in the amphibolitic dikes (A142, A144) and amphibolite (A135)