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Using colloidal packings as templates for structuring drugs JAMES WILKING, Harvard University, ANDRÉ STUDART, ETH, SEBASTIAN KOLTZENBURG, BASF, RODRIGO GUERRA, ESTHER AMSTAD, Harvard University, JENS RIEGER, BASF, DAVID WEITZ, Harvard University — Many pharmaceutical compounds are poorly soluble in water; this is problematic because most pharmaceuticals are delivered orally and must dissolve in the gastrointestinal fluid in order to be taken up by the body. We introduce a simple method for increasing the dissolution rates of poorly water-soluble organic actives. We demonstrate that by structuring the compounds within the interconnected, nanoscale pore space of a colloidal packing we create composites which rapidly disintegrate in water, exposing the nanostructured organic active and leading to improved dissolution rates.

[X] Prefer Oral Session
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