



**Droplet generation from cone jet using electrostatic forces: A hybrid lattice Boltzmann-finite difference based numerical study**

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November, 2018

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# 1 Introduction

Using EKI we can generate droplet[1]



Figure 1: Various sub-fields of Microfluidics.

## 1.1 Objective

## 1.2 Motivations

( Benefits- economical)

## 1.3 Financial

(Can be in terms of efficiency although currency numbers are more preferred).

## 1.4 Work impact

Brief explanation of work impact ( Broad area)

## **2 Project substance**

This should include 2 small paragraphs of brief methodology i.e., what is my interest, what I am trying to achieve through my experimental setup/numerical scheme.

### **3 Contents of research**

#### **3.1 Previous studies**

#### **3.2 Limitations**

#### **3.3 Experience to achieve results**

(You have studied literature and now procuring a experimental setup, with this you have to convince the readers that you are capable of achieving results. It should be valid).

#### **3.4 Details about research**

(All the study parameters which I will be studying and varying)

#### **3.5 Challenges**

(Which I will be facing while doing my experimental project)

## 4 Methodology

(Detailed experimental and analytical process to be adopted or a flowchart to defend same including brief explanations).

Mention the parameters selected for study, how you are going to change them and why?...for each objective and also show analysis.

## 5 Work plan

Make it in two parts. One is timeline where your plan is divided in terms of months and second is here your plan is divided in terms of years.

## 6 Anticipate results and potential contribution

This should include both short term and long term results. Also there should be a link directing impact of short term results on long term results like impact on society or monetary gains for some section of people or some countries.

## References

- [1] S.S. Bahga, O.I. Vinogradova, and M.Z. Bazant. “Anisotropic electro-osmotic flow over super-hydrophobic surfaces”. In: *Journal of Fluid Mechanics* 644 (2010), 245–255. DOI: 10.1017/S0022112009992771. ■