Dr. Abhishek Kumar
Professor
Department of Applied Mechanics
Motilal Nehru National Institute of Technology Allahabad, Prayagraj

A. International Journal

1. Deeksha Gupta, Ashish Dubey and **Abhishek Kumar** "*Improving microwave absorption bandwidth of nickel-dispersed boron carbide by double layering using genetic algorithm*" Ceramics International, Accepted (2025). (SCIE: Impact factor- 5.1) https://doi.org/10.1016/j.ceramint.2025.03.421
2. Avadesh Yadav, Sourabh Kumar Singh, Sreetam Das, Satish Kumar, and **Abhishek Kumar**, "*Shape Memory Polymer and Composites for Space Applications: A Review*" Polymer Composites, Accepted (2025). (SCIE: Impact factor- 4.8) https://doi.org/10.1002/pc.29707
3. Sushil Kumar Singh, Avadesh Yadav, Samarjit Singh, Anuj Jain and **Abhishek Kumar**, "*Enhancement of Mechanical and Viscoelastic Properties of Epoxy and Epoxy-Nano Silica Composites using Self-Healing Microcapsules*" Materials Today Communications, 43, 111741 (2025). (SCIE: Impact factor- 3.7) https://doi.org/10.1016/j.mtcomm.2025.111741
4. Amit Kumar Singh Chauhan, Mukul Shukla, **Abhishek Kumar**, "*Insights into microstructure and mechanical properties of 3D printed Ti-6Al-4V alloy at different layer thicknesses*" Materials Letters, 138047 (2025). (SCIE: Impact factor- 2.7) https://doi.org/10.1016/j.matlet.2025.138047
5. Amit Kumar Singh Chauhan, Mukul Shukla, **Abhishek Kumar**, "*Effect of NiAl and NiCr Coatings on High Cycle Fatigue and Corrosion Behavior of Direct Metal Laser Sintered Ti-6Al-4V Alloy*" Materials Today Communications, 42, 111102 (2025). (SCIE: Impact factor- 3.7) https://doi.org/10.1016/j.mtcomm.2024.111102
6. Deeksha Gupta, Prabhakar Kumar, Ashish Dubey and **Abhishek Kumar** "*Development of metamaterial using waste materials for microwave absorption*" Brazilian Journal of Physics, Volume 54, Article Number 200, (2024). (SCIE: Impact factor-1.5) https://doi.org/10.1007/s13538-024-01571-2
7. Amit Kumar Singh Chauhan, Mukul Shukla, **Abhishek Kumar**, "*Effect of Laser Sintering Parameters on the Microstructure, Mechanical Properties and Corrosion Behaviour of Titanium Grade 5 Alloy*" Journal of Materials Engineering and Performance, 33, 12806–12818 (2024). (SCIE: Impact factor-2.2) https://doi.org/10.1007/s11665-024-09935-0
8. Avadesh Yadav, Sreetam Das, Rushikethu Badardinni, Satish Kumar and **Abhishek Kumar**, "*Effect of dual dispersion of carbon fiber and silica nanoparticles on recovery performance of shape memory epoxy*", Smart Materials and Structures, 33 (6) 065044 (2024) (SCIE: Impact factor-3.7) 10.1088/1361-665X/ad4d37
9. Samarjit Singh, Rakesh Bhaskar, Kannan Badri Narayanan, **Abhishek Kumar**, Kishore Debnath, "*Development of silicon carbide (SiC)-based composites as microwave-absorbing materials (MAMs): a review*" Journal of the European Ceramic Society, 44 (13), 7411-7431 (2024) (SCI: Impact factor-5.8) https://doi.org/10.1016/j.jeurceramsoc.2024.05.032
10. Amit Kumar Singh Chauhan, Mukul Shukla, **Abhishek Kumar**, "*Solid particle erosion behaviour of laser sintered heat treated Ti-6Al-4V alloy*" Russian Journal of Nondestructive Testing, 60 (5), 583–590 (2024). (SCIE: Impact factor-0.9, Scopus Indexed) https://link.springer.com/article/10.1134/S1061830924601533

11. Samarjit Singh, Sushil Kumar Singh, **Abhishek Kumar** & Biplab Das "*Influence of Reduced Graphene Oxide Flakes Addition on the Electromagnetic Wave Absorption Performance of Silicon Carbide-Based Wave Absorber*" JOM: The Journal of The Minerals, Metals & Materials Society (TMS) 76, 486–495 (2024) (SCI: Impact factor-2.5) https://doi.org/10.1007/s11837-023-06222-6
12. Avadesh Yadav, Sourabh Kumar, Sreetam Das, Satish Kumar and **Abhishek Kumar**, "*Shape recovery and mechanical properties investigation of carbon fiber dispersed Bisphenol-A based epoxy composite*" Smart Materials and Structures, 32 (9) 095016 (2023) (SCIE: Impact factor-3.7) https://doi.org/10.1088/1361-665X/aceb27
13. Naveen Kumar, Ajaya Bharti, **Abhishek Kumar**, Ritesh Kumar Kushwaha, Kunvar Kant Patel, "*Nano material coatings for bio implant applications: A re-analysis*" Materials Physics and Mechanics, 51(6):92-106 (2023). (Scopus Indexed, ESCI) DOI: 10.18149/MPM.5162023_9
14. Amit Kumar Singh Chauhan, Mukul Shukla, **Abhishek Kumar**, "*3D Thermal Simulation of Powder Bed Fusion Additive Manufacturing of Stainless Steel*" International Journal on Interactive Design and Manufacturing, 17, 517–524 (2023). (Scopus Indexed, ESCI: Impact factor-2.1) https://doi.org/10.1007/s12008-023-01234-7
15. Prabhakar Kumar, Deeksha Gupta, Ashish Dubey, **Abhishek Kumar** "*Utilization of Zn-dispersed waste materials for realizing thin meta-structure with improved microwave absorption*", Composites: Mechanics, Computations, Applications: An International Journal, 14(2):39–55 (2023). (Scopus Indexed, ESCI, Impact factor-0.3) https://doi.org/10.1615/CompMechComputApplIntJ.2022044803
16. Samarjit Singh, Sushil Kumar Singh, Pappu Kumar Harijan, Sunil Kumar Yadav, **Abhishek Kumar**, "*Investigation on the effect of Fe impurity pickups during ball milling and Ni dispersion on the microwave absorption performance of ball milled Fe impurities-Ni/SiC composites*", Journal of Materials Science: Materials in Electronics, 33, 17828-17841 (2022). (SCI: Impact factor-2.8) https://doi.org/10.1007/s10854-022-08647-2
17. Rahul Singh, Sunkulp Goel, R. Jayaganthan and **Abhishek Kumar**, "*Studies on microstructure evolution, mechanical and corrosion behaviors of cryo-rolled 316L steel*" Journal of Materials Engineering and Performance, 31, 9660–9669, 2022. (SCIE: Impact factor-2.2) https://doi.org/10.1007/s11665-022-06993-0
18. Sushil Kumar Singh, Dheeraj Gunwant, Ajitanshu Vedrtnam, **Abhishek Kumar** and Anuj Jain "*Synthesis, Characterization, and Modelling the Behavior of in-situ ZrO_2 Nanoparticles Dispersed Epoxy Nanocomposite*" Engineering Fracture Mechanics, 263, 108300, 2022. (SCI: Impact factor- 4.7) https://doi.org/10.1016/j.engfracmech.2022.108300
19. Sunkulp Goel, Dharmendra Singh, Nikhil Kumar, **Abhishek Kumar** Chauhan, & Punit Singh, "*Effect of water and mercury quenching on the microstructure and mechanical behavior of room temperature rolled Zircaloy-2*", Indian Journal of Engineering & Materials Sciences; Vol: 29, 432-436, 2022 (SCI: Impact factor-0.9) DOI: 10.56042/ijems.v29i4.47288
20. S Singh, SK Singh, R Singh, **A Kumar**, A Nigam; "*Effect of Ni on the dielectric behavior and microwave absorption performance of ZnO composites*", Materials Physics and Mechanics 47 (3), 416-422, 2021. (ESCI) DOI: 10.18149/MPM.4732021_3
21. Rahul Singh, Samarjit Singh, B. Kranthi Kumar, **Abhishek Kumar**, "*Mechanical behaviour and corrosion study of 304L austenitic steel processed by constrained groove pressing*", Indian Journal of Engineering and Materials Sciences, 28, 258-264 (2021).

(SCI: Impact factor- 0.9) DOI: 10.56042/ijems.v28i3.45775

22. Rahul Singh, Surya Deo Yadav, Biraj Kumar Sahoo, Sandip Ghosh Chowdhury and **Abhishek Kumar**, "*Phase transformation, mechanical properties and corrosion behavior of 304L austenitic stainless steel rolled at room and cryo temperature*", Defence Science Journal, 71(3), 383-389, 2021. (SCIE: Impact factor- 0.8) https://doi.org/10.14429/dsj.71.16721
23. Abir Roy and **Abhishek Kumar**, "*Corrosion behaviour of Multiaxial compressed AlMgSi alloy*", Defence Science Journal, 71(3), 359-364, 2021. (SCIE: Impact factor- 0.8) https://doi.org/10.14429/dsj.71.16723
24. Naveen Kumar, Ajaya Bharti, **Abhishek Kumar** and Abhishek Nigam, "*Effect of process parameters on the crystal- parameters of Cu-Zn spinel-ferrites*", Materials Physics and Mechanics 47 (2021) 65-73. (Scopus Indexed, ESCI) http://dx.doi.org/10.18149/MPM.4712021_7
25. Rahul Singh, Shubham Agrahari, Surya Deo Yadav and **Abhishek Kumar**, "*Microstructural evolution and mechanical properties of 316 austenitic stainless steel by CGP*", Materials Science & Engineering A, 812, Article id: 141105, 2021. (SCI: Impact factor- 6.1) https://doi.org/10.1016/j.msea.2021.141105
26. Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*Mechanical and viscoelastic properties of SiO_2/epoxy nanocomposites post-cured at different temperatures*", Plastics, Rubber and Composites: Macromolecular Engineering, 50(3), 116-126, 2021. (SCI: Impact factor- 2.021) http://dx.doi.org/10.1080/14658011.2020.1840203
27. Rahul Singh, Deepak Sachan, Deepak Singh, Surya Deo Yadav, **Abhishek Kumar**, "*Microstructural Evolution and Mechanical Properties of Constrained groove pressed 304 Austenitic Stainless Steel*", Journal of Materials Engineering and Performance, 30, 290-301, 2020. (SCIE: Impact factor-2.2) https://doi.org/10.1007/s11665-020-05372-x
28. Samarjit Singh and **Abhishek Kumar**, Dharmendra Singh, "*Enhanced microwave absorption performance of SWCNT/SiC composites*" Journal of Electronic Materials, 49(12), 7279-7291, 2020. (SCI: Impact factor-2.2) https://doi.org/10.1007/s11664-020-08460-9
29. Yogesh Iyer Murthy, Sumit Gandhi, **Abhishek Kumar**, "*Assessment of current and potential applications of magnesium alloys in construction industry*", Interciencia, Vol. 45 (5), 21-39, 2020. (Scopus; SCIE: Impact factor-0.396)
30. Abir Roy, Manish Tiwari, Sandeep Sahu, Sumeet Mishra and **Abhishek Kumar** "*Microstructure, texture and mechanical properties of Al-Mg-Si alloy processed by multi-axial compression*", Journal of Materials Engineering and Performance, 29(6), 3876–3888, 2020. (SCIE: Impact factor-2.2) https://link.springer.com/article/10.1007/s11665-020-04917-4#citeas
31. Samarjit Singh, **Abhishek Kumar**, Smriti Agarwal, Dharmendra Singh, "*Synthesis and tunable microwave absorption characteristics of flower-like Ni/SiC composites*" Journal of Magnetism and Magnetic Materials, Vol. 503, Article 166616, 2020. (SCI: Impact factor-3.097) https://doi.org/10.1016/j.jmmm.2020.166616
32. Yogesh Iyer Murthy, Sumit Gandhi, **Abhishek Kumar**, "*Magnesium alloy anodes for corrosion prevention of reinforcements in concrete*", International Journal on Emerging Technologies, Vol.11, Issue 2, 656-661, 2020. (Scopus Indexed)
33. Samarjit Singh, **Abhishek Kumar**, Dharmendra Singh, "*Improved microwave absorption behavioral response of Ni/SiC and Ni/SiC/Graphene composites: A comparative insight*" Journal of Alloys and Compounds, Vol. 823, Article 153780, 2020. (SCI: Impact factor-6.371) https://doi.org/10.1016/j.jallcom.2020.153780

34. Yogesh Iyer Murthy, Sumit Gandhi, **Abhishek Kumar**, "*Micro characterization of pure Mg and AZ91D used as sacrificial anodes in reinforced cement concrete*", International Journal of Science Technology and Research, Vol.8 (11), 400-403, 2019. (Scopus Indexed)
35. Sushil Kumar Singh, Deepak Singh, **Abhishek Kumar** and Anuj Jain, "*An analysis of mechanical and viscoelastic behavior of nano-SiO_2 dispersed epoxy composites*", Silicon, Vol. 12(10), 2465-2477, 2019. (SCIE: Impact factor-2.941) https://doi.org/10.1007/s12633-019-00335-x
36. Singh S., and **Kumar A**, "*Selection of Core shell Material based Electromagnetic Wave Absorbers in 2 to18 GHz using TOPSIS and VIKOR Ranking Methods"*, Defence Science Journal, 69(5), 431-436, 2019. (SCIE: Impact factor- 0.8) https://doi.org/10.14429/dsj.69.14946
37. Saurabh, Maurya A. K., Singh S., and **Kumar A**, "*Microwave Absorption Performance of Graphene Nanoplatelets Dispersed SiC*", Defence Science Journal, 69(5), 437-441, 2019. (SCIE: Impact factor- 0.8) https://doi.org/10.14429/dsj.69.14946
38. Yogesh Iyer Murthy, Sumit Gandhi, **Abhishek Kumar**, "*Corrosion Mitigation of Reinforcement in Concrete using Magnesium Anodes*", International Journal of Recent Technology and Engineering, Vol. 8(4), 1950- 1956, 2019. (Scopus Indexed) doi: 10.35940/ijrte.c6272.118419
39. Shadma Afzal, Preeti Sirohi, Alok Kumar Yadav, Manish Pratap Singh, **Abhishek Kumar**, Nand K.Singh, "*A comparative screening of abiotic stress tolerance in early flowering rice mutants*", Journal of Biotechnology, Vol. 302, 112-122, 2019. (SCIE: Impact factor- 4.1; Scopus Indexed) https://doi.org/10.1016/j.jbiotec.2019.07.003
40. Rahul Singh, Surya Deo Yadav, Nikhil Malviya, Sunkulp Goel, R. Jayaganthan & **Abhishek Kumar**, "*Finite Element Analysis and Mechanical Behavior of 316L Stainless Steel Processed by Room Temperature Rolling*", Materials Science Forum, Vol. 969, 508-516, 2019. (Scopus Indexed)
    https://doi.org/10.4028/www.scientific.net/MSF.969.508
41. Rahul Singh, Gaurav Rajan, B. Kranthi Kumar, Raviraj Verma, R. Jayaganthan & **Abhishek Kumar**, "*Numerical Analysis of Constrained Groove Pressing and Mechanical Behaviour of Processed 316L Stainless Steel*", Materials Science Forum, Vol. 969, 901-908, 2019. (Scopus Indexed) https://doi.org/10.4028/www.scientific.net/MSF.969.901
42. **Abhishek Kumar**, Samarjit Singh, and Dharmendra Singh, "*Effect of heat treatment on morphology and microwave absorption behavior of milled SiC*" Journal of Alloys and Compounds, Vol. 772, 1017-1023, 2018. (SCI: Impact factor-6.371) https://doi.org/10.1016/j.jallcom.2018.09.136
43. Yogesh Iyer Murthy, Sumit Gandhi, **Abhishek Kumar**, "*Comparative Study of Pure Mg and AZ91D as Sacrificial Anodes for Reinforced Cement Concrete Structures in Chloride Atmosphere*", Civil Engineering Journal, Vol. 4 (8), 1750-1759, 2018. (Scopus Indexed) DOI: 10.28991/cej-03091110
44. Samarjit Singh, Ankur Sinha, Raj H. Zunke, **Abhishek Kumar**, and Dharmendra Singh, "*Double layer microwave absorber based on Cu dispersed SiC composites*", Advanced Powder Technology, Vol. 29 (9), 2019-2026, 2018. (SCI: Impact factor-4.969) https://doi.org/10.1016/j.apt.2018.05.008
45. Samarjit Singh, Sankalp Shukla, **Abhishek Kumar** and Dharmendra Singh, "*Influence of Zn dispersion in SiC on electromagnetic wave absorption characteristics*", Journal of Alloys and Compounds, Vol. 738, 448-460, 2018. (SCI: Impact factor-6.371)

https://doi.org/10.1016/j.jallcom.2017.12.190

46. Sushil Kumar Singh, Samarjit Singh, **Abhishek Kumar** and Anuj Jain, "*Thermo-mechanical behavior of TiO_2 dispersed epoxy composites*", Engineering Fracture Mechanics, Vol. 184, 241-248, 2017. (SCI: Impact factor-4.898) https://doi.org/10.1016/j.engfracmech.2017.09.005
47. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Microwave absorbing behavior of metal-dispersed TiO_2 nanocomposites*", Advanced Powder Technology, Vol. 25, 483–489, 2014. (SCI: Impact factor-4.969) https://doi.org/10.1016/j.apt.2013.07.006
48. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Effect of milling on dielectric and microwave absorption properties of SiC based composites*", Ceramic International, Vol. 40(1), 1797-1806, 2014. (SCI: Impact factor-5.532) https://doi.org/10.1016/j.ceramint.2013.07.080
49. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Effect of Particle Size of $BaFe_{12}O_{19}$ on the Microwave Absorption Characteristics in X-Band*", Progress in Electromagnetics Research M, Vol. 29, 223-236, 2013. (Scopus Indexed, ESCI) doi:10.2528/PIERM13011604
50. D. Singh, **A. Kumar**, S. Meena, and V. Agarwala, "*Analysis of frequency selective surfaces for radar absorbing materials*", Progress in Electromagnetics Research B, Vol. 38, 297-314, 2012. (Scopus Indexed) doi:10.2528/PIERB11121601
51. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Effect of Mg substitution on microwave absorption of $BaFe_{12}O_{19}$*", Advanced Materials Research, Vol. 585, 62-66, 2012. (Scopus Indexed) https://doi.org/10.4028/www.scientific.net/AMR.585.62

International Conference

52. Deeksha Gupta, Ashish Dubey, **Abhishek Kumar**, "*Effect of ball milling on microwave absorption properties of B_4C*", 4th Global Ceramic Leadership Roundtable Ceramics for Frontier Sectors: Emerging Advances and Prospects (CerAP2024) organized by Indian Institute of Technology Roorkee during March 11-12, 2024.
53. Zainab Momin, A. Mishra and **Abhishek Kumar**, "*Design modification of cooling channel for improved cooling of lithium-ion batteries*", The 64th Battery Symposium in Japan, Osaka, Japan (Physical Mode) held during 28-30, November 2023.
54. Avadesh Yadav, Rushikethu Badardinni, Ratnesh Kumar Yadav, Satish Kumar and **Abhishek Kumar**, "*Temperature-Step/Hold Multi-Frequency Dynamic Mechanical Analysis to Study Viscoelastic Behaviour of Shape Memory Epoxy for Space Structure and Component*", Third Global Conference on Recent Advances in Sustainable Materials (GC-RASM 2023) organized by PGP College of Engineering & Technology Namakkal, Tamil Nadu, India, held during 27 - 28, July 2023.
55. Yogesh Iyer Murthy, Sumit Gandhi and **Abhishek Kumar**, "*Crystallographic Study of Solid Solutions in The Mg-Ca-Nd Ternary System at 400 °C*", in the *International Conference on* Advancements in Interdisciplinary Research (AIR-2022) organized by MNNIT Allahabad, Prayagraj, held during 6-7 May 2022. Proceedings-AIR2022, River Publishers (ISSN: 2794-2333) **doi:** https://doi.org/10.13052/rp-978-87-7022-828-2
56. Sreetam Das, Sourabh Kumar Singh, Avadesh Yadav, Satish Kumar and **Abhishek Kumar**, "*Finite Element Analysis of a Shape Memory Polymer for Space Actuator Applications*", in the *International Conference on* Advancements in Interdisciplinary Research (AIR-2022) organized by MNNIT Allahabad, Prayagraj, held on 6-7 May 2022. Proceedings-AIR2022, River Publishers (ISSN: 2794-2333) **doi:** https://doi.org/10.13052/rp-978-87-7022-828-2

57. Prabhakar Kumar, Deeksha Gupta and **Abhishek Kumar**, "*Dispersion of Zn in waste material for microwave absorption property*", in the *International Conference on* Advancements in Interdisciplinary Research (AIR-2022) organized by MNNIT Allahabad, Prayagraj, held on 6-7 May 2022.
58. Prabhakar Kumar, Prashant Singh, Nigatu D. Tilahun, R. Sujithra, **Abhishek Kumar**, "*Finite Element Analysis of Re-entrant and modified curved re-entrant auxetic structure for energy-absorption"*, in the *International Conference on* Advancements in Interdisciplinary Research (AIR-2022) organized by MNNIT Allahabad, Prayagraj, held on 6-7 May 2022. Proceedings-AIR2022, River Publishers (ISSN: 2794-2333) **doi:** https://doi.org/10.13052/rp-978-87-7022-828-2
59. Sushil Kumar Singh, Samarjit Singh, Sourabh Shukla, **Abhishek Kumar** and Anuj Jain, "*Influence of SiO_2 nanoparticle reinforcement on the thermo-mechanical behavior of two different epoxy composite systems: A comparative study*", in International Conference on Sustainable Engineering" (ICSE-2021) organized by Government Engineering College Bikaner, Rajasthan, held on 26-27 February, 2021.
60. Samarjit Singh, Sushil Kumar Singh, Rahul Singh, **Abhishek Kumar**, "*Ball milled Ni dispersed SiC composites for improved microwave absorption response*", in International Conference on Sustainable Engineering" (ICSE-2021) organized by Government Engineering College Bikaner, Rajasthan, held on 26-27 February, 2021.
61. Rahul Singh, Samarjit Singh, B. Kranthi Kumar, **Abhishek Kumar**, "*Mechanical behaviour and corrosion study of 304L austenitic steel processed by constrained groove pressing*", in International Conference on Sustainable Engineering" (ICSE-2021) organized by Government Engineering College Bikaner, Rajasthan, held on 26 – 27 February, 2021.
62. Sushil Kumar Singh, Amit Kumar, Samarjit Singh, **Abhishek Kumar** and Anuj Jain, "*Investigation of thermo-mechanical properties of surface treated SiO_2/epoxy nanocomposite*", in the International Conference & Exposition on Mechanical, Material and Manufacturing Technology" (ICE3MT2020) organized by CVR College of Engineering Hyderabad, held on 9-10 October, 2020.

    Materials Today: Proceedings Vol. 38 (5), 2861-2865, 2021. (Scopus Indexed) https://doi.org/10.1016/j.matpr.2020.09.137 **(Best Paper Award)**
63. Rahul Singh, Surya Deo Yadav, Nikhil Malviya, Sunkulp Goel, R. Jayaganthan & **Abhishek Kumar**, "*Finite element analysis and Mechanical behavior of 316L stainless steel processed by room temperature*" in international conference "ICRAMMT – 2018" organized by MLRITM, Hyderabad, Telangana, held on 19-20 November, 2018.
64. Rahul Singh, Gaurav Rajan, B. Kranthi Kumar, Raviraj Verma, R. Jayaganthan & **Abhishek Kumar**, "*Numerical analysis of constrained groove pressing and mechanical behaviour of processed 316L stainless*" in international conference "ICRAMMT – 2018" organized by MLRITM, Hyderabad, Telangana, held on 19-20 November, 2018.
65. Yogesh Iyer Murthy, Sumit Gandhi, **Abhishek Kumar**, "*A critical Review on the use of sugarcane bagasse ash in cement mortar and concrete*", Recent Development in Cement Composites, (RDCC-2018), 24-25th Aug. 2018.
66. Rahul Singh, Deepak Sachan, Raviraj Verma, Sunkulp Goel, **Abhishek Kumar**, "*Mechanical behavior of 304 austenitic stainless steel processed by cryogenic rolling*", AMPCO 2017 at IIT Roorkee, Nov. 30- Dec. 2, 2017.

    Materials Today: Proceedings Vol. 5 (9, Part 1), 16880-16886, 2018. (Scopus Indexed) https://doi.org/10.1016/j.matpr.2018.04.090
67. Rahul Singh, I. K. Bhat, Raviraj Verma, R. Jayaganthan, **Abhishek Kumar**, "*Effect of*

processing temperature over the mechanical behaviour of 304 austenitic stainless steel", NMD-ATM 2017 at Pune (The Indian Institute of Metals), November 11-14, 2017.

68. Rahul Singh, Deepak Sachan, Sunkulp Goel, R. Jayaganthan, **Abhishek Kumar**, "*Effect of temperature over the mechanical behaviour of Titanium alloy (Ti06Al-4V)*", NMD-ATM 2017 at Pune (The Indian Institute of Metals), November 11-14, 2017.
69. Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*Unveiling the impact of ZrO_2 dispersion over the mechanical behavior of epoxy resin*", NMD-ATM 2017 at Pune (The Indian Institute of Metals), November 11-14, 2017.
70. Deepak Singh, Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*A Finite Element Approach to Determine Young's Modulus of Epoxy-Silica Nanocomposite*", NMD-ATM 2017 at Pune (The Indian Institute of Metals), November 11-14, 2017.
71. **Abhishek Kumar**, Samarjit Singh and Dharmendra Singh, "*Development of Double Layer Microwave Absorber using Genetic Algorithm*", IOP Conf. Ser.: Mater. Sci. Eng. 234 012009; ATDMAE 2017at Nanyang Technical Unversity, Singapore during July 12-14, 2017.

    IOP Conf. Series: Materials Science and Engineering 234 (2017). (ISSN: 1757-8981) https://doi.org/10.1088/1757-899X/234/1/012009
72. Samarjit Singh, Ankur Sinha, Raj Hemant Zunke, **Abhishek Kumar** and I.K. Bhat, "*AHP based TOPSIS and VIKOR analysis for selection of EM wave absorbers at X-band*", INCAM 2017 at MNNIT Allahabad during July 5-7, 2017.
73. **Abhishek Kumar** and Samarjit Singh, "*Development of Coatings for Radar Absorbing Materials at X-Band*", IOP Conf. Ser.: Mater. Sci. Eng. 330, 012006; International Conference on Recent Advances in Materials, Mechanical and Civil Engineering (ICRAMMCE-2017) held at Marri Laxman Reddy Institute of Technology and Management, Hyderabad during June 01-02, 2017.

    IOP Conf. Series: Materials Science and Engineering 330 (2018) 012006. https://doi.org/10.1088/1757-899X/330/1/012006
74. Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*Effect of Nanoparticles Dispersion on Viscoelastic Properties of Epoxy–Zirconia Polymer Nanocomposites*", IOP Conf. Ser.: Mater. Sci. Eng. 330, 012001; International Conference on Recent Advances in Materials, Mechanical and Civil Engineering (ICRAMMCE-2017) held at Marri Laxman Reddy Institute of Technology and Management, Hyderabad during June 01-02, 2017.

    IOP Conf. Series: Materials Science and Engineering 330 (2018) 012001. https://doi.org/10.1088/1757-899X/330/1/012001
75. Yogesh Iyer Murthy, Sumit Gandhi and **Abhishek Kumar**, "*Corrosion Prevention of Steel Reinforcement in 7.5% NaCl Solution Using Pure Magnesium Anode*", IOP Conf. Ser.: Mater. Sci. Eng. 330, 012003; International Conference on Recent Advances in Materials, Mechanical and Civil Engineering (ICRAMMCE-2017) held at Marri Laxman Reddy Institute of Technology and Management, Hyderabad during June 01-02, 2017.

    IOP Conf. Series: Materials Science and Engineering 330 (2018) 012003. https://doi.org/10.1088/1757-899X/330/1/012003
76. Rahul Singh, Sukulp Goel, Raviraj Verma, R. Jayaganthan and **Abhishek Kumar**, *"Mechanical behavior of 304 Austenitic stainless steel processed by Room temperature rolling*", IOP Conf. Ser.: Mater. Sci. Eng. 330, 012017; International Conference on Recent Advances in Materials, Mechanical and Civil Engineering (ICRAMMCE-2017) held at Marri Laxman Reddy Institute of Technology and Management, Hyderabad

during June 01-02, 2017.

IOP Conf. Series: Materials Science and Engineering 330 (2018) 012017. https://doi.org/10.1088/1757-899X/330/1/012017

77. Dharmendra Singh, P. Nageswararao, **A. Kumar** Chauhan and S.K. Rajput, "*Microstructure, mechanical and corrosion behavior of Al 5083 alloy processed by multi directional forging at cryogenic temperature*", International Conference on Recent Advances in Materials, Mechanical and Civil Engineering (ICRAMMCE-2017) held at Marri Laxman Reddy Institute of Technology and Management, Hyderabad during June 01-02, 2017.
78. Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*Improving tensile and flexural properties of SiO_2-epoxy polymer nanocomposite*", International conference on Materials Processing and Characterization (ICMPC-2017) organized by GRIET Hyderabad, during 17-19 March, 2017.

    Materials Today: Proceedings Vol. 5 (2, Part 1), 6339-6344, 2018. (Scopus Indexed) https://doi.org/10.1016/j.matpr.2017.12.243
79. Bandana Rajpoot, Sushil Kumar Singh, **Abhishek Kumar**, and Anuj Jain, "*Development of SiO_2-epoxy nano-composites and their thermo-mechanical properties*", International Conference on Nanomaterials and Nanotechnology (ICNANO-2017) organised by International Association of Advanced Materials (IAAM) in collaboration with VBRI Press AB, Sweden during 01 - 03 March, 2017 at Vinoba Bhave Research Institute, Allahabad, India. DOI: 10.5185/amp.2020.020401; ISSN: 2002-4428
80. Samarjit Singh, Gaurav Goswami and **Abhishek Kumar**, "*Influence of pH and calcination temperature on magnetic properties of nanosized Zn-ferrite synthesized by sol- gel citrate method*" International conference on emerging trends in nanomaterials science & technology (ICETNMST-2017) held at NIT Nagaland during 4-6 January, 2017.

    International Journal of Research in Engineering and Technology, Vol. 06 (01) 2017. eISSN: 2319-1163 | pISSN: 2321-7308. https://doi.org/10.15623/ijret.2017.0613006
81. Sushil Kumar Singh, Amit Kumar, Samarjit Singh, **Abhishek Kumar** and Anuj Jain, "*Effect of surface treatment of SiO_2-nanoparticles on mechanical properties of epoxy-nanocomposites*" International conference on emerging trends in nanomaterials science & technology (ICETNMST-2017) held at NIT Nagaland during 4-6 January, 2017.
82. **Kumar, A.,** Singh, S. "*Design of two-layer microwave absorber at X-band using genetic algorithm*", 11th International Conference on Industrial and Information Systems (ICIIS-2016) 03rd-04th, December 2016, Conference Proceedings, pp. 503-506, January- 2018.
83. Dharmendra Singh, P.N. Rao, **A. Kumar**, P.K. Gupta, D. Venketeswarlu, "*Effect of initial grain size on microstructure and mechanical behavior of cryorolled 5083 AA*", International Conference on Advancements in Aeromechanical Materials for Manufacturing (ICAAMM-2016) held at MLRIT Dundigal (Hyderabad) India during June 26-28, 2016.

    Materials Today: Proceedings Vol. 4 (8), 7609-7617, 2017. (Scopus Indexed) (https://doi.org/10.1016/j.matpr.2017.07.094 ISSN: 2214-7853)
84. Sushil Kumar Singh, Samarjit Singh, Raunak Kohli, Anuj Jain and **Abhishek Kumar**, "*Effect of TiO_2 Dispersion on Mechanical Properties of Epoxy Polymer*", International Conference on Condensed Matter & Applied Physics (ICC-2015) held at Bikaner (Rajasthan) India during October 30-31, 2015.

    AIP Conference Proceedings **1728**, 020586 (2016). http://dx.doi.org/10.1063/1.4946637
85. Z. Vakil, **A. Kumar**, A. Jain, K. M. Gupta, Mohd Najim, D. Singh, "*Effect of Cerium*

(Ce 3+) doping on structural, magnetic and dielectric properties of Barium Ferrite ($BaFe_{12}O_{19}$)", IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), 2015 held at SVS College of Engineering JP Nagar Arasampalayam Pollachi Coimbatore, India during March 05-07, 2015.

IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT), pp. 1-4, 2015. **DOI:** 10.1109/ICECCT.2015.7225982

86. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Effect of Co substitution on microwave absorption of $BaFe_{12}O_{19}$*" at International Conference "The Minerals, Metals & Materials Society, 143rd Annual Meeting & Exhibition" held at San Diego, California, USA during February 16-20, 2014.
87. **Abhishek Kumar**, Vijaya Agarwala, Dharmendra Singh and Rajkumar Jani, "*Effect of Silicon Carbide Morphology on Dielectric Properties at X-band*", at 57th DAE Solid State Physics Symposium (SSPS-DAE 2012) held at Indian Institute of Technology - Bombay, Mumbai, during December 3-7, 2012.
88. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Effect of Mg substitution on microwave absorption of $BaFe_{12}O_{19}$*" at International Conference on Advances in Materials and Processing Challenges and Opportunities (AMPCO-2012) held at IIT Roorkee, during November 2-4, 2012.
89. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Effect of calcination temperatures on morphology and microwave absorption properties of SiC*", at International Conference on Material Science and Technology (ICMST-2012) held at Kottayam, Kerala during June 10-14, 2012.
90. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Synthesis, Reaction Kinetic and Microwave Absorption Studies of $BaFe_{12}O_{19}$ Nanocrystals*", at International Conference on Functional Materials for Defence (ICFMD-2012) held at Defence Institute of Advanced Technology, Pune during May 18-22, 2012.
91. **Abhishek Kumar**, Gaurav Goswami and I. K. Bhat "*Prediction of Fatigue Crack Growth in Al-alloys using Artificial Neural Network*" 5th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2010) from 27th -29th December, 2010 at IIT Kharagpur.
92. Manoj Maurya, **Abhishek Kumar** and I. K. Bhat "*An experimental comparative study of cyclic creep behavior on different commercially available Al alloys*" 5th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2010) from 27th -29th December, 2010 at IIT Kharagpur.
93. **Abhishek Kumar**, Suneel Kumar and I. K. Bhat "*Effect of Cooling Rates on Cyclic Creep Behaviour on Al 1100 and Cu C2300 alloy*" 5th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM 2010) from 27th -29th December, 2010 at IIT Kharagpur.
94. Aftab Alam, **Abhishek Kumar** "*Finite Element Analysis of K-dominance region for functionally graded materials*" 4th International Conference on Theoretical, Applied, Computational and Experimental Mechanics (ICTACEM-2007) and Reunion of the Aerospace Engineering Graduates of IIT Kharagpur, from 27th -29th December, 2007 at IIT Kharagpur.

National Conference

95. Saurabh, Ratnesh Kumar Yadav, Sandeep Sahu, Deepak Kumar and **Abhishek Kumar**, "*Effect of high pressure torsion on microstructure and microhardness of Magnesium* AZ91" in the National Symposium of Research Scholar on Metallurgy and Materials (NSRS-2024) organized by the Department of Materials Science and Engineering at

Indian Institute of Technology Kanpur during March 09-10, 2024.

96. Sourabh Kumar Singh, Avadesh Yadav, Akanksha Singh, Satish Kumar, **Abhishek Kumar** "*Analysis of Copper Reinforcement Effect on Epoxy Based Shape Memory Polymer for Smart Actuators*" 5th Indian Conference on Applied Mechanics, National Institute of Technology Jamshedpur, November 11 - 13, 2022.

    Advances in Applied Mechanics. INCAM 2022. Lecture Notes in Mechanical Engineering. Springer, Singapore. Print ISBN: 978-981-97-0471-2; Online ISBN: 978-981-97-0472-9. https://doi.org/10.1007/978-981-97-0472-9_14

97. Sourabh Kumar Singh, Avadesh Yadav, Satish Kumar, and **Abhishek Kumar**, "*Analysis of shape memory polymer-based space actuators",* National Conference on Artificial Intelligence enabled Aerobots and Hydrobots (ASET-2022), Vikram Sarabhai Space Centre, Thiruvananthapuram, March 17 - 18, 2022.
98. Samarjit Singh and **Abhishek Kumar**, "*Improved Microwave Absorption Response of Ball Milled Ni Dispersed SiC Composites*", 4th Prof. Vijaya Agarwala Memorial National Conference on Microwave Absorbing Materials (VAMMAM-2020) organized by IIT Roorkee and MNNIT-Allahabad, during August 23rd -24th, 2020.
99. Abir Roy and **Abhishek Kumar**, "*Corrosion Behaviour of Multiaxial Compressed Al-Mg-Si Alloy*", 4th Prof. Vijaya Agarwala Memorial National Conference on Microwave Absorbing Materials (VAMMAM-2020) organized by IIT Roorkee and MNNIT-Allahabad, during August 23rd -24th, 2020.
100. Harikesh, S. D. Yadav and **Abhishek Kumar**, "*Modelling of Tensile Flow and Work Hardening Behaviour of Stainless Steel Using a Dislocation Density-Based Model*", 4th Prof. Vijaya Agarwala Memorial National Conference on Microwave Absorbing Materials (VAMMAM-2020) organized by IIT Roorkee and MNNIT-Allahabad, during August 23rd -24th, 2020.
101. Rahul Singh, Samarjit Singh, Balina Kranthi Kumar and **Abhishek Kumar**, "*Study of Mechanical and Corrosion Behaviour of Constrained Groove Pressed Austenitic Steel-304L*", 4th Prof. Vijaya Agarwala Memorial National Conference on Microwave Absorbing Materials (VAMMAM-2020) organized by IIT Roorkee and MNNIT-Allahabad, during August 23rd -24th, 2020.
102. Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*Impact of SiO_2 Nanoparticle Weight Fraction on Mechanical Properties of Two Epoxy Polymers*", 4th Prof. Vijaya Agarwala Memorial National Conference on Microwave Absorbing Materials (VAMMAM-2020) organized by IIT Roorkee and MNNIT-Allahabad, during August 23rd -24th, 2020.
103. Rahul Singh, Surya Deo Yadav, Biraj Kumar Sahoo, Sandip Ghosh Chowdhury and **Abhishek Kumar**, "*Phase transformation, mechanical properties and corrosion behavior of 304L austenitic stainless steel rolled at room and cryo temperature*", 4th Prof. Vijaya Agarwala Memorial National Conference on Microwave Absorbing Materials (VAMMAM-2020) organized by IIT Roorkee and MNNIT-Allahabad, during August 23rd -24th, 2020.
104. B. Kranthi Kumar, Rahul Singh and **Abhishek Kumar**, "*Effect of nanoparticles dispersion in High entropy alloys: A brief review*", in national conference Industrial application of Nano-Science and Nano-Technology (IANN-2019) organized by MNNIT-Allahabad, held during November 15-16, 2019.
105. Sushma Yadav, Samarjit Singh, **Abhishek Kumar**, "*Synthesis and Anti-bacterial Study of Zinc Oxide Doped Hydroxyapatite Nanocomposites with Potential Biomedical Applications*", in national conference Industrial application of Nano-Science and Nano-

Technology (IANN-2019) organized by MNNIT-Allahabad, held during November 15-16, 2019.

106. Rahul Singh, Gaurav Rajan and **Abhishek Kumar**, "*Parameter optimization of sliding wear of Cryogenically-rolled Austenitic steel using Taguchi method*" in conference AEMSD – 2018 organized by NML-Jamshedpur, to be held on 18-19 January, 2019. **(IInd Best Presentation)**
107. Deepak Kumar, Kushagra Gupta, Sumit Soni, Virendra Kumar Gond, Rishi Tiwari and **Abhishek Kumar**, "*Effect of nanoparticle dispersion on single lap shear strength of epoxy resin*" in conference Polymers: Usefulness and Current Concerns, organized by MNNIT Allahabad, held during 23rd-24th December, 2018.
108. Samarjit Singh, Rahul Singh and **Abhishek Kumar**, "*Effect of Ni microspheres on the dielectric behavior and microwave absorption performance of ZnO composites*" in conference ANA-2018, organized by MNNIT Allahabad, held during 21st-23rd December, 2018.
109. Samarjit Singh, **Abhishek Kumar**, "*Selection of core-shell thmaterial based electromagnetic wave absorbers in 2-18 GHz using TOPSIS and VIKOR ranking methods*", 2nd Prof. Vijaya Agarwala Memorial National Symposium on Microwave Absorbing Materials (VAMMAM-2018) from 24th to 25th August, 2018 at IIT Roorkee, India. https://doi.org/10.14429/dsj.69.14946
110. Saurabh, Anil Kumar Maurya, Samarjit Singh, **Abhishek Kumar**, "*Microwave absorption performance of graphene nanoplatelets dispersed SiC*", 2nd Prof. Vijaya Agarwala Memorial National Symposium on Microwave Absorbing Materials (VAMMAM-2018) from 24th to 25th August, 2018 at IIT Roorkee, India. https://doi.org/10.14429/dsj.69.14947
111. Sushil Kumar Singh, **Abhishek Kumar** and Anuj Jain, "*Influence of Filler Dispersion on the mechanical Behavior of ZrO_2 Dispersed Epoxy Nanocomposites*" in conference "SWAYAM – 2018" organized by BITS Pilani, K.K. Birla Goa Campus, held during 04th-06th July, 2018.
112. Rahul Singh, & **Abhishek Kumar,** *"Impact of deformation route over Mechanical and magnetic behavior of austenitic stainless*" in conference "SWAYAM – 2018" organized by BITS Pilani, K.K. Birla Goa Campus, held during 04th to 06th July, 2018.
113. Samarjit Singh, Sushil Kumar Singh and **Abhishek Kumar**, "*Material selection for nickelbased microwave absorbing materials in 2-18 GHz frequency range using different Multi-Criteria Decision-Making Methods*" NMD-ATM 2016 held at Indian Institute of Technology Kanpur during 11-14 November, 2016.
114. Abir Roy, Rishi Shukla and **Abhishek Kumar**, "*Mechanical behavior of Al 1xxx processed by Torsion*" NMD-ATM 2016 held at Indian Institute of Technology Kanpur during 11-14 November, 2016. **(Best Poster Award)**
115. Abir Roy, **Abhishek Kumar**, Shashank Shekhar, "*Mechanical behavior of Al 5083 processed by Constrained Groove Pressing*", in national conference on Product Design and Development at MNNIT Allahabad, during November 21-22, 2015.
116. Z. Vakil, **Abhishek Kumar**, Anuj Jain, K. M. Gupta, "*Design and Simulation of thin film based self biased Coplanar Isolator*", RAECE-2015 held at Indian Institute of Technology Roorkee, during February 13-15, 2015.
117. **Abhishek Kumar**, Vijaya Agarwala and Dharmendra Singh, "*Microwave Absorbing Properties of Metal-Particle Dispersed Al_2O_3*", at National Conference on Advances in National Materials (ADNAM-2013) held at National Institute of Ocean Technology, Chennai, during February 22-23, 2013.

118. **Abhishek Kumar**, Kolli Ganapathi, Dharmendra Singh and Vijaya Agarwala, "*Radar Cross Section Measurements and Simulations of a regular shapes in the X-band*", at National Symposium on Space Technology for Food & Environmental Security and Annual Conventions of Indian Society of Remote Sensing and Indian Society of Geomatics during December 5-7, 2012, New Delhi.
119. Pappu Kumar, **Abhishek Kumar** "*Preparation of nanocrystalline ZnCuMg ferrite powders synthesized by Sol-Gel method*" National Conference on Smart, Electronic and Engineering Materials 2010 (SEEMs'10), from 5th-6th March, 2010, at BFCET, Bathinda.

D. Book(s)/ Proceeding(s) published:

1. Edited a Proceeding of the 2022 International Conference on "*Advancements in Interdisciplinary Research towards Smart and Sustainable Society*" (AIR2022). e-ISBN: 9788770228282, **doi:** https://doi.org/10.13052/rp-978-87-7022-828-2

E. Book Chapter published:

1. Samarjit Singh, Abhishek Nigam, Bilab Das, Thozhuvur Govindaraman Loganathan and **Abhishek Kumar** (2024) "*Selection of spinel ferrite-based electromagnetic wave absorbing composites using AHO-based TOPSIS and VIKOR approaches*", Spinel Ferrite Materials: Fundamentals, Progress, and Applications, 1st Edition; Woodhead Publishing Series in Electronic and Optical Materials; Publisher: Elsevier, Paperback ISBN: 9780443217425, eBook ISBN: 9780443217432
2. Yadav, R.K., Saurabh, Goel, S., **Kumar, A**. (2024), "*Investigating the Effectiveness of Reinforced Ice on the Mechanical Properties*", In: Raghavendra, G., Deepak, B.B.V.L., Gupta, M. (eds) Recent Advances in Mechanical Engineering, Volume 1. ICMech-REC 2023. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-97-0918-2_33. (Print ISBN: 978-981-97-0917-5 and Online ISBN: 978-981-97-0918-2)
3. B. Kranthi Kumar, Rahul Singh, and **Abhishek Kumar**, "*Effect of Nanoparticles Dispersion in High Entropy Alloys: A Brief Review*" Industrial Application of Nanoscience and Nanotechnology, Volume-1, Chapter -10, Pages 127-135, December 2020. (ISBN: 978-93-89947-256-7)