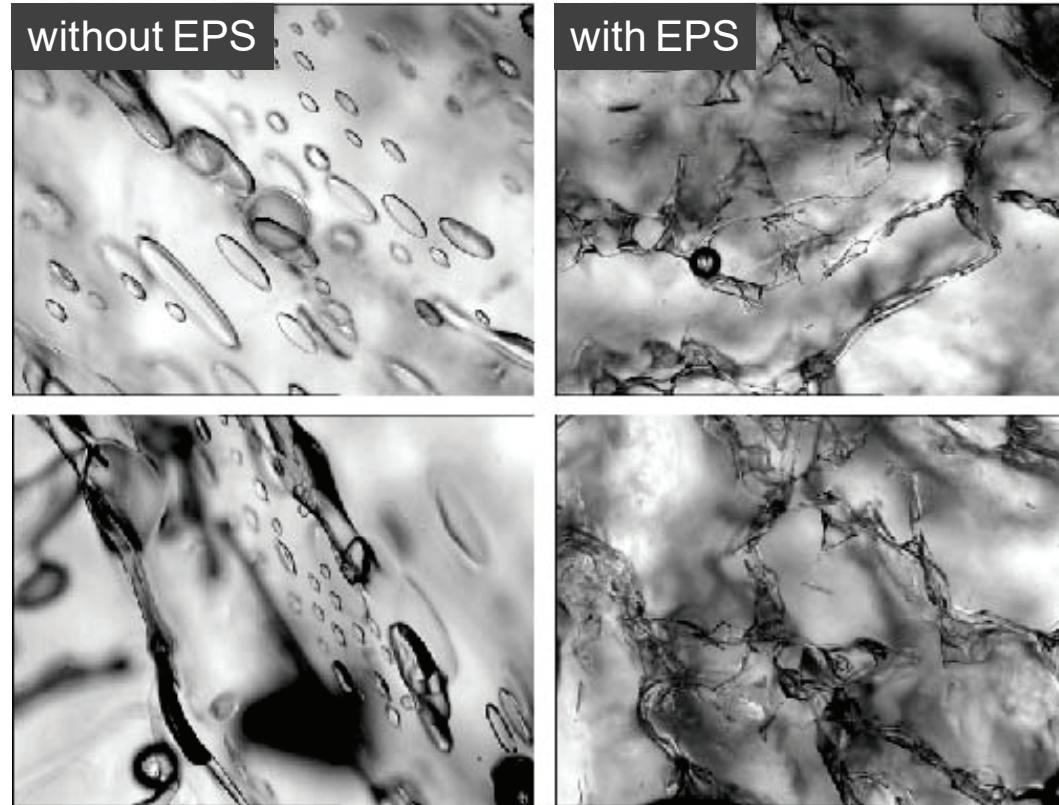


Sea ice algae secrete extracellular polymeric substances (EPS)

EPS changes brine microstructure



ellipsoidal inclusions

fractal inclusions

Krembs, Eicken, Deming *PNAS* 2011

numerical model
bounds on fluid
permeability

Steffen, Epshteyn, Zhu, Bowler, Deming, Golden
Multiscale Modeling and Simulation, 2018

How does the biology affect the physics?