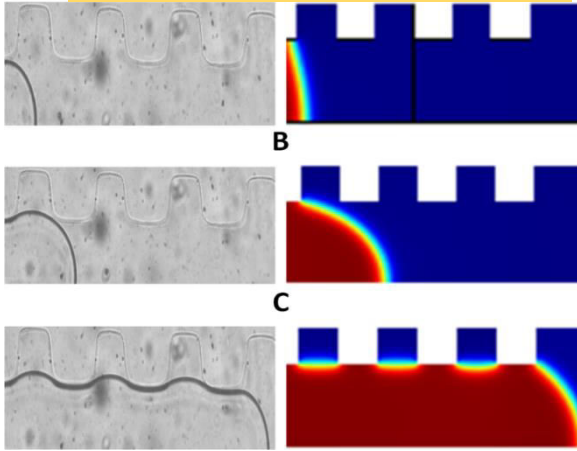


Project Investigator: Dr. Pranab Kumar Mondal (Department of Mechanical Engineering)



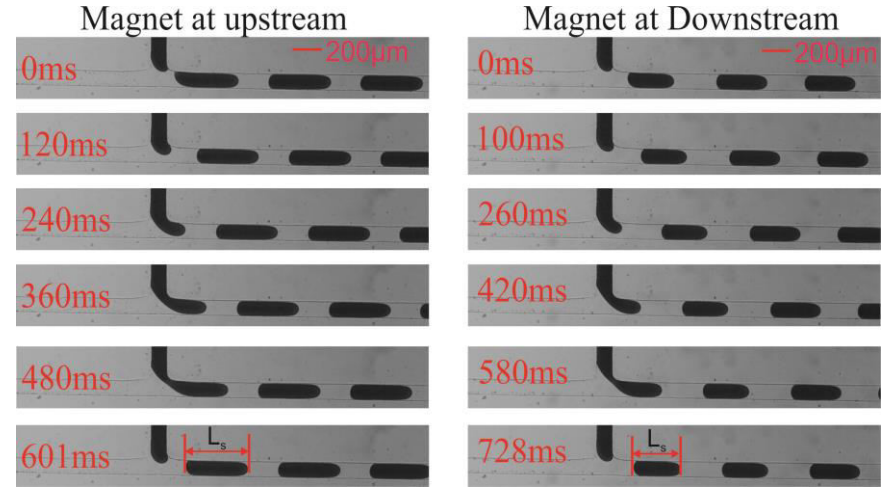
Objective: All research projects are executed at Microfluidics and Microscale transport process laboratory, IIT Guwahati

A Design of novel microfluidic platform for precise controlling of flow



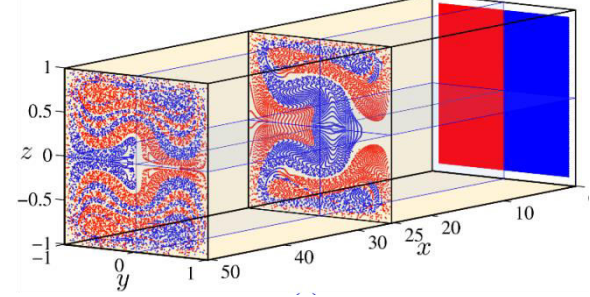
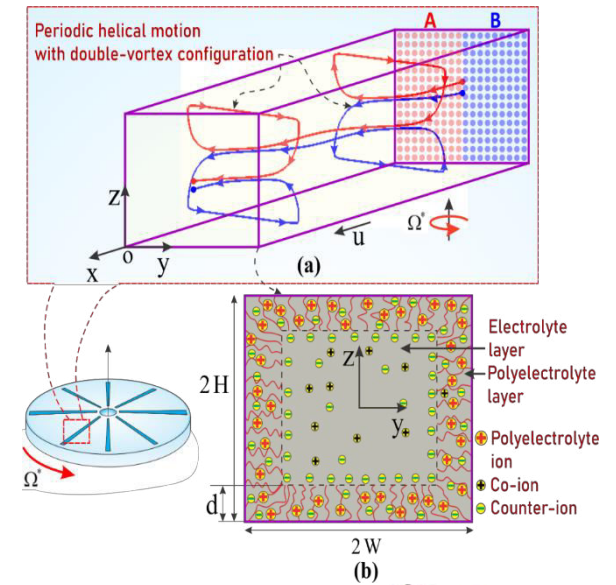
Surface roughness - wettability modulated filling dynamics. Novel way of controlling flow in microcapillary. [Funding from SERB-Department of Science and Technology]

B Non-invasive way of droplet generation



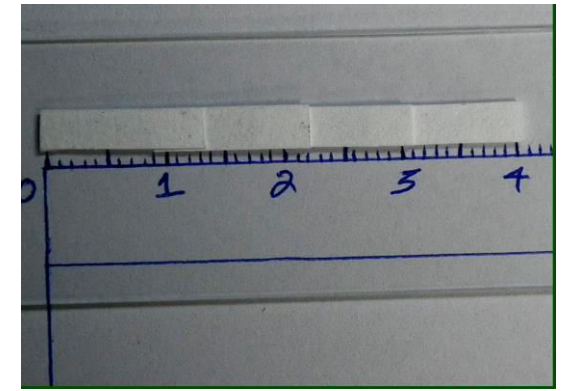
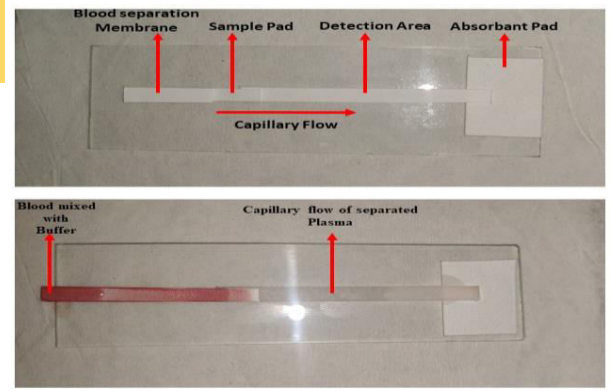
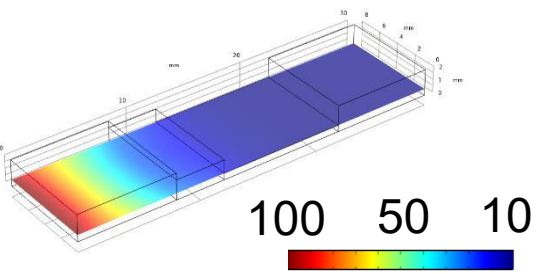
Controlled droplet generation using magnetic field towards development on Lab-on-a-chip based point of care device. [Funding from IEDC, Govt. of India]

C Exploring avenue towards achieving better mixing in centrifugal microfluidic device



Rotational force driven mixing in centrifugal microfluidic device towards achieving augmented fluidic functionality at small scale. [Funding from SERB (DST)]

d Towards the development of detection kit for COVID - 19 using paper microfluidics.



Variation of the flow velocity in the lateralflow assay towards the development of CRISPER Cas-12 based paper microfluidics device for the detection of COVID-19. [COVID-19 project, Funding from DBT, Govt. of India]

µm/s