

## Sabban Rushikesh Kailas

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### Personal dossier

**Current position:** pursuing Ph.D. at advanced materials research group, department of metallurgical and materials engineering, Indian Institute of Technology Madras

**Background:** M.Tech research (Materials Engineering) Iisc. Bangalore (January 2019)  
B.Tech: Metallurgical Engineering, College of Engineering Pune (2016)

**Linguistic Abilities:** English, Hindi, Marathi (S/W/R), Telugu(S)

### Scholastics

Degree	Institution/University	Completion year	Percent/CGPA
M.Tech Research	Indian Institute of science, Bangalore	Jan 2019	9.8/10
B.Tech	College of Engineering, Pune	May 2016	9.34/10
H.S.C.	Bhausahab Firodiya Junior College	2012	87.50/100
S.S.C.	Bhausahab Firodiya High School	2010	92.73/100

### Project experience

1) Heat Treatment and Surface Engineering of Selective Laser Melted Ti-6Al-4V for Improved Performance in Biomedical Implants (**M.Tech research project**)

**Guides:** Prof. Satyam Suwas and Prof. Kaushik Chatterjee (Dept. of Materials Engineering, IISc Bangalore)

2) Sustainable Green Technology for waste management: Conversion of mill scale into pure Fe<sub>2</sub>O<sub>3</sub> powder, its Mathematical Simulation and Kinetics study thereof (**B.Tech project**)

**Guide:** Dr. N. B. Dhokey, Head of the department, Metallurgical Engineering, COEP

3) Texture evolution during hot deformation of Moly-TZM, Moly TZC

**Guide:** Prof. Satyam Suwas (Dept. of Materials Engineering, IISc Bangalore); Duration: 1<sup>st</sup> June 2015 to 31<sup>st</sup> July 2015 (**Summer Internship**)

4) Model development and validation in patenting fumeless pickling and bronze plating line for the auto dosing of chemicals

**Guide:** Mr. Shaishav Upadhyay/Manager, Tata Steel, Wire Technology Group, Tarapur; Duration: 8<sup>th</sup> Dec 2014 to 16<sup>th</sup> Jan 2015 (**Winter Internship**)

5) Finding out optimum tempering time required after carbonitriding of compacted iron powder DAB 0008 (Grade 83.26.61)

**Guide:** Mr. Balakrishnan (Sintercom India Pvt. Limited); Duration: **Summer internship** (June 2014)

## **Publication**

**Rushikesh Sabban**, Sumit Bahl, Kaushik Chatterjee, Satyam Suwas, Globularization using heat treatment in additively manufactured Ti-6Al-4V for high strength and toughness, Acta Materialia, Volume 162, 1 January 2019, Pages 239-254

## **Conferences**

1) **R.Sabban**, P.Tarate, N. B. Dhokey, Dependence of degree of oxidation of mill scale on depth of static bed and its modelling with ANSYS FLUENT, PMAI (Powder Metallurgy Association of India) 2016 International conference, 18<sup>th</sup> -20<sup>th</sup> February 2016

2) **R.Sabban**, C.Tadwalkar, N. B. Dhokey, Sustainable Green Technology for waste management: Recovery of mill scale into Pure Fe<sub>2</sub>O<sub>3</sub> powder and its Mathematical Simulation, Materials and Manufacturing Technology 2016 conference and concurrent exhibition, ASM (American Society of Materials) International, Pune Chapter, 24<sup>th</sup> and 25<sup>th</sup> February 2016

## **Laboratory skills**

### **Expert user of:**

- 1) Scanning electron microscopy and Energy dispersive spectroscopy (FEI ESEM Quanta 200 and Zeiss EVO LaB<sub>6</sub>)
- 2) X-ray diffractometer (XRD, Panalytical X'Pert Pro)
- 3) Differential thermal analysis (DTA, NETZSCH STA409)
- 4) X-ray computed tomography (Xradia Versa XRM500)
- 5) X-ray texture goniometer (Bruker D8 Discover) for bulk texture and residual stress
- 6) MTS Landmark Servo-hydraulic System (Tensile, Compression Testing)
- 7) Instron rotating bending fatigue, Surface Mechanical Attrition Treatment (SMAT) setup
- 8) Electrochemical characterization (three electrode cell setup (CHI604E, C.H. Instruments): Tafel plot, Impedance spectroscopy, Mott-Schottky plot
- 9) Contact angle goniometer (OCA 15EC, Dataphysics)
- 10) Data analysis software 'Statistica' and 'OriginPro'
- 11) All major Microsoft Office applications

## **Academic achievements**

- 1) All India Rank 2<sup>nd</sup> in MT GATE-2016
- 2) MINEX young researcher award from American Society of Materials (ASM)
- 3) Departmental 2<sup>nd</sup> rank medal from Indian Institute of welding (IIW) in B.Tech
- 4) National Talent Search(NTS) scholarship for Economical backward students

**Date: 20/05/2020**

**Place: Pune**