

---

## KEY ACADEMIC ACHIEVEMENTS

---

- One of the **5** ( out of 88 students) recipients in the department to be bestowed with the prestigious **Ministry of Steel Scholarship** by the Government of India ('08)
- Secured an **All India Rank of 538** (99.92 percentile) in All India Engineering Entrance Examination ('08)
- Stood **1<sup>st</sup>** in the Secondary School Examination in school (out of 200 students) ('06)

---

## INTERSHIPS

---

### Tanaka Holdings , Japan

(May - Jul '11)

#### *Electrode Material Development – Automotive Materials Group*

- Engineered and characterized **iridium alloys** for highly durable electrodes for automotive applications
- Identified parameters which led to **15%** increase in high temperature oxidation resistance of electrodes
- Proposed and presented a plan for implementation of the results in mass production

#### *Sensor Material Development – Automotive Materials Group*

- Researched alternatives for **platinum** in electrodes for sensors for automobile applications
- Identified and developed an alloy which demonstrated the potential to reduce overall costs by **20%**

*Only intern to present the findings and results to the Technical Head and the CEO of the company*

### Tata Steel – Wire Division , Tarapur

(Jun - Jul '10)

#### *Spring Steel Transverse Crack Analysis*

- Analysed the entire production process for the Spring Steel Wire product to eliminate internal rejections due to Transverse Cracks in Spring Steel wires
- Learnt and successfully implemented **Six Sigma analysis** to identify the reasons for Transverse Cracks in Spring Steel wires and proposed changes in the process to eliminate the same

### Meta Copper & Alloys Ltd., Goa

(Dec '10)

#### *Hot Rolling of Brass (70/30) and its effect on grain size and mechanical properties*

- Examined the entire 70/30 brass coil production line to reduce inconsistencies in grain size of coils
- Identified the exact cause and proposed remedial measures which led to a reduction in rejections due to improper grain size by **40%** and savings of more than **INR 6,00,000**

---

## KEY PROJECTS

---

### Industrial Project – Diamond Cutting blades

(May - Jul '09)

- Developed diamond cutting blades ,by coating bronze disks with diamond for the **first time in India**
- Conducted extensive testing of prototypes at diamond processing plants in Surat
- Developed blades performed **better than imported ones** being used in the diamond industry
- The method and technology developed was transferred to Mesacon Entreprises, Mumbai

### Characterization of Exfoliated Graphenes Sheets (Undergraduate Thesis)

(Apr '11 - Till date)

- Fabricated graphene in lab using the "Drawing Method" and characterized by Raman Spectroscopy
- Studied the electrical properties of graphene for applications in electronic devices

### Quartz Crystal Tuning Forks (Manufacturing Process Research Seminar)

(Jun - Nov '11)

- Analysed over 10 scientific publications on fabrication and growth of quartz crystals
- Presented a talk on hydrothermal growth and processing quartz crystals for gas sensing applications

**TRIP Steel (Research Seminar)**

(Jan - Apr '11)

- Conducted an extensive literature survey of over 15 scientific publications and presented a talk on the **structure property relationships** of Transformation Induced Plasticity Steels
- Carried out a detailed analysis on the effect of various alloying elements on TRIP Steels

**STF based Body Armour (Entrepreneurial Business Plan)**

(Jul - Nov '10)

- Conceptualized a business model for Shear Thickening Fluid Based Body Armour
- Evaluated economic viability using parameters such as Net Present Value, Discounted Cash Flow etc. to present a comprehensive B-plan

---

**POSITIONS OF RESPONSIBILITY**

---

**Department Academic Mentor**

(Apr '11 - till date)

*Nominated member of the **Department Academic Mentorship Programme**, which helps academically underperforming students to improve and seeks to maximize the academic potential of all students*

- Assessed reasons for underperformance of second and third year students with Faculty Advisors
- Currently mentoring **4** second and third year students and guiding them to perform better
- Planned the course schedule for a student to avoid slot clashes and help clear 2 backlogs over a period of one year

**Internship Co-ordinator, Metallurgical Engineering & Materials Science**

(Apr '10 - May '11)

*Nominated member of the Practical Training Cell, collaborated in defining framework for securing internships at institute level in a team of 24*

- Responsible for securing internships for all third and second year students of the department
- Efficiently mapped **student-company profiles**, increasing companies hiring from the department
- Co-ordinated with faculty for getting new companies and revamped the company contact database
- Achieved **40% increase** in the number of internships offered in the department

**Computer Secretary , Hostel 4**

(Jul '09 - May '10)

*Elected to the hostel council by 600 hostel inmates, responsible for the upkeep of the entire hostel network*

- Supervised and co-ordinated with the institute authorities for the revamping of the hostel network
- Initiated a new student feedback system to ensure quick and effective addressal of grievances

---

**EXTRACURRICULAR ACTIVITIES**

---

**Organizational**

*Co-ordinator , Exhibitions & Workshops (Techfest '10)*

- Led a team of 7, guided by 2 managers ; responsible for one of the international exhibits
- Assisted in managing the exhibitions which had a foot-fall of over 10,000 over a period of 3 days

*Co-ordinator , Pronites ( Mood Indigo '09)*

- Assisted in managing concerts and live performances by various artists in a team of 10 coordinators , guided by 2 core group members

**Miscellaneous**

- One of the 15 students selected for the **National Sport Organisation – Table Tennis , IIT Bombay** ('08)
- Completed the Cross Country Race ( 6.5 km ) , IIT Bombay ('09 , '10)
- Built a RF controlled car as a part of the F1 Competition ; was appreciated for the unique design ('08)
- Played a supporting role in the winning Performance Arts Festival , Arthur Road ('08)

**Interests**

Have a keen interest in automobiles, novel materials and rock music