

Curriculum Vitae

Name: Dr. Swamini Chopra

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Date of Birth: 11th November 1991



Academic Credentials

Class/ Degree	Specialization	Institution	University	Year	%/CGPA	Class
Ph.D.	Metallurgical and Materials Engineering	V.N.I.T. Nagpur	V.N.I.T. Nagpur	2019	8.5 (Course work)	-
M. Tech.	Manufacturing Engineering	Dr. B.A.T.U. Lonere	Dr. B.A.T.U. Lonere	2015	8.69	<i>First Div. with Distinction</i>
B.E.	Mechanical Engineering	D.I.E.M.S. Aurangabad	Dr. B.A.M.U. Aurangabad	2013	81.33	<i>First Div. with Distinction (Gold medal)</i>

M. Tech. Project: Characterization and Performance Evaluation of Cryogenically Treated CBN Inserts.

Ph. D. Research: Development of Polymer/MWCNT Nano-composites and their Post-processing for Mechanical and Tribological Applications

Key Research Areas: Polymers and composites, Carbon Nanotubes (CNTs), Polymer and Metal Nano-composites, Cryogenic treatment of Materials, Microwave treatment of Polymers, Tensile properties and Tribological performance of Materials, Materials structural characterization.

Experience

Sr. No.	Organization	Post	From To	No. of Years
1.	Maharashtra Institute of Technology, Aurangabad	Assistant Professor - Research	May 2019 to Till Date	2 years 2 months
2.	Defense Institute of Advanced Technology (D.I.A.T.), Pune	J.R.F.	September 2018 to May 2019	9 months
3.	Visvesvaraya National Institute of Technology (V.N.I.T.), Nagpur	Research Scholar with Teaching Assistantship	July 2015 to July 2018	3 years
4.	Dr. Babasaheb Ambedkar Technological University (B.A.T.U.), Lonere	M. Tech Scholar with Teaching Assistantship	July 2013 to July 2015	2 years

List of Courses Taught/Teaching at UG level

Taught/ Teaching the following courses as Assistant Professor – Research at M.I.T. Aurangabad:

- Materials and Metallurgy (Theory and Practical)
- Automobile Engineering (Theory)
- Internal Combustion Engines (Theory)
- Design of Machine Elements I (Lab)

Taught the following courses as Teaching Assistant at V.N.I.T. Nagpur:

- Microcopy and X-Ray Diffraction (Lab)

Taught the following courses as Teaching Assistant at Dr. B.A.T.U. Lonere:

- Engineering Graphics (Lab)
- Materials and Metallurgy (Lab)
- General Aptitude to GATE aspirants (in-house program by Mechanical Dept.)

List of Courses Taught/Teaching at PG level

Taught/ Teaching the following courses as Assistant Professor – Research at M.I.T. Aurangabad:

- Advanced Manufacturing Processes (Theory)

Taught the following courses as Teaching Assistant at V.N.I.T. Nagpur:

- Structural Characterization of Materials (Lab)

Additional Assignments/Duties

- **PhD Coordinator** for Mechanical Engineering Department, M.I.T. Aurangabad since July 2021.

- **Central Research Coordinator** from September 2020 to Till Date.

Membership of Professional Bodies

- Life Member of **Indian Cryogenic Council**. Membership no.: LM-811.
- Life Member of **The Indian Science Congress Association**. Membership no.: L35623.
- **Professional member of Institute of Scholars (InSc)**. Membership no.: InSc20202360.

Research Projects/Projects Guided

Research projects with Industry:

1. Bhagyalakshmi Rolling Mill, Jalna: Zinc extraction from Induction Furnace Dust (IFD) using Hydrometallurgy and Pyrometallurgy routes.
2. Bhagyalakshmi Rolling Mill, Jalna: Microstructural modification and property evaluation of Rolled Steel using Jominy End Quench Set-up.
3. Sanjay Techno Plast Pvt. Ltd. Waluj: Cryogenic Treatment of PA66/GF Clutch Component.

Research project with Academia:

1. R. T. M. Nagpur University: Cryogenic Treatment for the Surface Modification of MWCNTs.
2. V. N. I. T. Nagpur: Study on the effect of Infill volume and Cryogenic treatment on the strength of 3-D printed PLA.

Projects guided as Assistant Professor - Research at M.I.T. Aurangabad:

B.Tech projects: 4 completed, 5 ongoing

Minor projects: 3 completed

Projects co-guided as Junior Research Fellow at D.I.A.T. Pune:

M.Tech projects: 2

Projects co-guided as Teaching Assistant at V.N.I.T. Nagpur:

B.Tech projects: 5

M.Tech projects: 1

Minor projects: 7

Projects co-guided as Teaching Assistant at B.A.T.U. Lonere:

Minor projects: 1

Computer/Software Proficiency

- MS Office (MS Word, MS Excel and MS Power Point)
- Origin 8.0
- ChemDraw 12
- X-Pert High Score Plus

Seminar/Workshop/ Industrial Training/ STTP//FDP/CEP/Conference Attended

Conferences:

1. Materials Chemistry 2020 International Gathering Global Virtual Summit on Advances in Materials, Physics and Chemistry Science, United Kingdom (Virtual), September 11-12, 2020.
2. International Conference on Flyash Utilization (GREEN ASHCON 2017), Dr. Babasaheb Ambedkar Auditorium, Deeksha Bhoomi, Nagpur, December 15-17, 2017.
3. International Conference on Recent Advances in Materials and Manufacturing Technologies (IMMT 2017), BITS Pilani Dubai Campus, November 28-29, 2017.
4. International Conference on Advanced Rechargeable Batteries & Allied Materials (ICARBM), C-MET Pune, March 8-10, 2017.
5. International Conference on Modern Trends in Engineering, Science and Technology (ICMTEST), Vishwatmak Om Gurudev College of Engineering, April 9-10, 2016.
6. International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 9), I.I.T. Powai, December 10-12, 2015.
7. 4th International Conference on Materials Processing and Characterization (ICMPC), G.R.I.E.T. Hyderabad, March 14-15, 2015.
8. International Colloquium on Materials, Manufacturing and Metrology (ICMMM), I.I.T. Madras, August 8-9, 2014.
9. 2nd International Conference on Current Trends and Challenges in Management, Engineering, Computer Applications and Technology (ICCTCMECAT), D.I.E.M.S. Aurangabad, March 23-24, 2013.
10. National Conference on Materials in Advanced Technology and Application (MATA), M.I.T. Aurangabad, September 20-21, 2016.
11. National Conference on Energy: Needs and Current Trends (ENACT), Dr. B.A.T.U. Lonere, December 19-20, 2014.
12. National Conference on Social Sensitization Renaissance 2014, V.N.I.T. Nagpur, March 22-23, 2014.

Workshops:

1. One Day Online Workshop on OBE Concepts & Implementation and Preparedness for NBA organized by Internal Quality Assurance Cell (IQAC), Maharashtra Institute of Technology, Aurangabad on 29th May 2021.
2. One day Workshop on Opportunities in Research and Development in Armament Establishments (ARMREB – 2020) jointly organized by Armament Research Development Establishment, DRDO, Pune and Dept. of Metallurgical Engineering and Material Science and Dept. of Mechanical Engineering, IIT Indore on 26th August 2020 (Online).
3. Five days Hands-on Workshop on Patent Searching, Drafting and Filing (online mode) organized by Panimalar Institute of Technology in association with Turnip Innovations and Exilyze Intellectual Services during 29th May to 2nd June 2020.
4. Two days National Workshop on Small and Wide Angle X-Ray Scattering (SWAXS – 2018) organized by Dept. of Metallurgical and Materials Engineering, D.I.A.T., Dept. of Defence R&D, Pune and Anton-Paar (India) during 12th-13th December 2018.
5. Five Day Workshop on Diffraction and Microscopy (WDM - 2018) organised by Dept. of Metallurgical and Materials Engineering, V.N.I.T. Nagpur during 25th to 29th August 2018.

6. Five Day Workshop on Failure Analysis of Engineering Materials organised by Dept. of Metallurgical and Materials Engineering, V.N.I.T. Nagpur with the support of Board of Research in Nuclear Sciences (B.R.N.S.) and The Indian Institute of Metals (I.I.M.)-Nagpur Chapter during 9th to 13th December 2017.
7. Five Day Workshop on High Resolution X-ray and Electron Diffraction organised by TEQIP and Knowledge Incubation Centre at Department of Material Science and Engineering, I.I.T. Kanpur during 1st to 5th February 2016.
8. One Day Pre-Workshop during COPEN 9 International Conference on Precision, Meso, Micro and Nano Engineering organised by Department of Mechanical Engineering, I.I.T. Powai on 9th December 2015.
9. Two Day Workshop on Machining of Advanced Materials: A Research Perspective (MAM – 2015) organised by Department of Mechanical Engineering, V.N.I.T. Nagpur during 4th and 5th December 2015.
10. One Day Workshop on Advanced Characterization Techniques during 7th National Symposium for Materials Research Scholars, MR-15 organised by Department of Metallurgical Engineering, I.I.T. Powai on 20th May 2015.

STTP:

1. Five Day STTP on Characterization of Materials (COM - 2018) organised by Dept. of Metallurgical and Materials Engineering, V.N.I.T. Nagpur during 22nd to 26th March 2018.
2. Three Day STTP on Research Methodology organised by Department of Mechanical Engineering, Dr. B.A.T.U., Lonere during 27th to 29th September 2014.

FDP:

1. Two week online course on Patent organized by Turnip Innovations from 05th November to 19th November 2020.
2. One week online FDP on Nanoscience and Nanotechnology – Current Persepctive organized by Dept. of Physics and Dept. of Mechanical Enginerring, G. H. Raisoni College of Engineering, Nagpur during 27th July to 1st August 2020.

Webinars:

1. Online Webinar on IPR & IP Management for Start-ups organized by Institution's Innovation Council, MIT Aurangabad in association with MIT MSM Innovation Lab and GIZ MSME INNO Project and Innovation and Entrepreneurship Promotion Center (IEPC) on 12th June 2021.
2. Online Webinar on Innovation in Materials Science: Role in Early Disease Diagnostics and Climate Change organized by Marathwada Institute of Technology, Aurangabad on 12th June 2021.
3. Online Webinar on IQAC Coordinators Meet organized by MasterSoft ERP Solutions Pvt. Ltd., Nagpur on 18th May 2021.
4. Online Webinar on National Education Policy 2020 organized by Institution's Innovation Council, MIT Aurangabad on 10th April 2021.
5. Online Webinar on Intellectual Property Rights organized by IQZC and IIC, MIT Aurangabad in association with MSME Development Institute, Ministry of MSME, Govt. of India and MASSIA, Aurangabad and Auto Component Cluster, Aurangabad and Printing cluster, Aurangabad on 11th March 2021.
6. Live session on Patent Protection for Innovation Driven Educational Institutes organized by Turnip Innovations, in association with The Frontiers Legal, on 29th August 2020.

7. International Webinar on Supercapacitors: A Futuristic Energy Storage Device organized by Sri Sathya Sai College for Women, Bhopal on 20th August 2020.
8. Online Webinar on Development and Use of Rubric for Effective assessment organized by NITTR Bhopal on 28th July 2020.
9. One week National Webinar Series on Recent Advances in Engineering and Technology organized by Rasoni Group of Institutions during 08th-13th June 2020.
10. Online Webinars on Opportunities for Mechanical Engineers in AI World and Journey of Excellence through TPM organized by Dept. of Mechanical Engineering, Maharashtra Institute of Technology, Aurangabad on 06th June 2020.
11. Online Interactive Session on How to Prepare for NBA organized by Internal Quality Assurance Cell (IQAC), Maharashtra Institute of Technology, Aurangabad on 09th May 2020.

MOOC Courses completed

1. Nanotechnology A Maker's Course – Coursera
2. Introduction to High-Throughput Materials – Coursera
3. Advanced Materials and Processes – NPTEL
4. Fundamentals of Surface Engineering – NPTEL

Seminar/Workshop/ Industrial Training/ STTP//FDP/CEP/Conference organized

Conference:

1. Organizing Secretary for International Conference of Recent Trends in Mechanical Engineering 2021 (Online Mode) during 22nd and 23rd January 2021 at M.I.T. Aurangabad.

Technical Symposium:

1. Coordinator for Five Day National Level Technical Symposium on Advances in Materials and Manufacturing Engineering (AMME-2020) during 30th June to 4th July 2020 at M.I.T. Aurangabad.

MDP:

1. Assisted in organizing Management Development Programme under Disha Project Enhancing Skills for Better Efficiency for IOCL dealers on 19-20th February 2018 at V.N.I.T., Nagpur.
2. Assisted in organizing Management Development Programme under Disha Project Enhancing Skills for Better Efficiency for IOCL dealers on 16-17th December 2016 at V.N.I.T., Nagpur.

Workshops:

1. Assisted in organizing Five Day Workshop on Failure Analysis of Engineering Materials during 9th to 13th December 2017 at V.N.I.T., Nagpur.

STTP:

1. Assisted in organizing Five Day Short Term Training Program on Characterization of Materials (COM - 2018) during 22nd to 26th March 2018 at V.N.I.T., Nagpur.

Invited talks delivered

1. A Novel Microwave Treatment to Augment the Mechanical properties of Polymeric Materials, during Materials Chemistry 2020 International Gathering Global Virtual Summit on Advances in Materials, Physics and Chemistry Science, United Kingdom (Virtual), Dt. 11-09-2020.
2. Polymers, Composites and Cryogenic Treatment of Materials, Institute of Chemical Technology (ICT), Jalna, Dt.: 11-09-2019.
3. Re-use of Industrial Waste Fly-ash (FA) as an efficient reinforcement material for polymer composites, during International Conference on Flyash Utilization (GREEN ASHCON 2017), Dr. Babasaheb Ambedkar Auditorium, Deeksha Bhoomi, Nagpur, Dt. 17-12-2017.

Intellectual Property Rights

Patents:

1. Title: *A Process for Degrading Polystyrene Plastic using Beetle Larvae*
Status: Granted (Patent no. 2021100302)
Contributors: Dr. Atul Krishnarao Wanjari, Dr. Saravana Kumar Krishnan, Dr. A. Sethupathy, Dr. Subbulakshmi N. Karanth, Dr. Tulika Chakrabarti, Dr. Ananda Shankar Hati, Dr. Piyush Gupta, Dr. Bassa Satyannarayana, Mr. Devansh Jain, Dr. Vivek Jaglan, Dr. Prasun Chakrabarti, **Swamini Chopra**.
2. Title: *Post-processing Microwave Treatment of Polymer and Polymer/CNT Nanocomposites*
Status: Granted (Patent no. 347541)
Contributors: **Swamini Chopra**, Phanitha Kalyani Gangaraju, Niharika Mondal, Chandana Ranga, Sirish Chanda, Kavita Pande, Abhay Deshmukh, D.R. Peshwe.
3. Title: *Process for optimization of cryogenic treatment for medical grade UHDPE* (201921032010)
Status: Under Examination
Contributors: **Swamini Chopra**, Kavita Pande, Saisha Batthula, Konda Alekhya Phani, Gauri Waghmare, Arabelli Anjali, Mitali Vijay Somvanshi, Neha Virendra Patil, Sidhdant Ramchandra Rakhe, Raju Vishnu Sontakke, , Dilip Peshwe, Chandrashekhar L. Gogte, Pierpaolo Carlone.

List of Research Publications

Papers in National/ International Journal

1. Kavita A. Deshmukh, **Swamini Chopra**, Pranjali Khajanji, Vishakha Gaidhani, Undeti Gopichand, Anjali Gawande, Sakshi Turkar, Falguni Khodaskar, D.R. Peshwe. Augmenting the Wear performance of Epoxy Composites by different fillers: Synthesis of highly crystalline g-C₃N₄ by Simple Pyrolysis and Recycling of Carbon Fibres from old Aircraft Composites. **Applied Surface Sciences Advances**, 6:100125.
2. Kavita A. Deshmukh, **Swamini Chopra**, Pranjali Khajanji, Abhay Deshmukh, Dilip Peshwe. Effectiveness of cryogenic treatment on PBT composites: prediction of interfacial interaction parameter and its influence on filler bonding and wear performance. **Polymer Bulletin** (<https://doi.org/10.1007/s00289-020-03501-z>).
3. **Swamini Chopra**, Kavita A. Deshmukh, Saisha Batthula, Konda Alekhya Phani, Gauri Waghmare, Arabelli Anjali, Mitali Vijay Somvanshi, Neha Virendra Patil, Sidhdant Ramchandra Rakhe, Raju Vishnu Sontakke, , Dilip Peshwe, Chandrashekhar L. Gogte, Pierpaolo Carlone. Structural Elucidation and Mechanical Characterization of

- Cryogenically Treated Ultra-High Molecular Weight Poly-ethylene (UHMWPE). **Transactions of Indian Institute of Metals**, 74(2): 255-265, 2021.
4. Kavita A Deshmukh, Pranjali Khajanji, **Swamini Chopra**, Abhay Deshmukh, Dilip Peshwe. The influence of Micro-graphite addition on Nucleation efficiency and Isothermal crystallization kinetics of Thermoplastic Polyurethane. **Materials Today: Proceedings**, 28: 642-650, 2020
 5. **Swamini Chopra**, Vyshnavi Ramanadham, Vullengala Sai Prasanna, Shruti Tiwari, Komal Lad, Kavita A. Deshmukh, D. R. Peshwe. Outcome of using Olive Oils for MWCNT Functionalization and Influence of –OH modified MWCNTs on Mechanical Properties of PA and PBT Polymer Nano-composites. **Materials Today: Proceedings**, 28: 408-419, 2020
 6. Kunal Bhansali, A. J. Keche, C. L. Gogte, **Swamini Chopra**. Effect of Grain Size on Hall-Petch Relationship during Rolling Process of Reinforcement Bar. **Materials Today: Proceedings**, 26: 3173-3178, 2020
 7. **Swamini Chopra**, Revati Deshpande, Garima Naik, Kavita Deshmukh, Abhay Deshmukh, D. R. Peshwe. Effect of Microwave Treatment Exposure Time on Functionalization and Purification of Multi-walled Carbon Nanotubes (MWCNTs). **Applied Physics A**, 125: 855-863, 2019
 8. Pranjal Chauhan, **Swamini Chopra**, T. Shanmugasundaram. Inter-dependency relationships in High Entropy Alloys (HEAs): Phase stability criteria. **Advanced Engineering Materials**, 21(9): 1900251, 2019
 9. **Swamini Chopra**, Kavita Deshmukh, Abhay Deshmukh, C. L. Gogte, Dilip Peshwe. Prediction, evaluation and mechanism governing interphase strength in tensile fractured PA-6/MWCNT nanocomposites. **Composites Part A**, 112: 255-262, 2018
 10. **Swamini Chopra**, Kavita A. Deshmukh, Abhay D. Deshmukh, D. R. Peshwe. Functionalization and Melt-compounding of MWCNTs in PA-6 for Tribological Applications. **IOP Conference Series: Materials Science and Engineering**, 346: 12005, 2018
 11. **Swamini Chopra**, Kavita A Deshmukh, Abhay Deshmukh, Dilip Peshwe. Inflorescence type morphology and Mirror-Mist-Hackle pattern in Tensile Fractograph of MWCNT/PBT Nano-composites. **International Journal of Materials Research**, 109(6): 561-568, 2018
 12. Revati Deshpande, Garima Naik, **Swamini Chopra**, Kavita A. Deshmukh, Abhay D. Deshmukh, D. R. Peshwe. A study on mechanical properties of PBT nano-composites reinforced with microwave functionalized MWCNTs. **IOP Conference Series: Materials Science and Engineering**, 346: 12004, 2018
 13. Kavita Deshmukh, A.R. Kangda, S.P. Mahajan, **Swamini Chopra**, Anupama Kumar, D.R. Peshwe. Influence of Talc Particle Size on Nucleating Efficiency of Commercial Isotactic Polypropylene (iPP). **Journal of Research in Engineering and Applied Sciences**, 3(1): 1-5, 2018
 14. Kavita A. Deshmukh, G.R. Pode, S. R. Roy, B. K. Gupte, A. D. Deshmukh, **Swamini Chopra**, D. R. Peshwe. Effect of Cryo-Ageing at Liquid Nitrogen Temperature and Subsequent Thermal-Annealing on the Interface of Talc Filled Polypropylene with Different Particle Size. **Transactions of the Indian Institute of Metals**, 71(2): 403-409, 2018
 15. **Swamini Chopra**, Kavita A. Deshmukh, Dilip Peshwe. Theoretical prediction of interfacial properties of PBT/CNT nanocomposites and its experimental evaluation. **Mechanics of Materials**, 109: 11–17, 2017
 16. **Swamini Chopra**, Saisha Batthula, Kavita Deshmukh, Dilip Peshwe. Tribological Behaviour of Multi-Walled Carbon Nanotubes (MWCNT) Filled Polybutylene

- Terephthalate (PBT) Nanocomposites. **Transactions of Indian Institute of Metals**, 70(3):801-807, 2017
17. Shreshtha S. Mishra, Nandita V. Ghodki, **Swamini Chopra**, S. A. Pande, Kavita A. Deshmukh, A. D. Deshmukh, D. R. Peshwe. Synthesis and Characterization of a Novel Conducting Biopolymer Chitosan Grafted Polyaniline-Polypyrrole Flexible copolymer. **International Journal of Science and Research Methodology**, 8(1): 104-111, 2017
 18. Priyanka Khandal, Shweta Gite, **Swamini Chopra**, S. A. Pande, Kavita A. Deshmukh, A. D. Deshmukh, D.R.Peshwe. Preparation, Characterization and Variation of Electrical Conductivity with Temperature of Aniline-Pyrrole Copolymer doped with CNT (in-situ and ex-situ). **VIBGYOR – Bi Annual Multidisciplinary Research Journal**, 4(1): 71-74, 2017
 19. Kavita Deshmukh, Maithili Bhakare, Samyukta Shrivastav, Vaishnavi Naik, **Swamini Chopra**, C.L. Gogte, D.R. Peshwe. Synthesis and Characterization of Self-Healing Thermoplastic Polyurethane (TPU) Thin Films Reinforced with Multi-wall Carbon Nanotubes (MWCNTs). **Journal of Nano Technology and Its Application in Engineering**, 2(1&2):1-13, 2017
 20. **Swamini Chopra**, Kavita Deshmukh, Abhay Deshmukh, C. L. Gogte, Dilip Peshwe. The Influence of Multi-Walled Carbon Nanotubes on the Nucleation, Crystallization and Tensile Properties of PA-6/MWCNT Composites. **Journal of Basic and Applied Research International**, 19(4): 247-252, 2016
 21. **Swamini Chopra**, Pooja Achari, Vaishali Kulkarni. Current Market Techniques used to Reduce CO₂ Emissions from Diesel Engines. **International Journal of Scientific Engineering and Applied Science**, 2(12):84-93, 2016
 22. Radheshyam Wagh, Sagar Nikam, Yogesh Salame, **Swamini Chopra**. Conversion of Single Cylinder 2-Stroke Petrol Engine into Compressed Air Engine using a Cam-operated DCV. **International Journal on Recent and Innovation Trends in Computing and Communication**, 4(4): 24-28, 2016
 23. **Swamini A. Chopra** and V. G. Sargade. Metallurgy behind the Cryogenic Treatment of Cutting Tools: An Overview. **Materials Today: Proceedings**, 2:1814-1824, 2015
 24. Sandeep Desai, **Swamini Chopra**, Raju Pawade. Energy Consideration in Metal Machining. **International Journal on Intelligent Electronic System**, 9(1):24-30, 2015
 25. **Swamini A. Chopra**, Vaishali D. Kulkarni, Pooja V. Achari. A Study of Techniques to Reduce CO₂ Emissions from Single Cylinder, Air-cooled Diesel Engine for 3-Wheeler. **International Journal of Multidisciplinary Research**, 1(12):57-60, 2013

Books

1. Title: *Novel Applications of Carbon based Nano-materials*
 Editors: **Swamini Chopra**, Kavita Deshmukh, Vincent Shantha Kumar, Jitendra Sharma.
 Publisher: CRC Press Taylor and Francis Group
 Publishing date: 2021
 (Ongoing)
2. Title: *Advances and Research in Agricultural Tools*
 Authors: D. R. Peshwe, Ram Kumar Singh, Kavita Deshmukh, **Swamini Chopra**, Samvidha Kulkarni, Maithili Bhakare, Samyukta Shrivastav, Sayali Chetule, Sanyam Totade, Janhavi Nistane, Vaishnavi Shringi
 Publisher: MME Publishing House
 Publishing date: October 2018
 ISBN No.: 978-93-5321-785-3
3. Title: *Cryogenic Treatment of Cubic Boron Nitride (CBN) Cutting Inserts*
 Authors: **Swamini Chopra**, Kavita Abhay Deshmukh, Dilip R. Peshwe.
 Publisher: LAP LAMBERT Academic Publishing

Publishing date: August 2017
ISBN No.: 978-3-330-09080-4

Book Chapters

1. Book Title: Nanotechnology in Aerospace and Structural Mechanics
Chapter: Cryogenic Treatment of Polymer/MWCNT Nano-composites for Mechanical and Tribological Applications (DOI: 10.4018/978-1-5225-7921-2.ch004)
Authors: **Swamini Chopra**, S. Sreya, Rohit V. Babhulkar, Swaksha P. Halde, Kavita A. Deshmukh, D. R. Peshwe.
Publisher: IGI Global Publication
Publishing date: April 2019
ISBN No.: 978-15-2257-921-2

Papers in National /International Conference Proceedings

1. Saurabh Patil, Kunal Padamwar, Mohammed Mudassir, **Swamini Chopra**. Design and Development of Vacuum Clamping Device for Nirlep Appliances Pvt. Ltd. at International Conference on Recent Trends in Mechanical Engineering (ICRTME-2021), **M.I.T. Aurangabad** on January 22-23, 2021, Paper no. DSG-111.
2. Vinayak Gawande, Salil Paranjap, Akshit Garg, **Swamini Chopra**, Kavita Deshmukh, D. R. Peshwe. Structural studies on Glass fiber reinforced Poly-styrene Composites at International Conference on Recent Trends in Mechanical Engineering (ICRTME-2021), **M.I.T. Aurangabad** on January 22-23, 2021, Paper no. MAT-133.
3. Poojitha Durgamahanti, Suniti Shougaijam, Sangeeta Marandi, Gugulothu Sravanthi, **Swamini Chopra**, Kavita Deshmukh, D. R. Peshwe. Evaluation of Crystallinity in Talc/Poly-styrene Composites by using FTIR and XRD at International Conference on Recent Trends in Mechanical Engineering (ICRTME-2021), **M.I.T. Aurangabad** on January 22-23, 2021, Paper no. MAT-136.
4. **Swamini Chopra**, Kavita A. Deshmukh, Kanchan Zine, Kartik Rathod, Abhay Deshmukh, Dilip Peshwe. A Novel Microwave Treatment to Augment the Mechanical properties of Polymeric Materials at **Materials Chemistry 2020 International Gathering Global Virtual Summit on Advances in Materials, Physics and Chemistry Science (Virtual)** on September 11-12, 2020.
5. **Swamini A. Chopra**, Kavita Pande, D.R. Peshwe. Augmentation of Mechanical Properties by Post-Processing Treatment of Polymers and Polymer/CNT Nano-Composites at **Research Scholar Day 2018**, V.N.I.T. Nagpur on 18th March 2018, Abstract no. K15.
6. **Swamini A. Chopra**, Kavita A. Deshmukh, Abhay D. Deshmukh, D.R. Peshwe. Effect of Industrial Waste Fly-ash (FA) reinforcement on the Tensile and Wear Properties of Nylon-6 (PA-6) at **International Conference on Flyash Utilization (GREEN ASHCON 2017)**, Dr. Babasaheb Ambedkar Auditorium, Deeksha Bhoomi, Nagpur, December 15-17, 2017, Souvenir pg no. 4.
7. Sonal P. Ghawade, Kavita A. Deshmukh, **Swamini Chopra**, D.R. Peshwe, S.J. Dhoble, Abhay D. Deshmukh. Rapid Synthesis of Highly Luminescent c-Dots for Improving the Efficiency of C-Si Solar Cell presented at **International Conference on Advanced Rechargeable Batteries & allied Materials (ICARBM) 2017**, C-MET Pune, March 8-10, 2017, Souvenir pg no. 124.
8. **Swamini A. Chopra** and V. G. Sargade. Hard Turning of AISI 52100 Bearing Steel Using Cryogenically Treated CBN Inserts presented at **International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 9)**, I.I.T. Powai, December 10-12, 2015, Paper ID: 138.

9. Sandesh S. Bhadane, **Swamini A. Chopra**, Mitali S. Mhatre, Raju S. Pawade. Effect of Water Vapour Coolant on the Surface Integrity of Turned Ti-6Al-4V alloy presented at **International Colloquium on Materials, Manufacturing and Metrology (ICMMM)**, I.I.T. Madras, August 8-9, 2014, Paper ID: ICM 2118.

Posters in National /International Conferences

1. *Research Scholar Day 2018*, V.N.I.T. Nagpur
Swamini A. Chopra, Kavita Pande, D.R. Peshwe
Poster Title: *Augmentation of Mechanical Properties by Post-Processing Treatment of Polymers and Polymer/CNT Nano-Composites*
2. *National metallurgist day- 71st Annual technical meeting (NMD-ATM)*, BITS Pilani K.K. Birla Goa Campus
Mitali Somvanshi, Raju Sontakke, Siddhant Rakhe, Neha Patil, **Swamini Chopra**, Kavita Deshmukh, D.R. Peshwe, C.L. Gogte
Poster Title: *Cold Treatment to Augment the Mechanical Properties of Ultra-High Density Polyethylene (UHDPE) Polymer used in Biomedical Application*
3. *International Conference on Advanced Rechargeable Batteries & allied Materials (ICARB) 2017*, C-MET.
Sonal P. Ghawade, Kavita A. Deshmukh, **Swamini Chopra**, D.R. Peshwe, S.J. Dhoble, Abhay D. Deshmukh.
Poster Title: *Rapid Synthesis of Highly Luminescent c-Dots for Improving the Efficiency of C-Si Solar Cell*
4. *National metallurgist day-Annual technical meeting (NMD-ATM 16)*, I.I.T. Kanpur.
Saisha Batthula, Kavita Deshmukh, A.R. Kangda, S.P. Mahajan, **Swamini Chopra**, D.R. Peshwe.
Poster Title: *Effect on Nucleating Efficiency of Commercial Isotactic Polypropylene (iPP) on Addition of Talc with different Aspect Ratios*
5. *National Conference on Materials in Advanced Technology and Application (MATA)*, M.I.T. Aurangabad.
Maithili Bhakare, Vaishnavi Naik, Samyukta Shrivastav, **Swamini Chopra**, Kavita Deshmukh, D.R. Peshwe.
Poster Title: *Effect of MWCNT on Extrinsic Self-Healing Phenomenon of TPU*

Awards, Achievements and Recognition

- Recognized and Nominated for **Research Excellence Award 2020** by *Institute of Scholars (InSc)* in November 2020.
- Invited as a **Keynote Speaker** to **Materials Chemistry 2020** Conference *Global Virtual Summit on Advances in Materials, Physics and Chemistry Science* (Virtual) scheduled on September 11-12, 2020.
- Recognized as a Mentor for **Virtual Internship with Science Leaders (#VISL) 2020** and is presently working with 1 fellow Mentor and 12 Mentees in the field of *Applications of Carbon-based nano-materials*.
- Recognized as a **Team Member of Polymer Recycling and Waste Management** at VNIT Nagpur by *Tarun Bharat, Nagpur* in October 2018.
- Recognized and featured as **Young Professional in the field of Cryogenics** by *Cryogenic Society of America* in *Cold Facts Magazine*, April 2018, Vol. 34(2).
- Shri Baburao Bapuraoji Jadhav **Gold Medal** (Medal of Merit) 2013.
- Shri Balkrishna Limaye Prize (Highest number of marks in B.E. Mechanical) 2013.

- Shri Jivanrai Bodhankar Memorial Prize (First in order of merit in B.E. Mechanical) 2013.
- Smt. Ambabai Deshpande Prize (First in order of merit in B.E. Mechanical) 2013.
- Late Smt. Fulanbai Motilal Darak Rahurikar Prize (First in order of merit in B.E. Mechanical) 2013.

Date: 21.07.2020

Place: Aurangabad