

## **A PERSPECTIVE ON POLISHING OPERATIONS FOR THE CONTINUOUS REMOVAL OF PROCESS AND PRODUCT RELATED IMPURITIES**

Steven M. Cramer, Rensselaer Polytechnic Institute, Troy, NY  
stevocramer@gmail.com

Key Words: Polishing, Process and Product Impurities, Expedited Process Development, Analytics

With the implementation of continuous and integrated downstream bioprocessing, it is increasingly important to develop efficient and robust post capture polishing operations. This is true for both affinity column based as well as alternative capture operations such as continuous precipitation processes. This presentation will discuss screening/in silico methodologies for process development of these polishing operations for both traditional and precipitation based processes. The impact of various analytical techniques (e.g. elisa, proteomics, analytical chromatography, mals, etc..) on the both the quality of the data and the ability of these tools to use this data to rapidly develop processes will be discussed. In addition, the inherent limitations of polishing operations for certain bioseparation challenges as well as the potential for new separation materials/processes to address these challenges will be addressed.