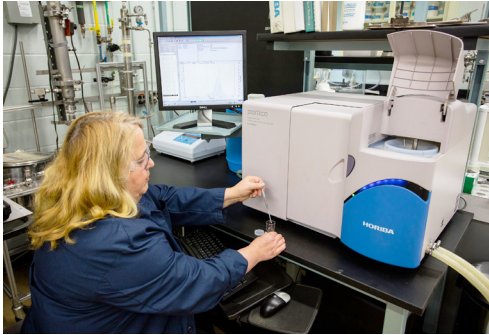


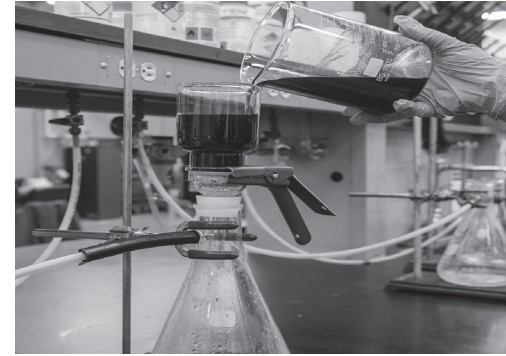
# HIGH PURITY CUSTOMIZED FILTRATION SOLUTIONS

**mott**  
MISSION CRITICAL PRECISION



## Filtration Performance Testing to 1.5 Nanometer (0.0015 $\mu\text{m}$ ) Particles

- » Measure particle capture to confirm media selection and filter size are correct for your application
- » Test and measure filtration efficiency down to 0.0015  $\mu\text{m}$ , 2x more efficient than industry standards (0.003  $\mu\text{m}$ )
- » Tests developed with prestigious University of Minnesota Particle Technology Lab



## Cleanliness Testing

- » Reduce particle shed in components and prevent damage to downstream internal components, improve wafer yield and eliminate chemical contamination concerns
- » Component flushing, rinsing and gravimetric testing
- » Microscopic inspection tests using Hirox 3D Microscope



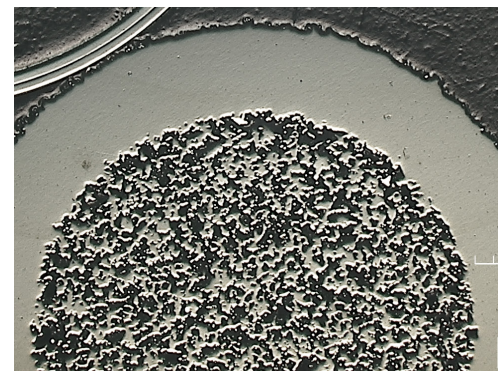
## Improve Preventative Maintenance Effectiveness with Failure Analysis and Lifecycle Testing

- » Lifecycle testing on porous sheet is capable of measuring the effects of long term corrosion exposure, pressure cycling, and other processes that may alter mechanical integrity
- » Critical to determining when parts will likely need replacement and avoiding production downtime due to unforeseen complications
- » Tests conform to ASTM E1508



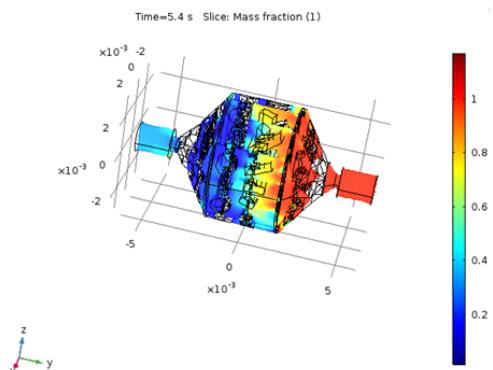
## 3D Porous and Porous/Solid Rapid Product Design

- » Innovative designs target thinner, more uniform, and lower differential pressures for diffusers, flow restrictors, filters and other fluidic components
- » Integrate multiple components, remove assembly steps and other points of failure in gas delivery system components
- » New component designs like valves, degassers, in-line filters and even pumps with solid-porous design aspects are possible
- » Prototypes at 2x the speed of the competition



## CFD Optimization of Fluidic Components

- » Save time with design iterations by optimizing fluidic component designs based on actual specifications
- » Mott's internal COSMOL team can simulate fluid conditions to achieve gas filtration, diffusion, flow control, gas mixing, gas sparging, and more for a host of UHP industries



Time=5 s Surface: von Mises stress (N/m<sup>2</sup>)  
Streamline: Velocity field (spatial frame)

