

# **Dehydration process in deep subduction zones**

## **-constraints from metamorphic petrology-**

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### **Abstract**

Study of dehydration and decarbonation processes of subducting oceanic crust is important to understand the subduction zone earthquakes, the island arc volcanism, and recycling of water and carbon to deep mantle. Recent UHP experiments in C-O-H fluid-bearing MORB system have revealed that several hydrous and carbonate are stable in cold subducting crust down to 300 km. Petrological and geochemical research on UHP eclogites also have shown that minor hydrous and carbonate phases were stable at coesite and diamond stability depths. I would briefly explain how fluid would be carried and transported by subducting oceanic crust based on my research.