

## **Brief Resume**

Name: Manas Paliwal

Date of birth: April 13, 1983

Affiliation: Assistant Professor, Metallurgical and Materials Engineering, IIT Kharagpur

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### **1. Education**

- 1) 2007. 8 – 2009. 8: M.S degree: Dept. Mining and Materials Engineering, McGill University, Montreal, Canada Thesis: (Advisor: Prof. In-Ho Jung)
- 2) 2009. 8 – 2014. 3: PhD degree: Dept. Mining and Materials Engineering, McGill University, Montreal, Canada (Advisor: Prof. In-Ho Jung)

### **2. Major research area**

- 1) Thermodynamic modelling of materials and application to alloy design
- 2) Microstructural solidification and experimental validation
- 3) Application of thermodynamic modelling to industrial processes
- 4) Diffusion couple experiments
- 5) Classical phase diagram experimental techniques
- 6) Rapid solidification and its application to additive manufacturing
- 7) Sustainable development
- 8) Process simulation

### **3. Professional Career**

- 1) Research Assistant, McGill University: 2007. 9 – 2014-03
- 2) Post. Doc. Fellow: McGill University: 2014. 03 – 2016.11
- 3) Assistant Professor, Materials Science and Engineering, IIT Gandhinagar: 2016.12-2018.12
- 4) Senior Lead Scientist, Sandvik Materials Technology: 2019.01 – 2021.03
- 5) Assistant Professor, Metallurgical and Materials Science, IIT Kharagpur: 2021.04 - Present

#### **4. Projects**

At IIT Kharagpur, I am actively involved in research projects with TATA Steel, Sandvik Materials Technology, MoS, MoM, DST etc.

##### ***At Sandvik Materials Technology***

- 1) **Ni alloy design:** Designing new heat treatment and aging schedules for new Ni alloys using a combination of computational thermodynamics and experiments
- 2) **Process modeling of AOD process**
- 3) **New flux design for dephosphorization**
- 4) **Alloy design for room temperature adiabatic refrigeration**

#### **5. Papers and Patents**

Research Publications-58, Patents-2

#### **6. Student Involvements**

PhD supervision-6

M.Tech-2