



## **Emulsion Polymers Consulting and Education, LLC**

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## **Chemical Modification of Starch Leading to Starch/Acrylic Hybrid Latexes**

### **Topical Outline of the Tutorial**

**September 2023**

- 1.) Starch molecular structure, chemical and physical properties
- 2.) Water soluble starch, nanoparticles of starch, nanocrystals
- 3.) Degradation to reduce MW, retrodegradation
- 4.) Functionalization and chemical modification of starch
- 5.) Polymer grafting onto starch, grafting “to” and “from”
- 6.) Sites on starch where grafting occurs, extent of grafting and its efficiency
- 7.) Polymerization induced self-assembly (PISA) of grafted starch into nanoparticles
- 8.) Use of starch in emulsion polymerization