Periodic Electrodynamic Focusing Lens for Nanoparticles and Ions < 10 nm

Tech ID: 21071 / UC Case 2006-166-0

BACKGROUND

Aerodynamic lenses are now widely used as a method to generate a particle beam, particularly for small nanoparticles. Aerosol mass spectrometers are commercially available and their integrated aerodynamic lens-nozzle designs has been characterized. [See, for example, Aerosol Science and Technology, 36, 617-631, (2002).] However, the technique has the serious limitation that it is limited to particles > 10 nm.

TECHNOLOGY DESCRIPTION

Researchers at UC San Diego have invented a lens design addressing this limitation. The present invention utilizes a complex electrodynamic lens system and method of operation that allows the focusing of nanoparticles, such as aerosols, and ions < 10 nm in size.

STATE OF DEVELOPMENT

This new capability for particle-beam collimation and focusing is in the early development stage, but is available for licensing.

INTELLECTUAL PROPERTY INFO

Patents pending

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OTHER INFORMATION

CATEGORIZED AS

- **Optics and Photonics**
  - All Optics and Photonics
- **Nanotechnology**
  - Tools and Devices
- **Sensors & Instrumentation**
  - Analytical

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