



Session 7	Emerging innovative technologies for the bioeconomy
Pitch Title	No More Downstream Processing: Harnessing Solid State Biocatalysis for Cost-Effective Biotransformation
Company	Shreenika
Speaker	Dr. Jeffrey Ehrhardt
Keywords feedstock	Small Molecules, Pharmaceutical APIs
Keywords technology	Biocatalysis, Biotransformation
Keywords End-Product	Fine Chemicals, Specialty Chemicals

Abstract:

Traditional biocatalysis requires highly soluble substrates, limiting space-time yields of processes and driving up costs. Further, low-titer processes often struggle in downstream purifications. While biphasic and surfactant-based systems can bypass some of the limitations of low solubility substrates, these solutions add further complexity and cost. Shreenika has invented a unique solution to bypass the limitations of poorly soluble substrates, called "solid state biocatalysis." Here we show a unique solution to transform insoluble substrate into product, with complete conversion and requiring only filtration to recover high purity product. Our solid state biocatalysis platform outcompetes chemical synthesis and traditional biocatalysis in many examples, due to simpler processing and dramatically reduced downstream processing requirements.