Subduction Zone Magmatism

Oceanic crust

Volcanic arc

Continental crust

Oceanic crust
Directly sampling melted rock can be difficult...
Experimental “Petrology”

1. Starting rock material

Granite
Experimental “Petrology”

1. Starting rock material

Granite

2. Experimental capsule

Cartoon: typical gold capsule; 1 cm x 0.3 cm
Experimental “Petrology”

1. Starting rock material

![Granite](image)

2. Experimental capsule

Cartoon: typical gold capsule; 1 cm x 0.3 cm

Rock powder

H₂O

Au

3. Experimental Apparatus

Images: Cold seal pressure vessels (CSPV)
Images A-B: Back scattered electron (SEM) images of experimental quenched magma (A), and (B) eruption products from the 1991 eruption of Mt. Pinatubo, Philippines.
Images A-B: Back scattered electron (SEM) images of experimental quenched magma (A), and (B) eruption products from the 1991 eruption of Mt. Pinatubo, Philippines.
Thank you for listening!

(if you have any questions, please feel free to ask me after this session!)