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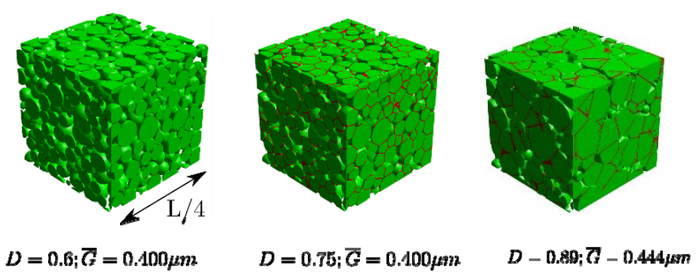
SIMaP Lab. / GPM2 team

Ceramic materials : modeling and 3D image-based modeling from sintering to fracture and damage behavior

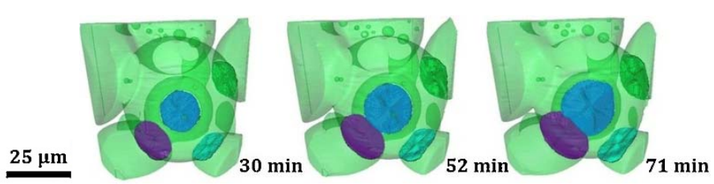
Modeling strategies : Discrete Element Method, Finite Element Method, FFT

Sintering

DEM model with grain growth

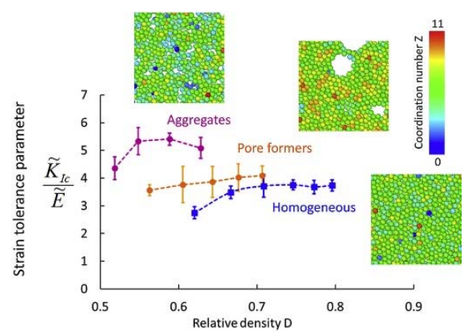


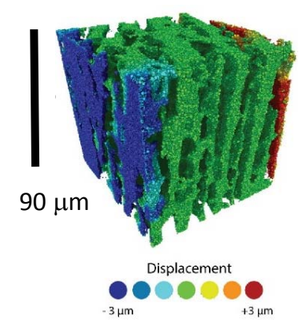
In-situ X-Ray tomography glass particles (700°C)



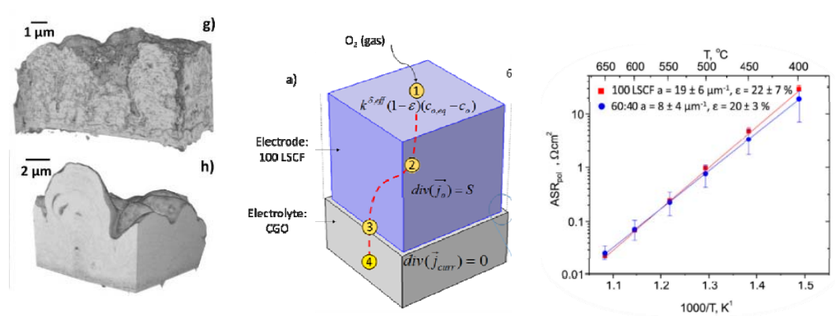
Mechanical and functional properties of porous ceramics

Elasticity and fracture of partially sintered ceramics





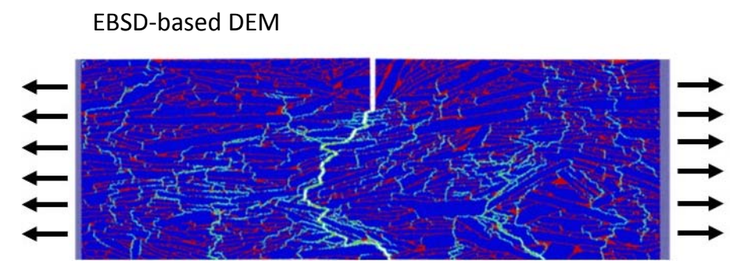
SOFC : FEM modeling of Area Specific Resistance



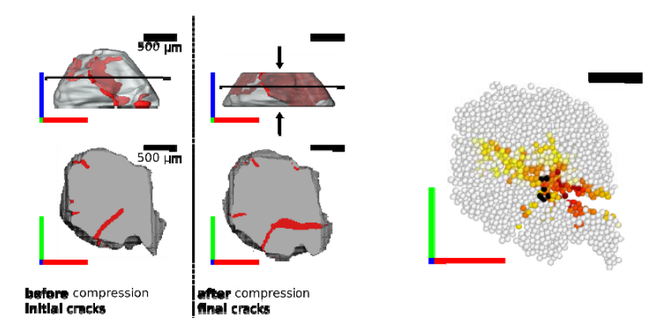
3D FIB-SEM imaging

Fracture and damage

Alumina nacre



Aerogel particle



X-ray tomography DEM

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