Analytical Instrumentation, Methods & Materials

METHODS AND SYSTEMS FOR DETECTING DIFFUSING SINGLE PARTICLES

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The Invention

UW-Madison (and University of Cambridge) researchers have developed an improved system for measuring the mass of single molecules (SMs). Their system leverages Fabry-Pérot (FP) microcavities for cavity-enhanced dynamic light scattering (CEDLS). In a FP optical microcavity, light is confined between two reflective surfaces at wavelengths defined by the cavity length (L). By manipulating L, quantized optical resonances can be created using mode matching conditions. The system leverages servo motors to dynamically control L by moving the individual fibers. Once found, the optical resonances are locked, with the resultant scattered light from the sample having sufficient intensity to detect and characterize SMs with requisite specificity and without the need for fluorescence.

Additional Information

For More Information About the Inventors

- Randall Goldsmith

Tech Fields

- Analytical Instrumentation, Methods & Materials : Spectroscopy

For current licensing status, please contact Jennifer Gottwald at jennifer@warf.org or 608-960-9854