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DEPARTMENT OF
SCIENCE & TECHNOLOGY
सत्यमेव जयते

BITS Pilani
TECHNOLOGY
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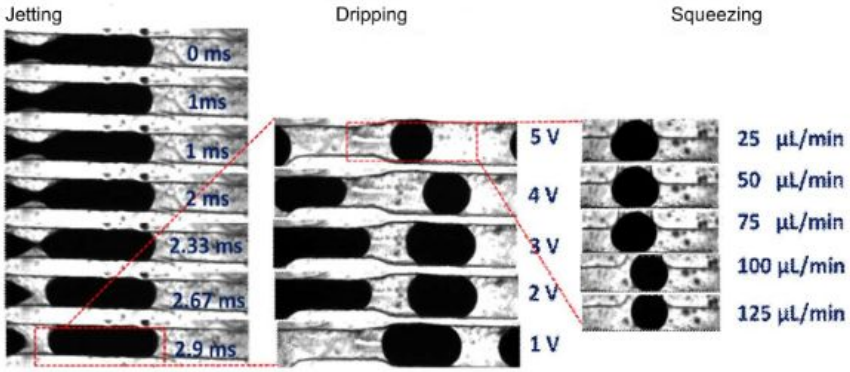
PENDING

(IN202311052236) Improved electro-microfluidic droplet chip



NEED

Efficient droplet generation and sorting in microfluidic systems is a significant challenge, impacting applications like diagnostics and drug delivery. Current systems lack precision and scalability.

MARKET ANALYSIS

The global microfluidics market is projected to grow at a CAGR of 19.2%, reaching $45 billion by 2033 (source: Market Research Future, 2023). Technological advancements and increasing demand for portable diagnostic tools are driving growth.

TECHNOLOGY OVERVIEW

The invention offers a precise electro-microfluidic chip that generates and sorts droplets by applying electric potential. It improves droplet control, scalability, and efficiency in lab-on-a-chip applications for diagnostics and drug development.

Target Industries

Biotechnology, pharmaceuticals, diagnostics., Microfluidic device manufacturers, lab-on-a-chip developers, pharmaceutical companies focusing on drug delivery, diagnostic firms, and R&D institutions.

TECHNOLOGY KEY FEATURES

Electro-microfluidic droplet generation, precise droplet control, electric potential application, scalable design, suitable for lab-on-a-chip, diagnostic, and drug delivery applications.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)

Read more here

Technology is available for licensing/ co-development.

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