

Curriculum Vitae

Name : Dr. Koushik Biswas

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Date of birth: 24th November, 1973

Nationality: Indian

Marital status: Married

• Education:

Ph. D., Material Science, Max-Planck Institute for Metal Research and University of Stuttgart, Germany, 2002. Grade: 1.0 (sehr gut/very good)

Thesis: *Liquid phase sintering of SiC ceramic with rare earth sesquioxides.*

Thesis supervisor: Prof. Dr. rer. nat. Fritz Aldinger

M. Tech., Materials and Metallurgical Engineering, Indian Institute of Technology, Kanpur, India and Max-Planck Institute for Metal Research and University of Stuttgart, Germany, 1999.

Cumulative GPA: 8.96/10.0

Thesis: *Liquid phase assisted sintering of alumina and silicon carbide based ceramics.*

Thesis supervisor: Prof. Dr. G. S. Upadhyaya and Prof. Dr. rer. nat. Fritz Aldinger

B. E., Metallurgical Engineering, Jadavpur University, Kolkata, India, 1996.

Cumulative marks: 79.3%

Thesis: *Some experiments on pitting corrosion of stainless steel (304 type).*

Thesis supervisor: Prof. Dr. B. Chaudhury and Prof. Dr. P. K. Mitra

• Work experiences:

1. Marketing personnel in ESAB India Ltd., July' 1996-Dec'96.
2. Research Associate with Prof. G. S. Murthy, I. I. T. Kanpur, India, Jan' 1997-June' 1997.
3. Teaching Assistant with Prof. Dr. R. K. Dube, I. I. T. Kanpur, India, July' 1997-Dec' 1997.
4. Teaching Assitant with Prof. Dr. R. Narayan, I. I. T. Kanpur, India, Jan' 1998-June' 1998.
5. Guest scientist in Max-planck Institute, Stuttgart, Germany, June' 1998 – March' 1999.
6. Project Associate with Prof. Dr. G. S. Upadhyaya, I. I. T. Kanpur, India, May' 1999.
7. Research Assistant in Max-planck Institute, Stuttgart, Germany, August' 1999 – December' 2002.
8. Visiting Faculty in Indian Institute of Technology Kharagpur, India, February' 2003 – August' 2004.
9. Post Doctoral Fellow Researcher, Seoul National University, Korea, September' 2004 – August' 2005.

10. Asst. Professor, Department of Metallurgy And Materials Engineering, Bengal Engineering and Science University, Shibpur, Howrah, November' 2005 – March' 2007.
11. Asst. Professor, Department of Metallurgical And Materials Engineering, Indian Institute of Technology Kharagpur, India, March'2007 – till date.
12. Asso. Professor, Department of Metallurgical And Materials Engineering, Indian Institute of Technology Kharagpur, India, September'2013 – till date.

- **TEACHING EXPERIENCE** (Subjects taught / teaching)

At the undergraduate level:

1. **Ceramic Engineering**
2. Powder Metallurgy
3. Powder metallurgy Laboratory
4. Joining of Metals
5. Physics of Metals
6. Special Materials and Non-Ferrous Alloys
7. Introduction to Materials
8. Plastic Deformation
9. Materials Engineering
10. Materials Processing
11. **Materials Processing laboratory**

At the postgraduate level:

1. **Processing by Powder Metallurgy Techniques**
2. **Powder metallurgy Laboratory-I**
3. Materials Processing
4. Advanced Metal Joining Processes
5. Application of Powder Metallurgy Parts
6. Advanced Materials Processing Laboratory

- **Summary of Research Output:**

1. THESIS GUIDANCE:	<i>PhD</i>	= 5 (Completed) + 8 (continuing)
	<i>M.Tech</i>	= 22 (Completed) + 2 (Continuing)
2. PUBLICATION:	<i>Journal</i>	= 61 (Published & Accepted)
	<i>Conf. Proc</i>	= 6 (Published & Accepted)

- **Awards and honours:**

- DAAD (German Academic Exchange Service) scholarship, 1998-1999
- Max-Planck Fellowship, 1999-2002
- Procter and Gamble Fröder Prize for the best student of the year 1998-99 from the department of Chemistry, University Stuttgart, Germany.
- BIOGRAPHICAL MENTION IN INDO-AMERICAN WHO'S WHO 1994 (FI Publications, vol.1, p.380).

- **Membership of Academic/Professional Bodies:**

1. Life Member of The Indian Ceramic Society.
2. Life Member of The Indian Institute of Metals.
3. Life Member of The Indian Science Congress
4. Life Member of Materials Research Society of India

SPONSORED RESEARCH AND CONSULTANCY UNDER TAKEN:

Sponsoring Agency	Title of project	Amount of grant	Period
Department of Science and Technology, New Delhi	A novel route of synthesis for development of solid oxide fuel cell anode material (No. SR/FTP/ETA-01/2002, dated 1-10-2003)	8.28 Lacs	2003-2004
Council for Scientific and Industrial Research, New Delhi	Synthesis and characterization of nanocrystalline ZrO ₂ -based electrolyte for solid oxide fuel cells (No. 22(0371)/04/EMR-II, dated 6-4-2004)	12 lacs	2004-2006
SRIC, IIT Kharagpur	Synthesis and Thermo-mechanical characterization of MoSi ₂ -SiC-ZrO ₂ nano-composites (No. IIT/SRIC/ISIRD/2007-08, dated 9-05-2007)	5 lakhs	2007-2012
IRELTDC, Indian Rare-earths, Limited, Kerala	Versatile nano Zirconia production at Indian Rare Earths Limited, OSCOM (No. IRELTDC/SAO/08-09/1, dated 24-01-2008)	52.36 lakhs	2008-2012
Department of Bio-technology, Ministry of Science, New Delhi	Synthesis, development and in-vitro characterization of bio-inert Yttrium/Ceria coated/stabilized Zirconia toughened Alumina composites for Biomedical applications (No. BT/PR9385/MED/32/10/2007, dated May, 2008)	29.60 lakhs	2008-2010
Naval Materials Research Laboratory (DRDO), Ambernath	Generation of semi-solid slurries through one step processing of liquid metal for rheocasting (No. NMRL/MMG/0401/04/LP/MM/29/2008, dated 07-05-2008)	9.92 lakhs	2008-2010
SRIC, IIT Kharagpur	A bridge project aimed at the expansion of lithium ion battery research (No. IIT/SRIC/MME/IBR/2009-10/78, dated 30-06-2009)	5.00 lakhs	2009-2010
Gontermann Peipers, West Bengal	Optimization of moulding materials for a roll foundry (No. IIT/SRIC/MT/2009-10/105, dated 03-02-2010)	1.51 lakhs	2010
Various Organizations	Powder metallurgy laboratory equipment usage (No. IIT/SRIC/MT/2010-11/18, dated 01-06-2010)	1.49 lakhs	2010-2011
India Govt. Mint, Kolkata	Quality improvement of silver medallion obtained from Kolkata mint (No. IIT/SRIC/MT/2010-11/71, dated 18-10-2010)	4.74 lakhs	2010-2011
Various Organizations	Lithium ion battery equipment usage (No. IIT/SRIC/MT/2010-11/18, dated 01-06-2010)	2.20 lakhs	2010-2012
Council for Scientific and Industrial Research, New Delhi	Microwave assisted synthesis of nanocrystalline electro-ceramics for ferro-electric relaxors and SOFCs (No. IIT/SRIC/MET/NEF/2012-13/08; Dated: 04-05-2012)	21.98 lakhs	2012-2015
IIT Kharagpur	Development of high energy density lithium ion prismatic batteries for laptops, solar and electric vehicles (No. IIT/SRIC/MET/ELB/2012-13/139; Dated: 28-03-2013)	3.98 lakhs	2013-2015
IRELTDC, Indian Rare-earths, Limited, Kerala	Optimization of processing parameters to produce high aspect ratio synthetic wollastonite at OSCOM. RC:TDC:1700/13:760 , Dt. 23-03- (No: IIT/SRIC/MET/OAR/2014-15/78)	38.328 lakhs	2014-2017
IIT Kharagpur (SGIRG)	Light metals, rare earth elements doped nano-structured magnesium hydride admixed with or without carbon nano tube for hydrogen storage material (No. IIT/SRIC/MET/ENN/2014-15/54)	25 lakhs	2014-2017
ODC, Ordnance Factory Medak, Telangana	Development of Composite Integral Armour of Futuristic Infantry Combat Vehicle (No. IIT/SRIC/IES/DIAC/2015-16/127)	22.971 lakhs	2016-17