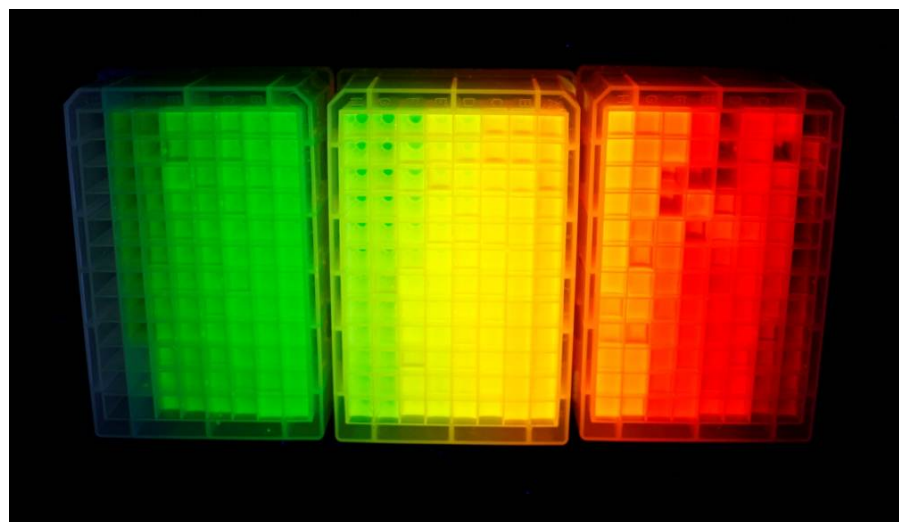
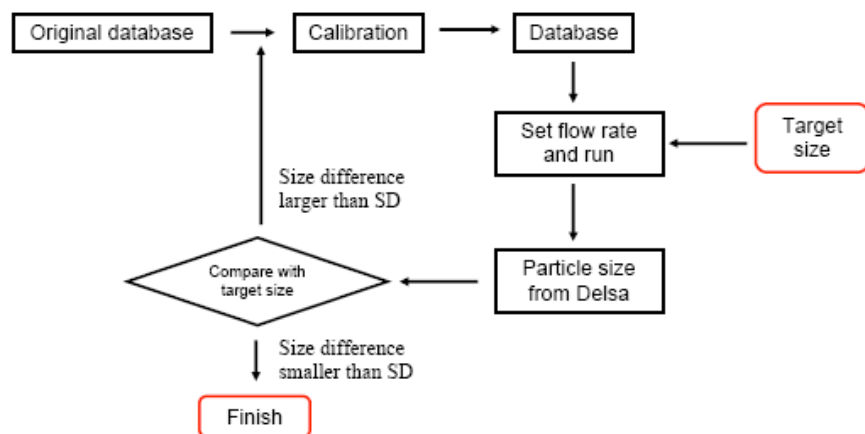


Particle Process Analytical Technology PPAT

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Overview: This project has been oriented towards evaluating particle oriented process control technologies for the manufacture of high value submicron or nano materials. Beginning with a model system (silica) and using a flow manufacturing process, we have demonstrated very precise control over particle size through the use of in-line particle measurement and process control algorithms



Technical Information: Silica, nanogold, (polystyrene) and most recently, quantum dots have been explored with flow manufacturing and PPAT. The quantum dot syntheses have been highly promising and we have demonstrated precise control over the size and quality of CdSeS QDs over an emission range of 500 – 750nm.

Industrial Relevance: Although conducted on a relatively small scale these methods are applicable to a high-value particulate products with the need for precise control over particle size.