

# DEVADAS BHAT P

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## WORK EXPERIENCE

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### Temporary Faculty

Department of Metallurgical and Materials Engineering, NITK Surathkal

July 2019 - present

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## EDUCATION

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1. **Doctor of Philosophy** in Materials Chemistry at University of Lille, France October 2015 - January 2019
2. **M.Tech** in Metallurgical and Materials Engineering at IIT Madras July 2013 - July 2015
3. **B.Tech** in Metallurgical and Materials Engineering at NITK Surathkal August 2009 - May 2013

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## JOURNAL PUBLICATIONS

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1. **D. Bhat Panemangalore**, R. Shabadi, D. Tingaud, M. Touzin, G. Ji, Biocompatible silica-based magnesium composites, *Journal of Alloys and Compounds*, ELSEVIER, 772, 49-57 (2019), (I.F = 5.316) <https://doi.org/10.1016/j.jallcom.2018.09.060>
2. **D. Bhat Panemangalore**, R. Shabadi, M. Gupta, G. Ji, Effect of fluoride coatings on the corrosion behavior of Mg-Zn-Er alloys, *Surfaces and Interfaces*, ELSEVIER, 14, 72-81 (2019), (I.F = 4.837) <https://doi.org/10.1016/j.surfin.2018.11.007>
3. **D. Bhat Panemangalore**, R. Shabadi, M. Gupta, R. Ambat, G. Ji, A. Addad, L. Lesven, Microstructure and Corrosion behavior of extruded Mg-Zn-Er alloys, *Materials Science Forum*, 941, 1766-1771 (2018) <https://doi.org/10.4028/www.scientific.net/MSF.941.1766>
4. Pravan Omprakash, Viswesh P, **D. Bhat Panemangalore\***, A Review of 2D Perovskites and Carbon-Based Nanomaterials for Applications in Solar Cells and Photodetectors, *ECS Journal of Solid State Science and Technology*, IOP Publishing, 10, 031009, (2021), (I.F = 2.070) <https://doi.org/10.1149/2162-8777/abefaf>
5. Pravan Omprakash, Udaya Bhat K, **D. Bhat Panemangalore\***, Carbon and metallic-based nanomaterials for strain sensors – a review, *Current Nanomaterials*, Bentham Science, 6(3), 172-184 (2021) <https://doi.org/10.2174/2405461506666210112151221>
6. **D. Bhat Panemangalore**, Rajashekhar Shabadi, Manoj Gupta, Corrosion Behavior, Microstructure and Mechanical Properties of Novel Mg-Zn-Ca-Er Alloy for Bio-Medical Applications, *Metals*, MDPI, 11, (3), 519, (2021), (I.F = 2.351) <https://doi.org/10.3390/met11030519>
7. Aruna M.N, M.R Rahman, Sharanappa Joladarashi, Hemantha Kumar, **D. Bhat Panemangalore**, Influence of different fumed silica as thixotropic additive on carbonyl particles magnetorheological fluids for sedimentation effects, *Journal of Magnetism and magnetic materials*, ELSEVIER, 529, 167910, (2021), (I.F = 2.993) <https://doi.org/10.1016/j.jmmm.2021.167910>
8. Merbin John, Ashok Kumar P, Udaya Bhat K, **D. Bhat Panemangalore**, A Study on HAZ behaviour in 800MPa Cold rolled and Hot Rolled Steel Weld, *Materials Today: Proceedings*, ELSEVIER, Volume 44, Part 2, 2985-2992, (2021) <https://doi.org/10.1016/j.matpr.2021.02.124>
9. Naveen B, Udaya Bhat K, **D. Bhat Panemangalore**, Coating technologies for copper based antimicrobial active surfaces: A perspective review, *Metals*, MDPI, 11, (5), 711, (2021) (I.F = 2.351) <https://doi.org/10.3390/met11050711>
10. Manisha Behera, **D. Bhat Panemangalore**, Rajashekhar Shabadi, Additively Manufactured Magnesium Based Bio-Implants and their Challenges, *Transactions of the Indian National Academy of Engineering*, SPRINGER, (2021) <https://doi.org/10.1007/s41403-021-00241-y>
11. Varun G, Anushpamathi S, Pravan Omprakash, **D. Bhat Panemangalore\***, Energy Storage through Graphite Intercalation Compounds: A Review, *Journal of Electrochemical Society*, IOP Science, 168, 040541, (2021), (I.F = 4.316) <https://orcid.org/0000-0002-7152-5395>
12. Pravan Omprakash, Bharadwaj Manikandan, Ankit Sandeep, Romit Shrivastava, Viswesh P, **D. Bhat Panemangalore\***, Graph Representational Learning for bandgap prediction in varied perovskite crystals, *Computational Materials Science*, ELSEVIER, 196, 110530, (2021), (I.F = 3.3) <https://doi.org/10.1016/j.commatsci.2021.110530>

13. Pooja Netalkar, Maithreye S R, Karuna BYM, Srikant Natarajan, Thirupathi Gadipelly, **D. Bhat Panemangalore**, Arup Dasgupta, Amitha Lewis, Effect of nano-hydroxy apatite incorporation on fluoride releasing ability, penetration and adaptation of a pit and fissure sealant, International Journal of Paediatric Dentistry, WILEY, (2021), (I.F = 3.455) <https://doi.org/10.1111/ipd.12890>
14. **D. Bhat Panemangalore**, Rajashekhara Shabadi, Manoj Gupta, Ludovic Lesven, Microstructure and corrosion behavior of Mg-Sn-Y alloys, Metals, MDPI, 11(7), 1095, (2021), (I.F = 2.351) <https://doi.org/10.3390/met11071095>
15. Ananya Das, Pratham Nagaraj, **D. Bhat Panemangalore\***, Women in Electrochemistry-Contributions, Challenges and Potential Solutions, Journal of The Electrochemical Society, IOP Publishing, 169 (1), 017503, (2022), (I.F = 4.316) <https://doi.org/10.1149/1945-7111/ac483e>
16. Udaya Bhat K, **Devadas Bhat P**, Spandana Bhat K, Merbin John, Pradeep L. Menezes, Surface modification of 6xxx series Aluminum alloys, Coatings, MDPI, 12(2), 180, (2022), (I.F = 2.881) <https://doi.org/10.3390/coatings12020180>
17. Arun Kumar D. S, Puneeth Kumar T. R, Krishnamoorthy K, **D. Bhat Panemangalore**, M. R. Rahman, Flexible Electromagnetic Shielding Material Using Multi-Walled Carbon Nanotube Coated Cotton Fabric, IEEE Transactions on Components, Packaging and Manufacturing Technology, 12, 3, 79-488 (2022), (I.F = 1.738) <https://doi.org/10.1109/TCPMT.2022.3154226>

## BOOK CHAPTERS

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1. **D. Bhat Panemangalore**, Rajashekhara Shabadi, Microstructural Aspects of Metal Matrix Composites, Encyclopedia of Materials: Composites, Reference Module in Materials Science and Materials Engineering, ELSEVIER, 1, 274-297, (2021) <https://doi.org/10.1016/B978-0-12-819724-0.00019-7>
2. Udaya Bhat, **D. Bhat Panemangalore**, Suma Bhat, Equal Channel Angular Processing - A Modern Deforming Technique for Quality Products, Handbook II- Advanced Welding and Deforming, Handbooks on Advanced Manufacturing, ELSEVIER, ISBN 9780128220504 (2021) <https://doi.org/10.1016/B978-0-12-822049-8.00014-1>
3. Udaya Bhat K, **D. Bhat Panemangalore**, Ionic liquid electrolytes for flexible supercapacitors, Flexible Supercapacitor Nanoarchitectonics, Wiley-Scrivener USA, ISBN 9781119711469 (2021) <https://doi.org/10.1002/9781119711469.ch19>
4. **D. Bhat Panemangalore**, Udaya Bhat K, Corrosion Characteristics of Metal Matrix Composites, Encyclopedia of Materials: Composites, Reference Module in Materials Science and Materials Engineering, ELSEVIER, 1, 442-453, (2021) <https://doi.org/10.1016/b978-0-12-819724-0.00102-6>
5. Udaya Bhat K, **D. Bhat Panemangalore**, Carbon nanomaterials for biofuel cells, Biofuel cells- Materials and challenges, Wiley-Scrivener USA, ISBN 9781119724698 (2021) <https://doi.org/10.1002/9781119725008.ch7>
6. Udaya Bhat K, **D. Bhat Panemangalore**, Engineering architectures for biofuel cells, Biofuel cells- Materials and challenges, Wiley-Scrivener USA, ISBN 9781119724698 (2021) <https://doi.org/10.1002/9781119725008.ch10>
7. Udaya Bhat K, **D. Bhat Panemangalore**, Microbes-surface interactions, Application of Microbes in Environmental and Microbial Biotechnology, SPRINGER, ISBN 9789811622243 (2021) [https://doi.org/10.1007/978-981-16-2225-0\\_16](https://doi.org/10.1007/978-981-16-2225-0_16)
8. **D. Bhat Panemangalore**, Udaya Bhat K, Spandana Bhat K, Graphene from leaf wastes, Graphene from Natural Sources: synthesis, characterization and applications, CRC Press, ISBN 9781003169741 (2022) <https://doi.org/10.1201/9781003169741>

## TEACHING

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- **Odd Semester 2019-20:**

Production of Iron and Ferro Alloys (MT320) Thermodynamics of Solids (MT702)  
Extractive Metallurgy Laboratory (MT323) Metal Finishing Laboratory (MT423)

- **Even Semester 2019-20:**

Measurements and Control (MT256) Production of Steel (MT360) Seminar (MT480)

- **Odd Semester 2020-21:**

Measurements and Control (MT256) Thermodynamics of Solids (MT702)  
Fuels and Furnaces (MT307) Seminar (MT441)

- **Even Semester 2020-21:**

Mineral Processing and Beneficiation (MT204) Instrumental Methods of Analysis (MT255)  
Extractive Metallurgy Laboratory (MT305)

**Summer courses:** Secondary Refining of Steels (MT413) and Non-Destructive Testing (MT414)

- **Odd Semester 2021-22:**

Advances in Iron Making (MT700) Thermodynamics of Solids (MT702)  
Extractive Metallurgy Laboratory (MT305)

- **Even Semester 2021-22:**

Measurements and Control (MT256) Production of Steel (MT350)  
Introduction to Materials Science and Technology (MT160)

## FELLOWSHIPS

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- |   |                               |
|---|-------------------------------|
| 1. Student grant for THERMEC Conference                                       | July 2018                     |
| 2. Doctoral research grant - French Ministry of Higher Education and Research | October 2015 - September 2018 |
| 3. Mobility grant - College doctoral Lille Nord de France                     | June 2016 - August 2016       |
| 4. DAAD - IIT Masters Sandwich Scholarship                                    | September 2014 - March 2015   |
| 5. MHRD fellowship  | August 2013 - May 2015        |

## FACULTY DEVELOPMENT PROGRAM (FDP)

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**AICTE Training and Learning (ATAL) Academy** September 2021

- Delivered invited lecture (online) on "Novel Mg-RE based alloys and composites for biomedical applications", organized by JNN College of Engineering, Shivamogga

**TEQIP III Sponsored short-term course** December 2020

- Successfully completed one week of "Atomistic Modelling of Solids: Theory and Applications" in the Department of Mechanical Engineering, IIT Indore

**NPTEL-AICTE certificate course** January-March 2020

- Successfully completed 8 weeks of "Health Research Fundamentals" by NPTEL, funded by the Ministry of HRD, Government of India

**NPTEL-AICTE certificate course** July-September 2019

- Successfully completed 8 weeks of "Biomaterials for Bone Tissue Engineering Applications" by Prof. Bikramjit Basu, IISc Bengaluru, funded by the Ministry of HRD, Government of India

## CONFERENCES

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1. **D. Bhat Panemangalore**, Rajashekhara Shabadi, Gang Ji, Manoj Gupta, Influence of chemical composition and conversion coatings on the corrosion properties of Mg-Sn-xY (x= 0.5, 1 and 2 wt%) alloys, European Corrosion Congress, EUROCORR 2016, Montpellier, France, September 2016

2. **D. Bhat Panemangalore**, R.Shabadi, G. Ji, M. Gupta, Influence of zinc and erbium on the corrosion behavior of magnesium, International Conference on Electrochemical Science and Technology, ICONEST 2017, Bengaluru, India, August 2017

3. **D. Bhat Panemangalore**, R.Shabadi, G. Ji, M. Touzin, D. Tingaud, Biocompatible silica-based magnesium composites, Journées Annuelles de la SF2M - Matériaux, Microstructures et Fonctionnalités, Lyon, France, October 2017

4. **D. Bhat Panemangalore**, R.Shabadi, M. Gupta, R. Ambat, G. Ji, A. Addad, L. Lesven, Microstructure and corrosion behavior of extruded Mg-Zn-Er alloys, THERMEC 2018, Paris, France, July 2018

5. **D. Bhat Panemangalore**, Rajashekhara Shabadi, Manoj Gupta, Influence of Ca and Er on novel Mg-Zn-Ca-Er alloys, THERMEC 2021, Graz, Austria, June 1-5, 2021 - Virtual Conference

## MEMBERSHIP IN PROFESSIONAL BODIES

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- |   |                        |
|---|------------------------|
| 1. Electron Microscope Society of India (EMSI), Lifetime Member | Membership No: LM-1962 |
| 2. Indian Institute of Metals (IIM), Lifetime Member            | Membership No: 58106   |
| 3. Materials Research Society of India (MRSI), Lifetime Member  | Membership No: LMB3226 |
| 4. Minerals, Metals & Materials Society (TMS), Member           | 2020-21                |
| 5. ASM International, Member                                    | 2020-21                |
| 6. French Society for Metallurgy and materials (SF2M), Member   | 2017-19                |
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