

Food microstructure: Beyond what your eyes can see



Food structure

What?

How?

Why?

Applications

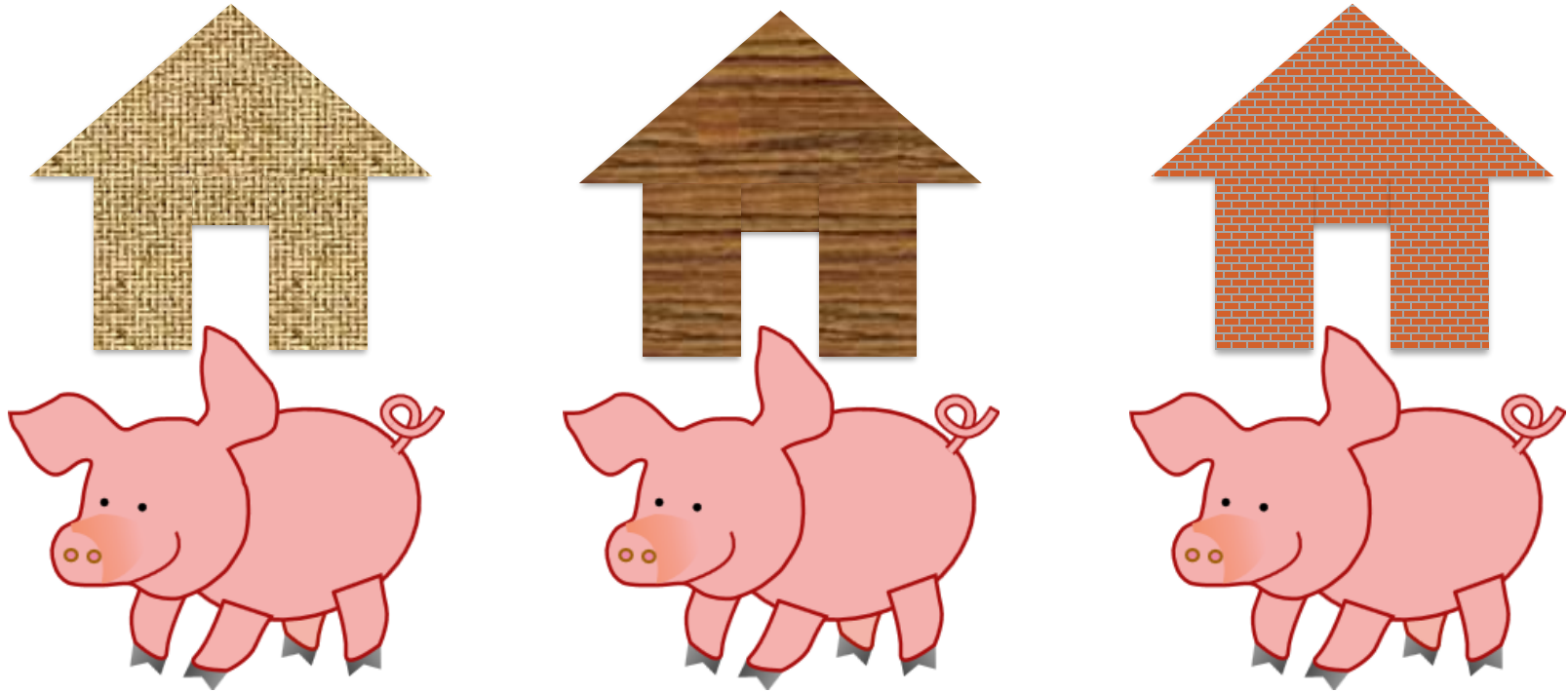
Food structure

What?



Spatial arrangement of elements in a food product and their interactions

Importance of the structure



Why food structure?



Vs.



Vs.

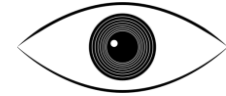
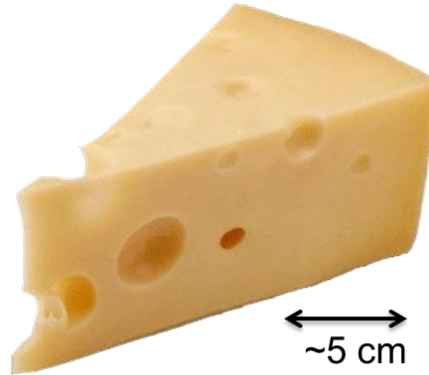


Vs.



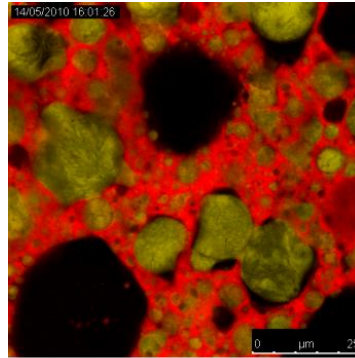
The scale in food structure

Macrostructure



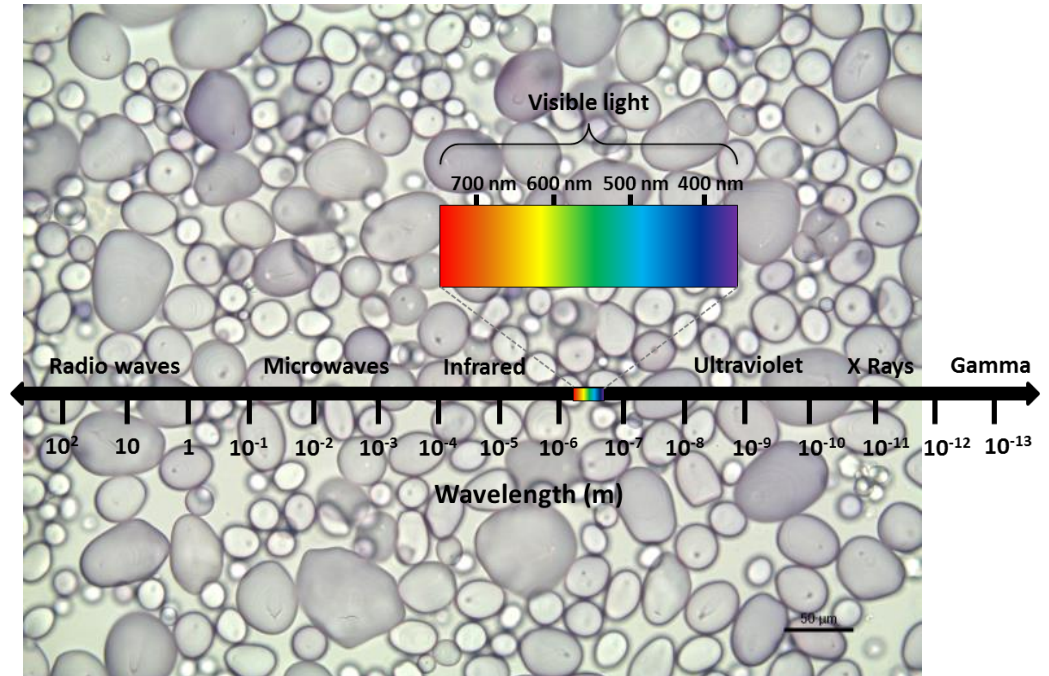
How?

Microstructure

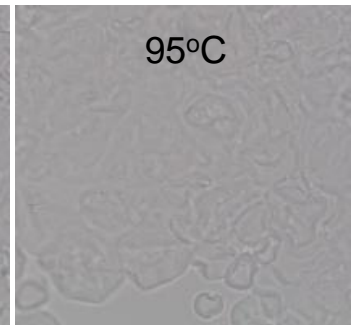
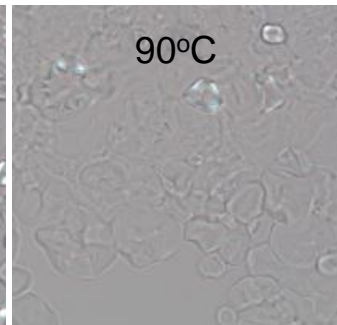
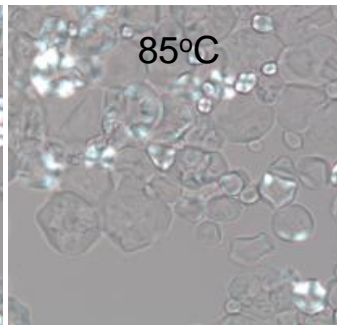
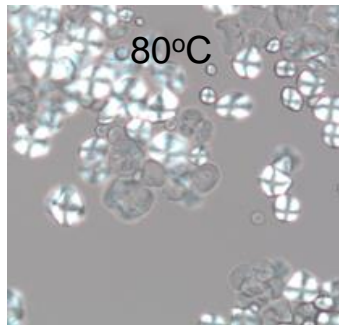
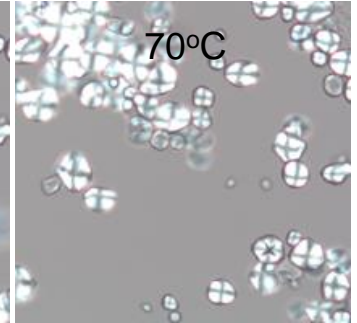
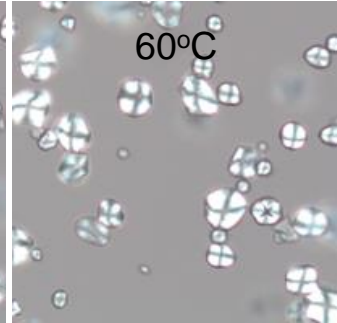
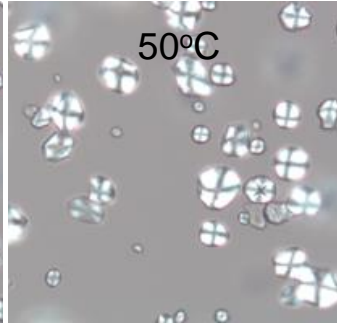
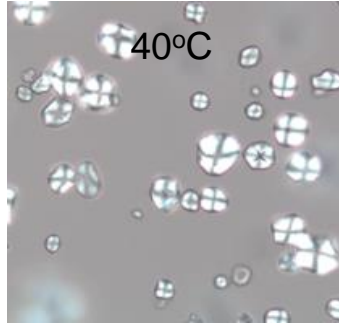
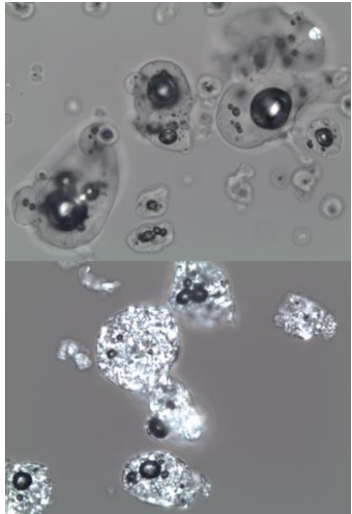


25 μ m

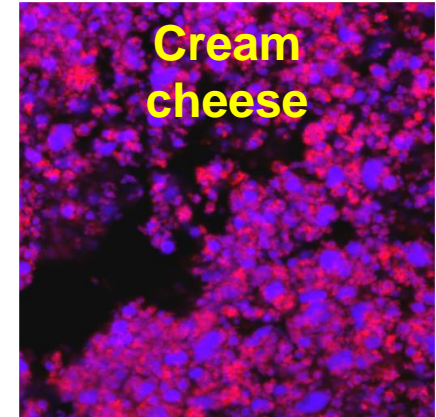
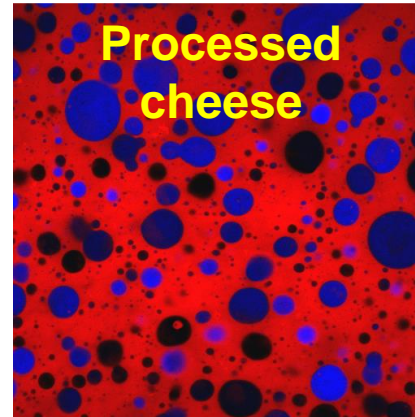
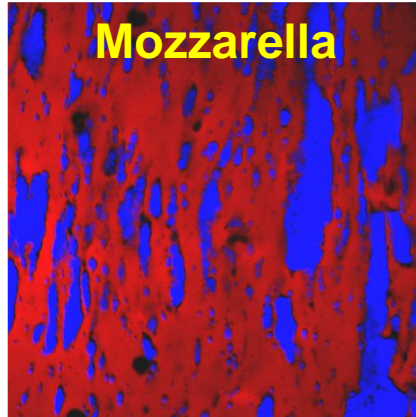
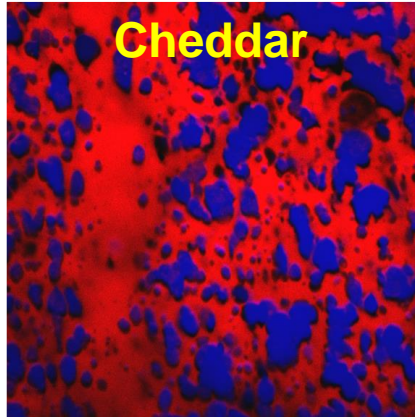
Light microscopy



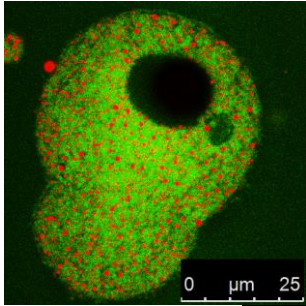
Polarized-light microscopy



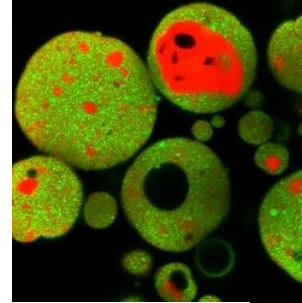
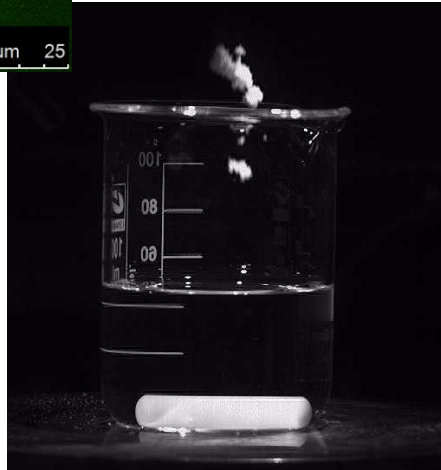
Fluorescence microscopy



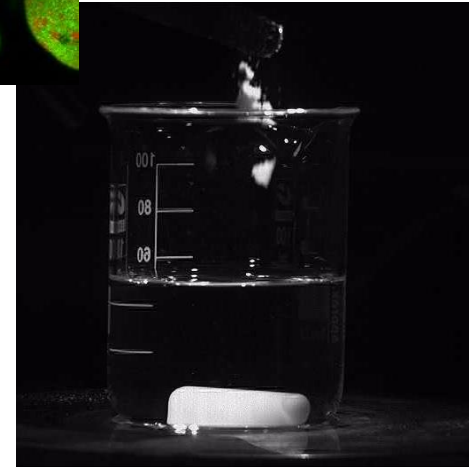
Structure & functionality



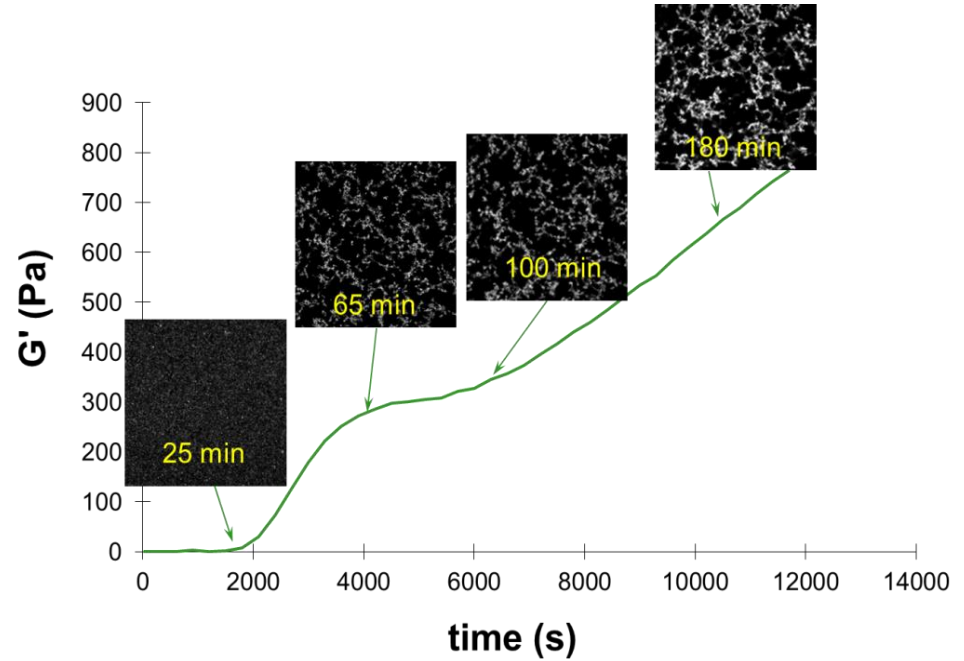
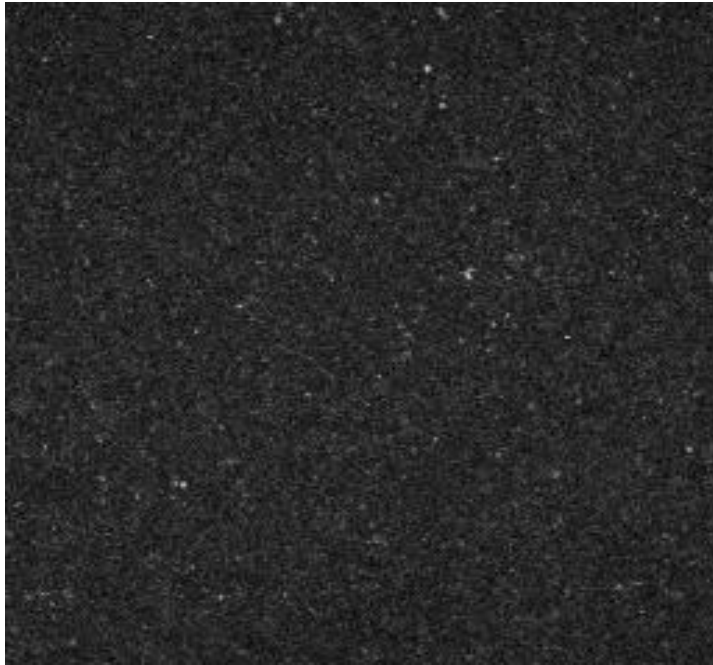
Good solubility



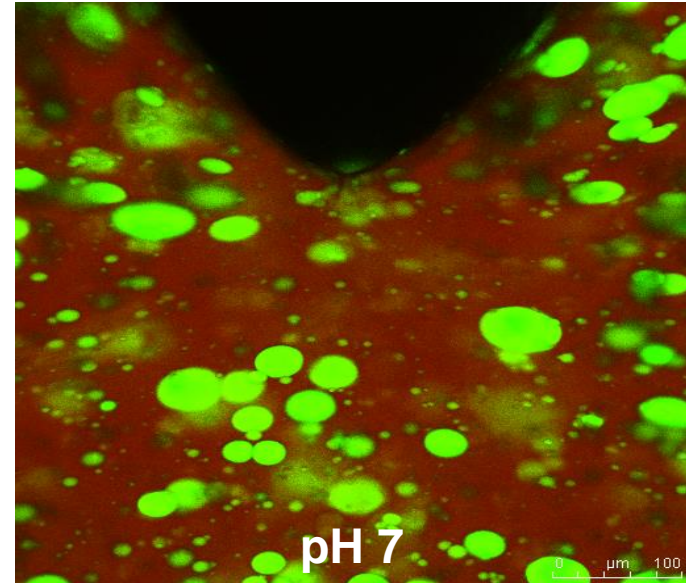
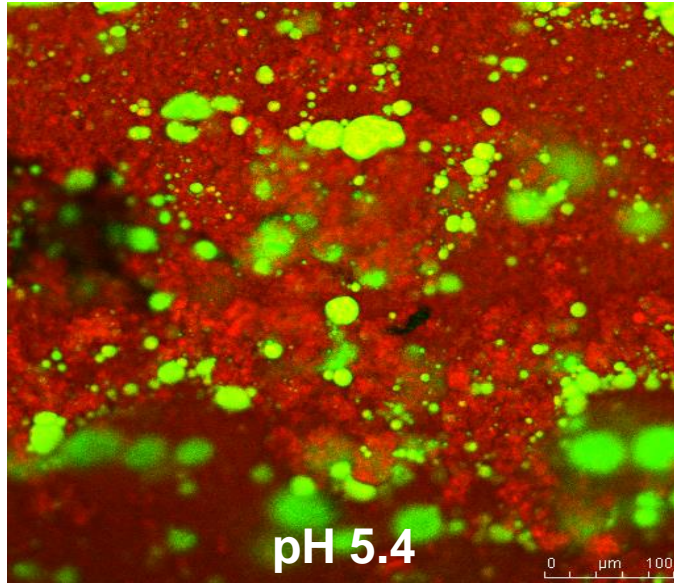
Poor solubility



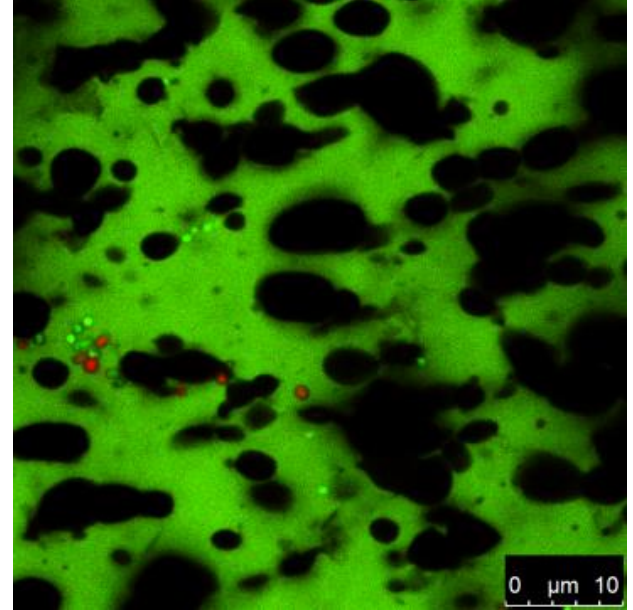
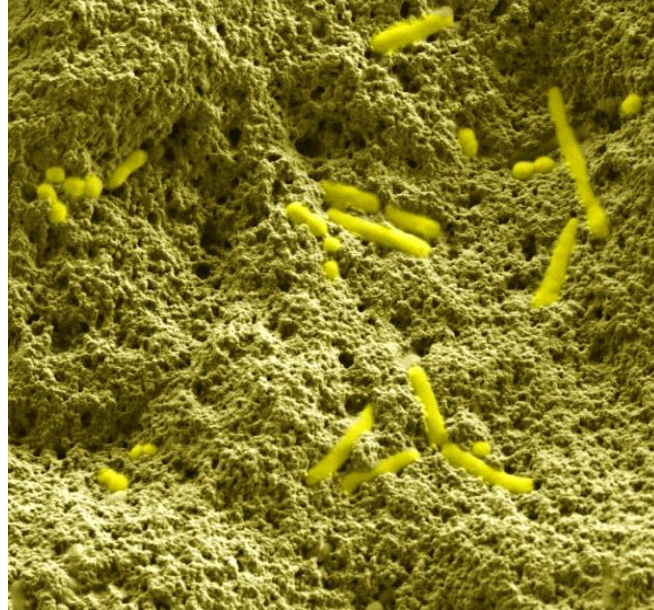
Structure formation



Structure breakdown



Electron microscopy



3D imaging

