



复旦大学物理系物质科学报告

Electrical Digitalization and Manipulation of Microfluidic Droplets: The Application of Giant Electrorheological Fluid

Physics Department Colloquium

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Microfluidics, especially droplet microfluidic, attracts much attention recently from diverse research fields due to its highly integration, digitalization and computer-controlled characteristics. While, electrorheological (ER) fluid, especially GER (giant electrorheological) fluid, which is considered as a kind of smart material has been applied to the microfluidic systems to achieve active and precise control of fluid by electrical signal. In this talk, we will introduce recent results of microfluidic droplet manipulation, GER fluid, and some pertinent achievements by introducing GER fluid into microfluidic system: digital generation, manipulation of “smart droplets” and droplet manipulation by GER fluid. Once it is combined with real-time detection, integrated chip with many

functions can be realized. Some other applications of GER fluid will be also introduced.

Time: 2:00pm, Tuesday, 2016.03.15

Location: Physics Building, Room 221B

(Cookies and coffee are served from 1:30 pm)