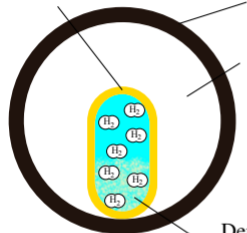


(a) Internal control of  $f_{H_2}$

Au Capsule  
impermeable  
to  $H_2$



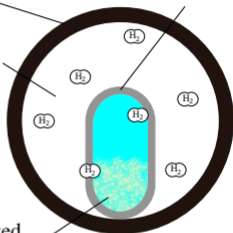
$$f_{H_2}^{\text{Caps.}} \gg f_{H_2}^{\text{Vessel}}$$

High  $f_{H_2}$  - Low  $f_{O_2}$   
Imposed by  
serpentinization

(b) External control of  $f_{H_2}$

AgPd Capsule  
permeable  
to  $H_2$

Vessel wall  
Ar at  
50 MPa



Demineralized  
water and  $Fe_{0.90.5}$

$$f_{H_2}^{\text{Caps.}} = f_{H_2}^{\text{Vessel}}$$

Low  $f_{H_2}$  - High  $f_{O_2}$   
Imposed by  
vessel/external system