scCO₂ exposure

vol. response and role of pre-existing micro-fissures

x-rays

3D density and deformation fields

direct scCO₂ exposure
dessication micro-fissuring

CO₂ breakthrough

calcite dissolution and fiss. network rearrangement

Long-term CO₂ exposure

[Stavropoulou & Laloui 2022]

CO₂ uptake
density variations due to CO₂ penetration

Mechanical

TH couplings

Hydro

HM couplings

TM couplings

precipitation desaturation dissolution

CO₂