Dry systems forward look

Michel Louge,
virtual IFPRI AGM,
July 1, 2020

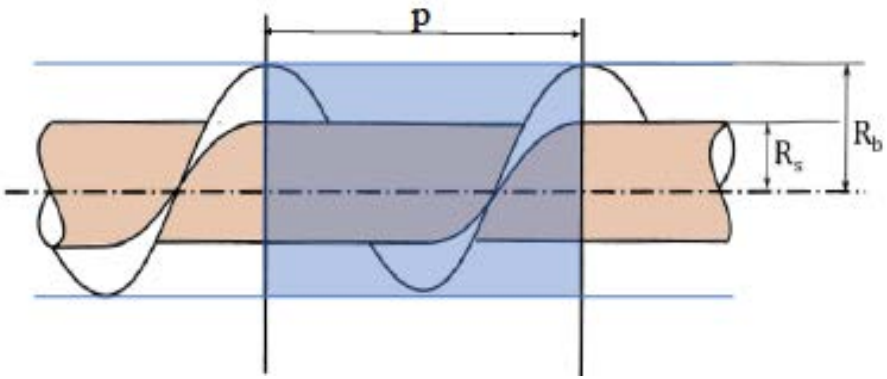
Dry systems portfolio

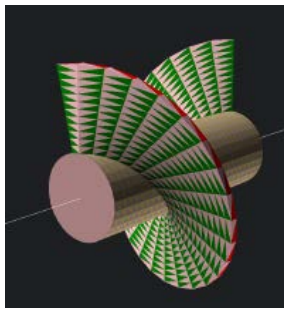
- Karen Hapgood (3D-print aggl.) ending
- Joe McCarthy (segregation) ending
- Colin Hare (weak yield) ending
- Indresan Govender (mixing) renewal 2020+1
- Karen Daniels (dry rheology) until 2021+1
- Prabhu Nott (screw feeding) until 2022+1
- Arno Kwade (milling additives) until 2022+1
- Csaba Sinka (powder adhesion) delayed start

Related initiatives

- DEM Round-Robin (Birmingham)
  - high-shear granulator and rotating drum
  - characterization, PEPT tracers, DEM
- Cohesion workshop, January 2020

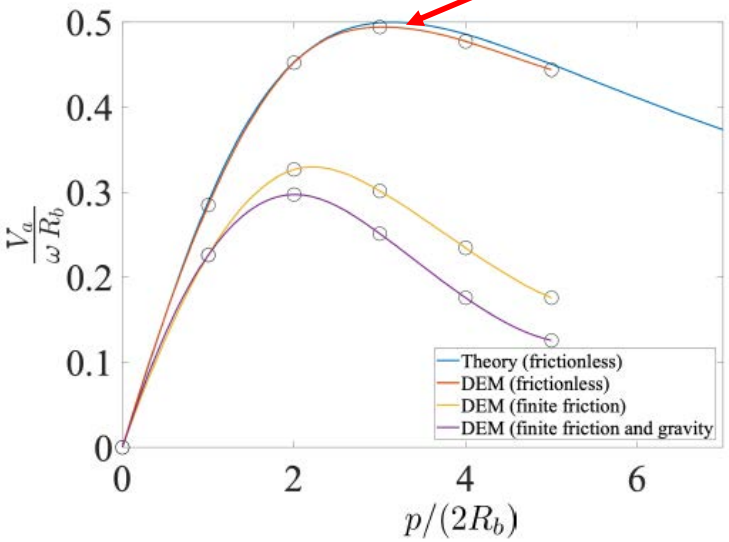
What we learned





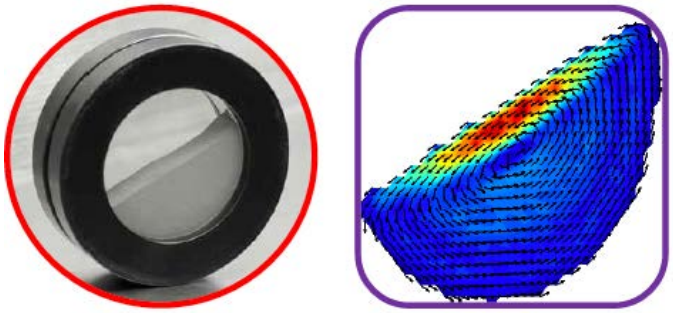
Prabhu Nott

Existence of an optimum flow rate

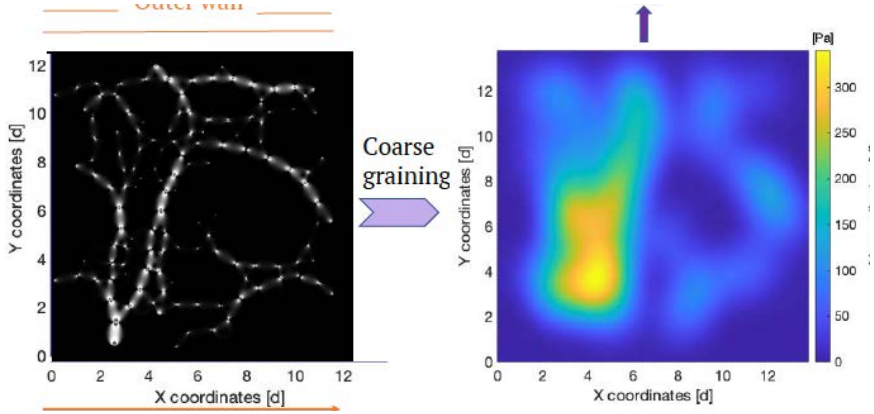


the power of careful modeling of mechanics, assisted by DEM

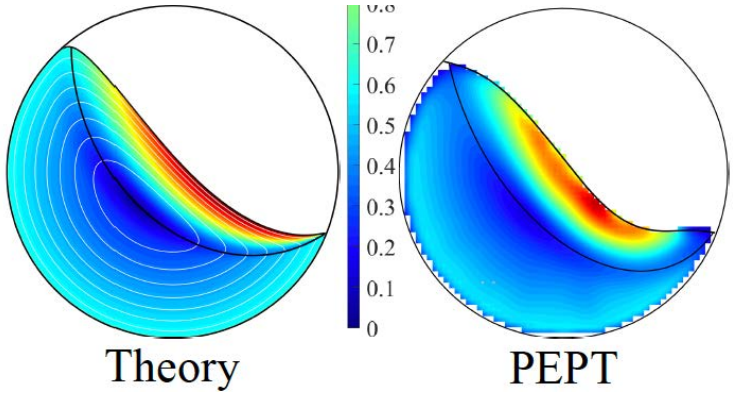
What we learned



Kit Windows-Yule



Karen Daniels

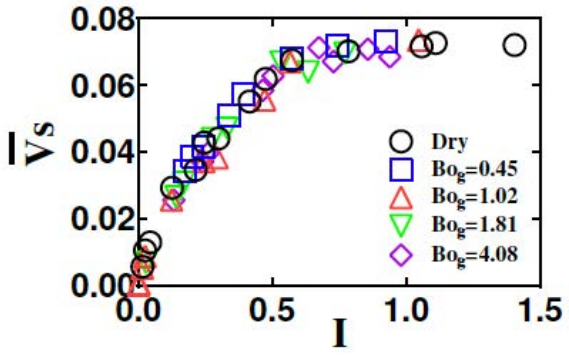


Indresan Govender

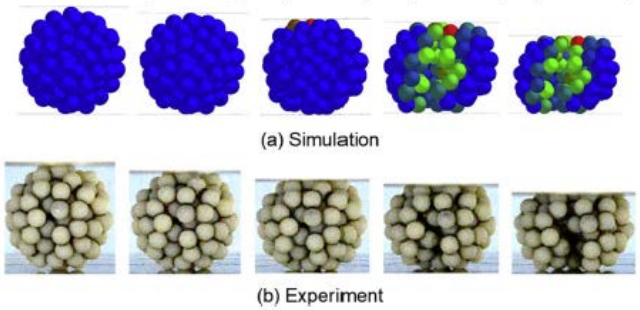
The power of unique instrumentation

Practical information

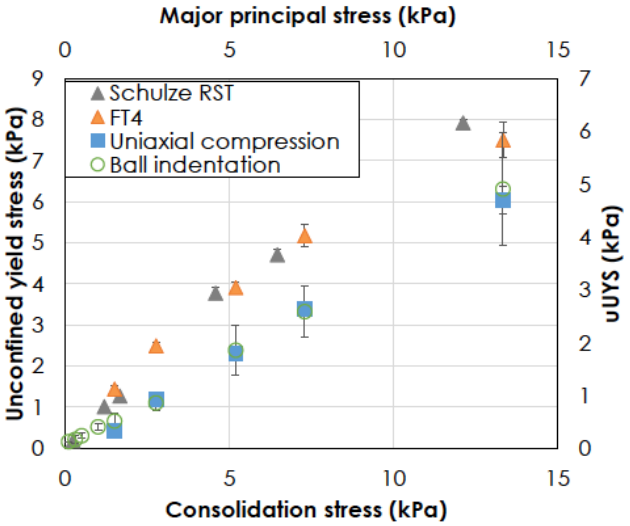
Scaling of segregation (Indresan Govender and Joe McCarthy)



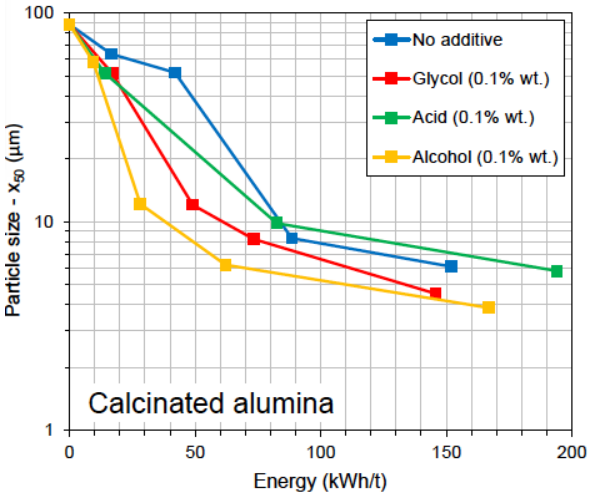
Resilience of 3D-printed agglomerates (Karen Hapgood)



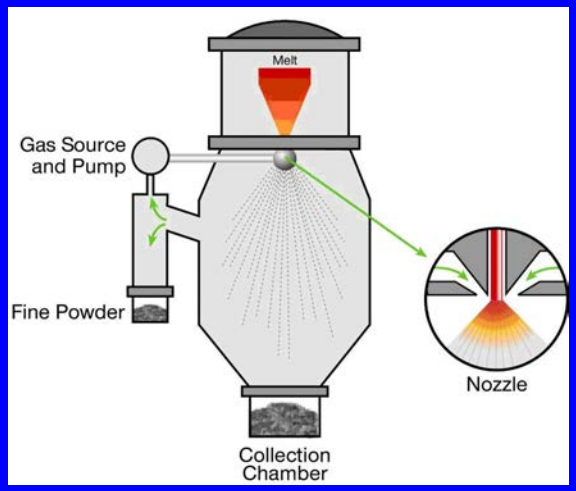
Yield of weakly-consolidated powder (Colin Hare)



Role of additives on milling (Arno Kwade)

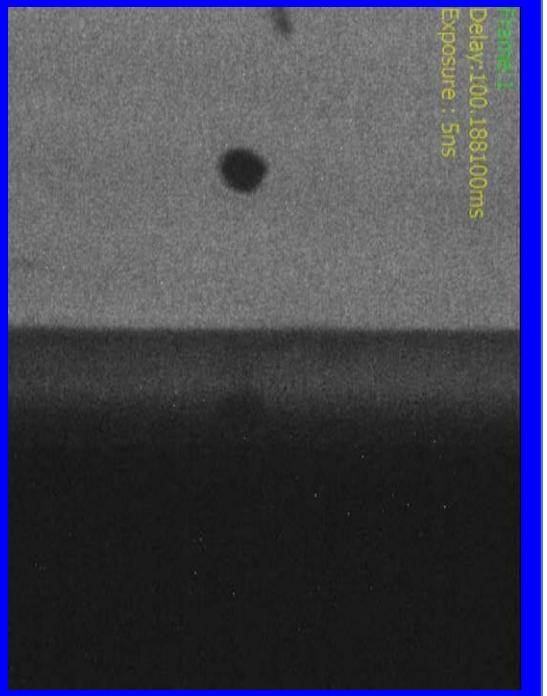


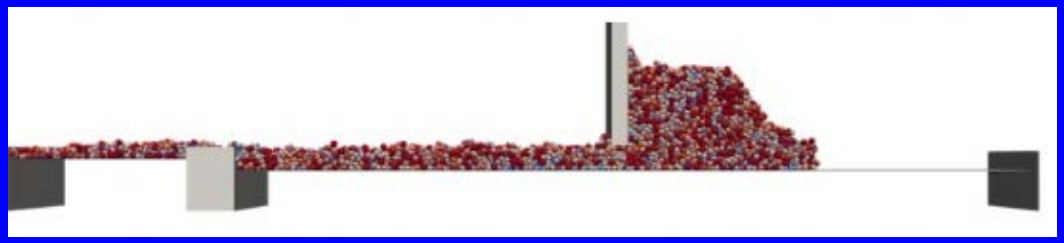
Forward look: thin films



thin films
powder synthesis

Atieh Moridi

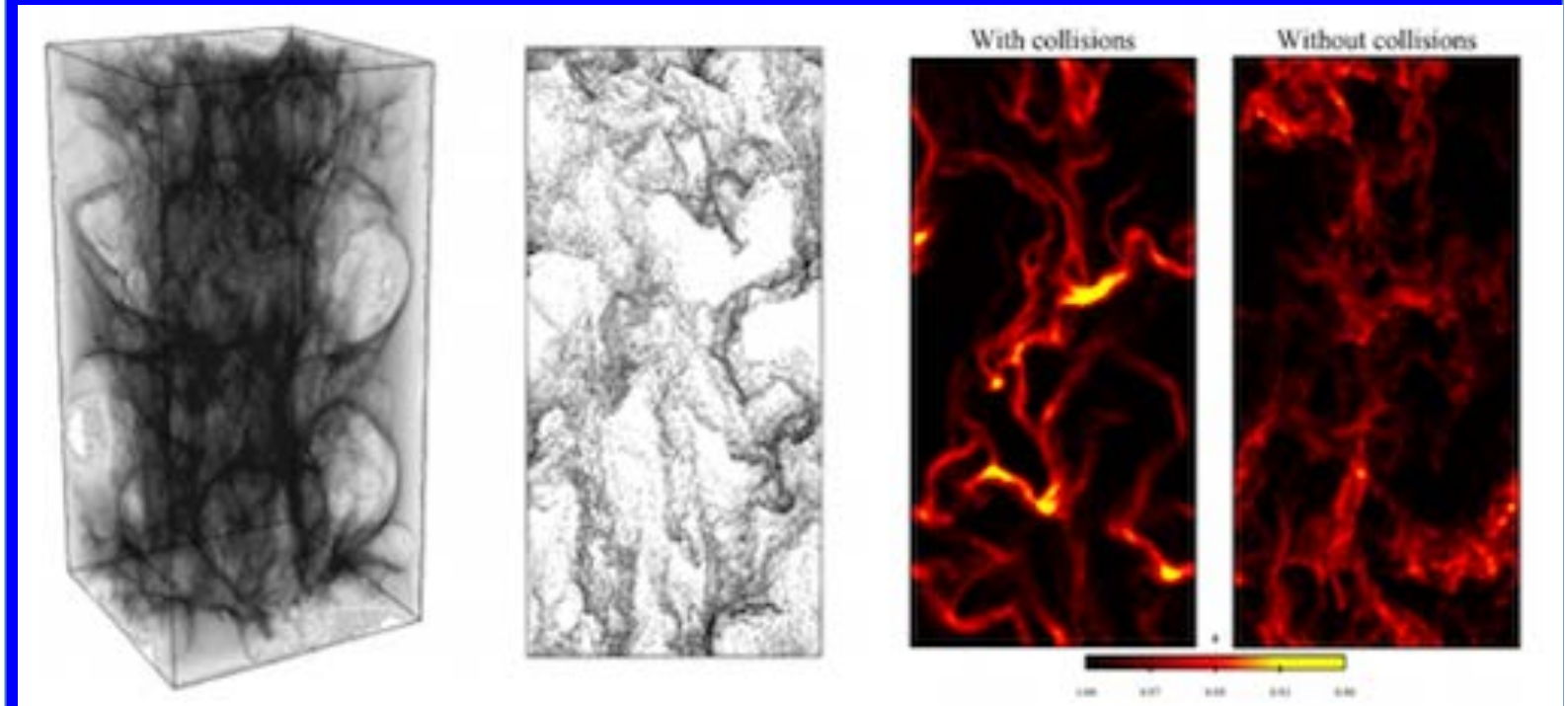




also Fahrang Radjai (Montpellier), Peter Van Puyvelde (KU Leuven), Steve Morris (Toronto)

Forward look: role of the gas

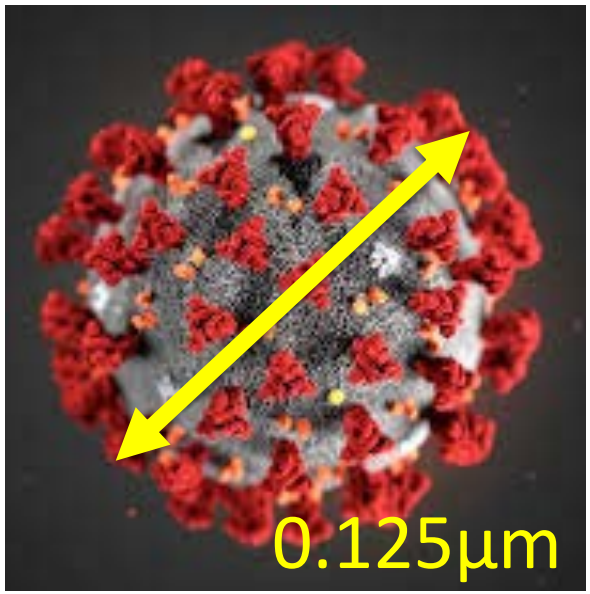
gas-solid flows, atomization



Olivier Desjardins

also Jesse Capecelatro (Michigan), Rodney Fox (Iowa State)

Forward look: aerosols



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