

CURRICULUM VITAE

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C/O Dipak Chakraborty, Bhairav Sarani, Malugra
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Present Status

Pursuing Phd in Materials Science Centre, Indian Institute of Technology, Kharagpur.

Post-graduate Thesis

Synthesis and characterization of Aluminium alloy based composite for electrical applications.

For the purpose of electrical power transmission, combination of high strength and high electrical conductivity are very desirable, but these two properties are mutually exclusive in metallic material. To achieve it, a route involving powder metallurgy was opted for fabrication of carbon nanotube dispersed Al.

In our investigation, carbon nanotube (CNT) have been blended with pure elemental Al and 20 hours ball-milled Al system for 30 minutes in different compositions of 0%, 1%, 2% and 5% in Retsch PM200 planetary ball mill at a speed of 300 rpm with a ball to powder weight ratio (B: P ratio) of 10:1. In all experimental operations, 15 g of mixed powders with composition of the above systems were canned together with 150 g tungsten carbide balls into a hardened steel vial. All samples were hot pressed for 1 hour at 350° C at 4.5 Mpa constant pressure . Their composition and grain size were determined in X-ray Diffraction analysis. It has been found that average grain size reduces to approximately 40 nm after 20 hrs of milling. SEM images show that a better dispersion of CNT has been obtained in milled Al sample. In CNT dispersed in 20 hours milled sample better improvement in electrical conductivity has been obtained. Hardness increases with increasing CNT content and grain size reduction. In nano-scratch study we have found decrease in plasticity, increase of recovery index and wear resistance with CNT content and grain size refinement.

Undergraduate Project

- *“Automatic Double-Axis welding machine using Pneumatic drive”*

Conferences and workshop

- *Presented a Technical paper in the “International Conference on Recent Trends in Engineering and Material Sciences(ICEMS-2016).*

- *Participated in the workshop held at CSIR-National Metallurgical Laboratory, Jamshedpur “Quantitative NDE for Material Characterization & Condition Monitoring of Engineering Components.”*

Working Experience:-

- *Worked as Asst. Health and Safety officer with Lafarge Umiam Mining Private Limited.*
- *Participated and completed Transfer of Technology of Safety leadership development program and Model Location Rollout 2012 in Lafarge Surma Cements.*

Area of interest

- Structure, processing and property correlation of light metal alloys, superalloys and metal matrix composite materials.

Educational Qualifications

| Degree/ Exam & Year | Board/ University | Subjects/ Specialization | Division/ Marks |
|-----------------------------------|---------------------------|---|------------------------------------|
| M.Tech (Ongoing) (2014-'16) | IEST, Shibpur | Materials Science and Technology | 84% |
| B.Tech (2011) | Pondicherry University | Mechanical Engineering | 1 st Div/ 7 |
| H.S. (2006) | AHSEC | Physics, Chemistry, Math, Bengali, English | 1 st Div/ 65% |
| 10 th | SEBA | Bengali, English, Social Studies, Science, Mathematics, Advanced Mathematics | 1 st Div/ 70% |

Skills & Languages

- Good Communication Skills.
- Languages known: *Bengali, English, Hindi, Tamil (Oral)*
- Qualified GATE 2014 in Mechanical Engineering.

Hobbies

- Have keen interest in music and literature.
- Have passed Visharad in Rabindra Sangeet from Bangiya Sangeet Parishad.

Personal Details

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|-----------------------|---------------------------------|
| <i>Name</i> | Ashok taru Chakraborty |
| <i>Father's Name</i> | Dipak Chakraborty |
| <i>Sex</i> | Male |
| <i>D.o.B.</i> | 21 st February, 1989 |
| <i>Marital Status</i> | Single |
| <i>Nationality</i> | Indian |

Referees

Dr. Arijit Sinha

Assistant Professor

Dr. M. N. Dastur School of Materials Science and Engineering

Area of work : Nanomechanical Characterization, Composite Materials, Shape Memory alloys

Phone : 033-2668-4561 to 63, (ext-)

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Dr. Supriya Bera

Marie-Curie Post-Doc Fellow

Institute for Complex Materials, IFW Dresden

Helmholtzstraße 20, 01069 Dresden, Germany

and

Assistant Professor

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Dr. Ajit Kumar Chakraborty

Visiting Professor

Dr. M. N. Dastur School of Materials Science and Engineering

Formerly: Professor, IIT, Kharagpur

Area of Work: Metallurgical manufacturing (foundry, Machining, Welding, Surface Engg.), Extractive Metallurgy

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Declaration

I hereby declare that all the information stated above is true to the best of my knowledge.

Dated: 1st November, 2016

Silchar, Cachar, Assam

Ashok taru Chakraborty.

ASHOKTARU CHAKRABORTY