

# **Dr. Kshetramohan Sahoo**

E-mail: [kshetramohan@iisc.ac.in](mailto:kshetramohan@iisc.ac.in)

## **1. Educational Background:**

### **Indian Institute of Science, Bangalore (2010-2020)**

Ph.D. and M.Sc. (Engg.) in Chemical Engineering (2020)

Advisor: Prof. Sanjeev kumar Gupta

Thesis title: **Studies on a new continuous Spinning disc-Spinning bowl contactor/mixer**

### **Training School, Bhabha Atomic Research Centre, Mumbai (2003-2004)**

One year orientation Course on Nuclear Engineering and Science (OCES).

### **Indira Gandhi Institute of Technology, Sarang (1999-2003)**

B.E. in Chemical Engineering (2003)

## **2. Industrial assignments:**

### **Bhabha Atomic Research Centre Projects, Kalpakkam, Tamilnadu (2004-2010)**

#### **Scientific Officer – D (2007-2010)**

Reactor operation and Reactor safety

#### **Scientific Officer – C (2004-2007)**

Reactor physics and Reactor engineering

## **3. Research Expertise:**

Particle engineering, Precipitation, Metal and drug nanoparticle synthesis, Liquid-liquid mixing, Atomization, Microfluidics, Impinging jet systems, and Spinning disc spinning bowl contactor.

#### **4. New Research Interests:**

Water purification, Food processing, Biomass utilization, Energy storage, Multiphase reaction engineering, and Interfacial and colloidal engineering.

#### **5. Publications:**

1. Atomization characteristics of a spinning disc in direct droplet mode, **2021**, K Sahoo and S Kumar, **Industrial & Engineering Chemistry Research**, 60 (15), 5665-5673.
2. Green synthesis of sub 10 nm silver nanoparticles in gram scale using free impinging jet reactor, **2021**, K Sahoo and S Kumar, **Chemical Engineering and Processing-Process Intensification**, 165, 108439.

#### **6. Conferences:**

##### **Paper Presentation**

1. ‘Studies on drop formation process at the edge of a spinning disc under direct drop regime’ at 73<sup>rd</sup> annual meeting of **American Physical Society (APS-2020, Chicago-23<sup>rd</sup> Nov 2020)**.
2. ‘Studies on mixing in a spinning disc spinning bowl reactor’ at Sixth **Asian Particle Technology Symposium (APT-2015)** held at **Seoul, South Korea. (17<sup>th</sup> Sep 2015)**.

##### **Poster Presentation**

1. ‘Drop formation at the edge of a spinning disc at low flow rate’ at **Complex Fluid-2020** organized by **IIT Bombay and Indian Rheological Society (IRS-10<sup>th</sup> Dec 2020)**.
2. ‘A new Spinning disc spinning bowl contactor: Synthesis of drug nanoparticles and mixing studies’ presented under meet the faculty and post doctoral candidate category at annual meeting of **American Institute of Chemical Engineers (AIChE-2020, San Francisco-16<sup>th</sup> Nov 2020)**.
3. ‘Free Impinging Jet Reactor for Scalable Synthesis of Sub 10 nm Silver Nanoparticle with a Green Protocol presented at **International conference on Nanoscience and Technology (ICONSAT-2018)** held at **Bangalore, India (21<sup>st</sup> Mar 2018)**.

4. 'Development of flow reactor for largescale synthesis of nanoparticles' presented at IRHPHA workshop sponsored by **DST, India** held at **IIT Bombay, India (25<sup>th</sup> Feb 2013)**.

### **7. Member of Professional Bodies:**

American Institute of Chemical Engineers (**AIChE**), American Physical Society (**APS**), and Indian Rheological Society (**IRS**).

### **8. References:**

#### **1. Prof. Sanjeev kumar Gupta**

Dept. of Chemical Engineering, Indian Institute of Science

Bangalore-560012, India

Email: [sanjeev@iisc.ac.in](mailto:sanjeev@iisc.ac.in)

#### **2. Prof. K. Kesava Rao**

Dept. of Chemical Engineering, Indian Institute of Science

Bangalore-560012, India

Email: [kesava@iisc.ac.in](mailto:kesava@iisc.ac.in)