**INTRODUCTION: UHP METAMORPHISM AND RECENT FINDINGS**

Ultrahigh-pressure (UHP) metamorphism refers to the recrystallization of continental and oceanic crustal rocks at pressures high enough to form coesite and/or diamond at a minimum \( P > 2.7 \) GPa at \( T > 600 ^\circ C \). Figure 1 shows relevant \( P-T \) conditions defining both UHP and HP (high pressure) metamorphism; in addition, geotherms of about 5 \(^\circ C/km\) (extremely cold subduction zones) and 20 \(^\circ C/km\) (old descending plates) are illustrated. UHP and HP metamorphic conditions are separated by the quartz-coesite phase boundary; the graphite-diamond boundary further subdivides the UHP regime into diamond (±coesite) and graphite (±coesite) \( P-T \) fields. Occurrences of the UHP analog of rutile as well as supersilicic titane, and/or K-bearing clinopyroxene, and aragonite + magnesite inclusions in garnet from Kokchetav microdiamond-bearing gneisses suggest subduction depths of ~190–280 km (e.g., see review by Schertl and Sobolev 2012). The recent interpretation of stishovite pseudomorphs in a pelitic gneiss from western China suggests that some continental materials might have been exhumed from an even greater depth (~350 km?) than commonly accepted (Liu L. et al. 2007, 2009). Prior to the initial discoveries of coesite in UHP rocks in 1984 and microdiamond in 1990, coesite, diamond, stishovite, and other UHP minerals had only been reported from meteorite impact craters and mantle xenoliths (Chopin 1984; Smith 1984; Sobolev and Shatsky 1990).

Discovery of tracts of upper continental crust metamorphosed under mantle \( P-T \) conditions has enriched and extended our understanding of plate tectonics (Ernst and Liou 1995). The recognition of deep continental subduction responsible for the formation and subsequent return of UHP rocks to the surface from depths >100 km in collisional mountain belts has been intensively studied in the Earth sciences for the last three decades. A continuing explosion of research on global continental UHP terranes reflects their significance with regard to mantle dynamics and the tectonics of continental evolution, crustal subduction, collision, exhumation, mantle-slab interactions, and geochemical recycling. Thus far, more than 20 coesite-bearing, 10 diamond-bearing, and three majoritic garnet-bearing UHP regions have been documented globally (for reviews, see Liou et al. 2009; Dobrzhinetskaya and Faryad 2011).

Among many recent exciting discoveries of UHP minerals in continental collisional zones since 2010, several new occurrences...