



Showcasing research from Professor Aaron Timperman's laboratory, Department of Bioengineering, University of Pennsylvania, PA, USA.

Measuring the electrophoretic mobility and size of single particles using microfluidic transverse AC electrophoresis (TrACE)

This study presents a novel system called transverse AC electrophoresis (TrACE) that enables simultaneous measurements of electrophoretic mobility and size of single particles. TrACE combines AC electrophoresis to drive the particles' oscillations and particle tracking velocimetry to record their unique trajectories. Measurements made in TrACE are consistent with ELS measurements, and precision is enhanced. TrACE systems are expected to be highly suitable as fieldable tools to measure a broad range of individual particles.

As featured in:



See M. Hannah Choi,  
Aaron T. Timperman *et al.*,  
*Lab Chip*, 2024, **24**, 20.