

Opportunities & Approach

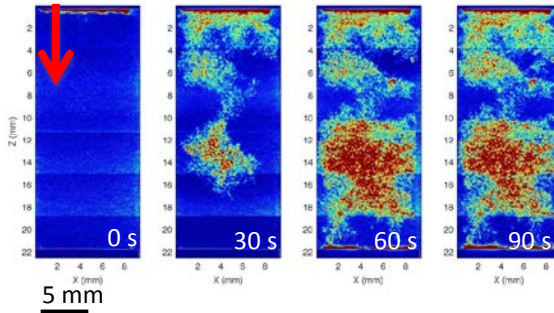
Synchrotron hard x-ray tomography

- 3-Dimensional
- High resolution (“nano”)
- Large samples (“macro”)
- Dynamic

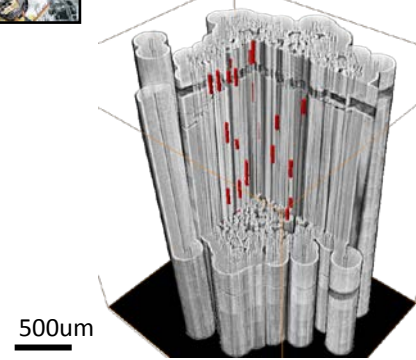


CO2 sequestration

Injecting supercritical CO₂

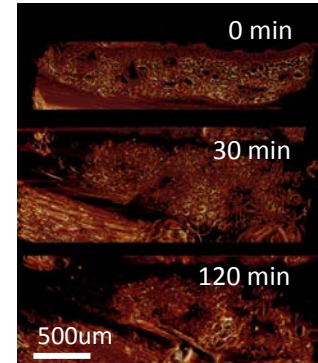


Advanced materials under heat & stress



Biofuel production

Switchgrass pretreatment



Meso Challenge & Impacts

Challenge: Predictive mesoscale modeling of structural dynamics

Impact: Dynamic 3D imaging is essential to develop and constrain models

To realize this impact requires: Information extraction from (terabytes of) dynamic 3D images