Quantachrome Instruments Workshop on Methods of Characterization and Evaluation of Adsorbents for Industrial Applications

Thursday, November 2, 11:30 AM -12:00 PM
Minneapolis Convention Center, Room 101J

Charles Thibault

Use of Dynamic Breakthrough Measurements for Characterization of Adsorbents and Optimization of Separation Processes

Use of adsorbents, both naturally occurring and synthetic, for the separation and purification of gasses has been around for many years. Although these processes are well developed, the introduction of new adsorbents and the need to optimize the existing processes, results in the need for better understanding of the competitive adsorption and equilibrium conditions of the gas-solid system. Optimizing the parameters of the separation process in a production environment, even in a pilot plant, can be very costly. The ability to model these systems in a benchtop system, in the lab, under controlled conditions, is a valuable tool in improving the efficiency of these processes. We will discuss the use of a commercially available dynamic breakthrough apparatus for the development and optimization of gas separation and purification processes.