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4. **Academic Qualification (Undergraduate Onwards):**

	Degree	Year	Subject	University/Institute	Grade
1	B.Sc.	1993	Physics	Pune University	First Class with Distinction
2	M.Sc.	1995	Physics	Pune University	First Class
3	Ph.D.	2000	Physics	Pune University	

5. **Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.**
Ph.D. Thesis Title: Influence of dopants and defects on the properties of colossal magnetoresistance manganite systems
Institute/Organization/University: University of Pune
Year of Award: 2000
6. **Work experience (in chronological order) :**

S. No.	Position Held	Name of Institute	From	To
1	Scientist	ARCI, Hyderabad	2003	Present
2	Visiting Scientist (IUSSTF Fellow)	Harvard University, Cambridge, USA	2009	2010

3	Young Scientist (Fast Track Fellow)	University of Pune	2002	2003
4	Post Doctoral Research Fellow	University of Maryland, College Park, USA	2000	2002
5	Senior Research Fellow (CSIR),	University of Pune	1998	2000
6	Junior Research Fellow	University of Pune	1996	1998

7. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S. No.	Name of Award	Awarding Agency	Year
1	Visiting Scientist (IUSSTF Fellow) Harvard University, Cambridge, USA	DST- IUSSTF	2009
2	Young Scientist (Fast Track Fellow University of Pune	DST	2002
3	Post Doctoral Research Fellow	University of Maryland, College Park, USA	2000
4	Senior Research Fellow (CSIR), University of Pune	CSIR	1998
5	Junior Research Fellow University of Pune	University of Pune	1996

8. Publications (List of papers published in SCI Journals, in year wise descending order).

- Basha, D. N., Samuel, G. L., & **Bathe, Ravi**. (2024). Investigation of ablation threshold and microchannel fabrication on stainless steel using ultrafast laser. *Materials and Manufacturing Processes*, 1–11. <https://doi.org/10.1080/10426914.2024.2419090>
- Basha, D.N., Samuel, G.L. & **Bathe, Ravi** Enhancing Tribological Performance of Gray Cast Iron by Laser Surface Texturing of Micro-grooves and Micro-crosshatches. *J. of Materi Eng and Perform* (2024). <https://doi.org/10.1007/s11665-024-09860-2>
- D.M. Santhoshsarang, S Narayanaswamy, G. Telasang, K. Divya, **Ravi Bathe**, G. L. Samuel, Additive Manufacturing of AISI H13 Tool Steel with Combinations of Higher Laser Power and Scan Speed: Microstructural and Mechanical Properties Insights, *J. of Materi Eng and Perform* (2024). <https://doi.org/10.1007/s11665-024-10467-w>
- Investigations on Laser-Assisted Turning of IN625 Alloy with Hot Hardness Approach using Uncoated and CrAlSiN Coated WC Tools, B. Amarendhar Rao, Manish Tak, R. N. Rao, Krishna Valletti and **Ravi Bathe**, *Journal of Process Mechanical Engineering*, 2024;0(0). doi:10.1177/09544089241279232
- Enhancing Tribological Performance of Gray Cast Iron by Laser Surface Texturing of Micro-grooves and Micro-crosshatches, Basha D.N.; Samuel G.L.; **Bathe Ravi**, 2024, *Journal of Materials Engineering and Performance*, 10.1007/s11665-024-09860-2s
- Laser surface structuring of titanium alloy (Ti-6Al-4V) for improved tribocorrosion resistance for bio-implant applications, Madapana D.; **Bathe Ravi**; Manna I.; Majumdar J.D., 2024, *Tribology International*, 197, 109711, 10.1016/j.triboint.2024.109711
- Effect of process parameters on the corrosion kinetics and mechanism of nanosecond laser surface structured titanium alloy (Ti6Al4V), Madapana D.; **Bathe Ravi**; Manna I.; Majumdar J.D., 2024, *Applied Surface Science Advances*, 20, 100580, 10.1016/j.apsadv.2024.100580
- Machinability Aspects of Non-Textured and Micro-Textured Cutting Inserts in Turning of Titanium Gr 2, Sharma R.; Pradhan S.; **Bathe Ravi** N., 2024, *Surface Review and Letters*, 31, 2, 2450014, 10.1142/S0218625X24500148
- Chemical and mechanochemical degradations of ultrafast laser surface structured Ti6Al4V in simulated body fluid environment, Madapana D.; **Bathe Ravi**; Manna I.; Dutta Majumdar J., 2024, *Applied Surface Science*, 649, 159096, 10.1016/j.apsusc.2023.159096
- Studies on Surface Characteristics and Biocorrosion Behavior of Ultrafast Laser-Structured Titanium Alloy (Ti6Al4V), Madapana D.; **Bathe Ravi**; Manna I.; Dutta Majumdar J., 2024, *Physica Status Solidi (A) Applications and Materials Science*, 221, 15, 2300610, 10.1002/pssa.202300610

11. Developing Laser-Assisted Machining Process for Nickel Based Superalloy IN625 Using Experimental and Statistical Analysis, Rao B.A.; Tak M.; Rao R.N.; **Bathe Ravi**, 2023, Lasers in Manufacturing and Materials Processing, 10, 4, 681, 701, 10.1007/s40516-023-00230-9
12. Tribocorrosion Behaviour of Laser-Induced Periodic Surface Structured Ti6Al4V, Madapana D.; **Bathe Ravi**; Manna I.; Dutta Majumdar J., 2023, Journal of Bio- and Tribo-Corrosion, 9, 1, 9, 10.1007/s40735-022-00724-7
13. The isotropic and anisotropic self-cleaning surfaces by using only femtosecond laser, Srin K.S.; Ramkumar J.; **Bathe Ravi**, 2023, Results in Materials, 17, 100362, 10.1016/j.rinma.2022.100362
14. Impact of laser surface texturing (LST) on the tribological characteristics of piston rings and cylinder liners—a review. Part 2: application of the process, **Bathe Ravi** N.; Padmanabham G.; Thirumalini S.; Vaira Vignesh R., 2022, Transactions of the Institute of Metal Finishing, 100, 3, 119, 127, 10.1080/00202967.2022.2034348
15. Design and developmental approach aimed at polar solvent chemical sensor for biomedical application, Srin K.S.; Ramkumar J.; **Bathe Ravi**, 2022, Materials Today: Proceedings, 56, 1255, 1260, 10.1016/j.matpr.2021.11.191
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18. Microstructural Studies of Composite (Cr3C2–NiCr) Laser Clads Developed on Preheated Substrate T91, Hebbale A.M.; Tak M.; **Bathe Ravi**, 2021, Transactions of the Indian Institute of Metals, 74, 3, 593, 600, 10.1007/s12666-020-02150-0
19. Impact of laser surface texturing (LST) on the tribological characteristics of piston rings and cylinder liners—a review. Part 1: development of LST technology, **Bathe Ravi** N.; Padmanabham G.; Thirumalini S.; Vaira Vignesh R., 2021, Transactions of the Institute of Metal Finishing, 99, 5, 231, 237, 10.1080/00202967.2021.1929609
20. Design and fabrication of honeycomb micro-texture using femtosecond laser machine, Sharma R.; Pradhan S.; **Bathe Ravi** N., 2021, Materials and Manufacturing Processes, 36, 11, 1314, 1322, 10.1080/10426914.2021.1906898
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23. Ultrafast Laser-Induced Periodic Structuring of Titanium Alloy (Ti-6Al-4V), Dileep M.; **Bathe Ravi**; Manna I.; Padmanabham G.; Dutta Majumdar J., 2021, Journal of Materials Engineering and Performance, 30, 6, 4000, 4011, 10.1007/s11665-021-05779-0
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52. Prediction of femtosecond laser ablation parameter on Human teeth using chemical compositional analysis, Loganathan, Sarathkumar; Santhanakrishnan, Soundarapandian; **Bathe, Ravi**; Arunachalam, Muthukumaraswamy; *Procedia Manufacturing*, 2019, 34,379-384
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102. Bathe, Ravi; Vispute, RD; Habersat, Daniel; Takeuchi, Ichiro; Sharma, RP; TS, T Venkatesan; United States Army Research Laboratory, Adelphi, MD 20783.
103. Basha, D Nazeer; Bathe, Ravi; Padmanabham, G; Laser Surface Micro-Texturing of Gray Cast Iron using Ultrafast Laser
104. Sake, Narayanaswamy; Telesang, Gururaj; Park, Nokeun; Bathe, Ravi; Selective Laser Melting of Ss316l on In718: Interfacial Microstructure, Texture and Mechanical Properties Texture and Mechanical Properties

9. Books/Reports/Chapters/General articles etc.

1. A chapter on “Nanomachining” authored by KS Srin, J. Ramkumar and Ravi Bathe in Nature-Inspired Self-Cleaning Surfaces in the Nanotechnology Era. Available at: <http://dx.doi.org/10.5772/intechopen.111369> (2023)
2. A chapter on “A Review of Machinability Aspects of Difficult-to-Cut Materials Using Microtexture Patterns” authored by Rahul Sharma, Swastik Pradhan, and Ravi Nathuram Bathe, in the book on Advanced Manufacturing and Processing Technology (ed.) Chander Prakash, Sunpreet Singh, J. Paulo Davim, eBook ISBN 9780429298042, CRC Press, chapter-3, 2021
3. A chapter on “An Experimental Investigation of Laser-Assisted Machining of EN24 Steel Taguchi Experimental Design for Turning of AISI 4340 Steel and Grey Analysis on Machinability Parameters for Sustainable Machining”, Authored by Ajit M. Hebbale, S. Rajesh K. Reddy, Mirza Abdul Hadi Baig, Manish Tak, Ravi N. Bathe, in the book on Sustainable Machining Strategies for Better Performance, Editors: Dr. P. Srinivasa Pai, Dr. V. Krishnaraj, Publisher: Springer Singapore, ISBN: 978-981-16-2277-9, 2021
4. A chapter on “Use of Compression-Bending Fracture Geometry to Study the Effects of Stoichiometry on Fracture Toughness of β -NiAl” authored by Devi Lal, Ananya Tripathi, Abhijit Ghosh, Ravi Bathe, Praveen Kumar, Vikram Jayaram; in the book Advances in Structural Integrity, pages 313-320, 2022

10. Detail of patents:

1. Method for Reducing Friction on Metalic Substrates by Preparing Micro Dimpled Textures by Ultrafast Laser by **Ravi Bathe**, D. Nazeer Basha, Samuel G. L. and Thirumalini S, Indian Patent (Patent No.: 547040, date: 02/08/2024, Application # 202111051880, dtd: 12/11/2021)
2. Method for Preparing Multifunctional and Isotropic, Uni-directional Superhydrophobic Surfaces using Ultrafast Laser by **Ravi Bathe**, K. S. Srin, and G. Padmanabham, in Indian Patent (Patent No.: 441368 date:28/07/2023, Application # 202011022242, 27/05/2020,)
3. A Roller Bearing with Textured Surfaces by Jain Ayush, Nallaiyan Muthu Nilavan, Ganesan Rajaram, **Ravi Bathe** and G. Padmanabham, Indian Patent (Patent No.: 492887, date: 01/01/2024 Application # 201811039232, 16/10/2018)
4. An Improved Process for Preparing Durable Multifunctional Coatings on Metal/Alloy Substrate by R. Subasri, S. Pradheebha, **Ravi Bathe** and G. Padmanabham, Indian Patent (Patent No.: 366262, date: 06/05/2021, Application # 201711020529, 12/06/2017)
5. A Process for Surface Structuring of Ti6Al4V using Nanosecond Laser by Dileep Madapana, Indranil Manna, **Ravi Bathe** and Jyotsna Dutta Majumdar, Indian Patent filed (Patent No. 555651, date 02/12/2024, Patent Application # 202431038620, date: 16/05/2024)

11. Papers presented at Indian Conference/Symposia

1. Dr. Ravi Bathe delivered a keynote talk on “Design and fabrication of multifunctional surfaces by ultrafast laser processing” at the the 1st International Conference on "Materials Processing using Lasers and Surface Engineering" (IMPULSE 2023) held at IIT-Madras, Chennai, during December 14- 15, 2023.

2. Dr. Ravi Bathe delivered an invited talk on “Multifunctional Surface Structures by Ultrafast Laser Processing” at the workshop on "Advances and Challenges in Pulsed Laser Deposition (PLD) for Growing Heterostructures, 2D Layers, and Nanostructures," held at LAMDA Lab, National Centre for Nanosciences and Nanotechnology (NCNN), University of Mumbai during March 14th and 15th, 2024.
3. Dr. Ravi Bathe delivered an invited talk on “Additive Manufacturing of Complex Parts” at two-day national level seminar on "Recent Advances and Challenges in Additive Manufacturing of Nano-structured Materials" held at National Engineering College, K.R. Nagar, Kovilpatti, Tamilnadu, during April 28 and 29, 2023.
4. Dr. Ravi Bathe delivered a keynote talk on “Laser Cladding Technology for Engineering Component Repairs” at a conference on Advances in Laser & Arc Cladding Technologies – ALACT-2023, organised by IIW – Jamshedpur during 3-4 Nov 2023.
5. Dr. Ravi Bathe delivered an invited talk on “Development of metal additive manufacturing technology for repairing of aero-engine components” at One Day National Seminar on “Certification Challenges during Life Revision and Refurbishing of Aero Engine Components” organized by 6. Regional Centre for Military Airworthiness (Koraput) on 28th April 2022.
6. Dr. Ravi Bathe delivered an invited talk on “Ultrafast Laser Micro-textured Engineered Surfaces for Friction Control” at international conference on “Laser Assisted Material Processing (LAMP 2022)” organized by Indian Institute of Technology Kharagpur during 29th to 31st August, 2022.
7. Dr. Ravi Bathe delivered an invited talk on “Laser Processing of Materials: From Lab to Industry” at fourth international webinar series under the pCOE Advanced Laser Material Processing organized by Indian Institute of Technology Madras, on 14th October 2023.
8. Dr. Ravi Bathe delivered an invited talk on “Additive Manufacturing of Complex Parts with Powder Bed Fusion Technology” at 2nd International Conference on Advanced Materials and Manufacturing Processes (ICAMMP-2023) organized by Jawaharlal Nehru Technological University Gurajada Vizianagaram (JNTUGV) during 3rd & 4th March 2023.
9. Dr. Ravi Bathe delivered an invited lecture on “Laser processing of materials and its impact on sustainability” at Online Faculty Development Programme (FDP) on *Green Technology and Sustainability Engineering* organized by Department of Mechanical Engineering, Amrita School of Engineering, Amrita Vishwa Vidyapeetham (Coimbatore Campus) on 7th July 2021.
10. Dr. Ravi Bathe delivered an invited lecture on “Laser Processing for Electric Vehicles: Role of Laser in India’s EV Manufacturing Journey” at Laser World of Photonics India during December 9-11, 2020
11. Dr. Ravi Bathe delivered an invited lecture on “Laser Materials Processing at ARCI” at Symposium on Intense Laser Application and Innovation (SILAI2020), TIFR, Hyderabad during January 27-29, 2020.
12. Dr. Ravi Bathe delivered an invited lecture on “Multifunctional Surfaces by Ultrafast Laser Processing” at International Conference on Application of Laser in Manufacturing (CALM -2019), Bombay Exhibition Center, Mumbai during October 17-18, 2019
13. Dr. Ravi Bathe delivered an invited lecture on “Laser processing of materials for industrial applications” at Industrial lecture series for 4th year ME students, Indian Institute of Technology (IIT) Tirupati on October 11, 2019
14. Dr. Ravi Bathe delivered an invited lecture on “Laser based Metal Additive Manufacturing” at India-Fraunhofer Additive Manufacturing Workshop 2019, National Chemical Laboratory (NCL), Pune on July 30, 2019
15. Dr. Ravi Bathe delivered an invited lecture on “Role of Lasers in Additive Manufacturing” at Workshop on 3D printing, Defence Institute, Bengaluru, during May 23-24, 2019

Ph.D. Student Presented at Indian Conference/Symposia

16. Mr. B. Amarendhar (Dr. Ravi Bathe) has presented (Oral) a paper entitled as "Experimental and Laser Heating Approach for Laser-assisted Turning of IN625 Alloy" in 1st international conference on Mechanical Engineering: Researches & Evolutionary Challenges-2023 conducted by National Institute of Technology-Warangal, Telangana from 23-25 June, 2023.
17. Mr. B. Amarendhar Rao (Dr. Ravi Bathe) has presented (Oral) a paper entitled as "Experimental Analysis of Conventional and Laser assisted Turning for IN625 with CrAlSiN Coated Tungsten Carbide Inserts" in 77th Annual Technical Meeting of The Indian Institute of Metals (IIM-ATM2023), during 22nd - 24th November 2023 at Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar.
18. Mr. D. Nazeer Basha (Dr. Ravi Bathe) presented paper on “Enhancing Tribological Performance of Gray Cast Iron by Femtosecond Laser Surface Textured Micro-Crosshatch Patterns” at the the 1st International Conference on "Materials Processing using Lasers and Surface Engineering" (IMPULSE 2023) held at IIT-Madras, Chennai, during December 14-15, 2023.
19. Mr. D. Nazeer Basha (Dr. Ravi Bathe) presented a paper on “Femtosecond Laser textured micro-groove and micro-crosshatch patterns to enhance the tribological performance of gray cast iron” at 12th International Conference on Precision, Micro, Meso and Nano Engineering 2022 (COPEN 12) held at IIT Kanpur during 8-10 December 2022.

20. Mr. D. Nazeer Basha (Dr. Ravi Bathe) presented a paper on “Nanosecond Laser Surface Texturing for High Friction applications “ at 2nd Virtual International Tribology Research Symposium (ITRS 2021) held at SRMIST during December 08-10, 2021
21. Mr. D. Nazeer Basha (Dr. Ravi Bathe) presented a paper on Laser Surface Texturing of Automotive Components for Improving Tribological Performance at the ‘Young Scientists Conference-6th India International Science Festival 2020 (IISF 2020)’ held during December 22-24, 2020.
22. Mr. D. Nazeer Basha (Dr. Ravi Bathe) presented presentation on Ultrafast Laser Pulses – A Ray of Pulses for an Unpredictable Innovations for the Best Human Life at the ‘Science, Technology and Innovation Talks (STIN 2021), Young Research Fellows, a National Level Competition’ organized by ARCI during December 25-26, 2020.
23. Mr. Nazeer Basha (Dr. Ravi Bathe) received Best Poster Award at International Conference on Precision, Micro, Meso, and Nano Engineering, COPEN 12, was held at IIT Kanpur

12. Other Publications

- “Innovative laser-assisted machining technique promises cost reduction and precision in manufacturing hard-to-machine materials” by Ravi Bathe, 21 December 2023 by PIB Delhi <https://dst.gov.in/innovative-laser-assisted-machining-technique-promises-cost-reduction-and-precision-manufacturing>
- "ARCI develops technology to improve fuel efficiency of internal combustion engines" by Ravi Bathe, March 20, 2020 by PIB Delhi
- "One-step laser-based fabrication of self-cleaning metallic surfaces can help prevent rusting", by Ravi Bathe, August 25, 2020 by PIB Delhi
- Exploration of Metal Additive Manufacturing for Components Realization, by Gururaj Telasang and Ravi Bathe, IIM METAL NEWS, Vol. 26, No. 5, Page 10-19, May 2023. URL: https://iim-india.net/storage/iim-metal-news/mn_may_23.pdf
- Metal Additive Manufacturing Technology: Materials And Applications, by Gururaj Telasang and Ravi Bathe, Srajan, Hindi Magazine, 2024.
- VIGYAN KI AWAAZ - PODCAST - i-radiolive.com Episode 116, 01/12/2023

13. Committee Member:

- Member of the Expert Review committee to evaluate and shortlist VAIBHAV Fellowship proposals (funded by DST, No. DST/IC/VAIBHAV/expert panels/2023, date: 12/09/2023)
- Member of Work Group (WG) On “Additive Manufacturing” to implement National Strategy for Additive Manufacturing by Ministry of Electronics and Information Technology (MeitY) (OM GG-11/2/2022-R&D-E dated: 10/06/2024).
- Member of the board of examiners for IIT Kanpur Ph.D. thesis (Photonics Science and Engineering)
- Member of the Expert Review committee for the "National Centre for Additive Manufacturing (NCAM)" being implemented by M/s NAM, Hyderabad funded by MeitY (ref. GG-11/8/2021-R&D-E dated: 30/05/2022)
- Member of the Expert Review committee for the "Centre for Promotion of Additive Manufacturing– Agri & Food Processing (CPAM- A&FP)” has been initiated at CDAC (Kolkata) in collaboration with CMTI (Bangalore), CFTRI (Mysore) and IIM-CIP(Kolkata) funded by MeitY (ref. GG-11/15/2023-R&D-E dated: 01/03/2024)
- Member of the Expert Review committee for the “Additive Manufacturing based Cost Effective Optical Computing Chips”, being implemented by IISc, Bangalore and C-MET, Pune funded by MeitY (ref. GG-11/5/2021-R&D-E dated: 17/01/2022)
- Domain Expert for procurement of "E-Beam Powder Bed Fusion Additive Manufacturing facility" at CSIR-Advanced Materials and Processes Research Institute, Bhopal (email dated 14/11/2022)

14. Conference Organization (as Convener):

- The International Conference on Application of Lasers in Manufacturing (CALM 2019), organized by ARCI in association with Messe Muenchen India and concurrently with Laser World of Photonics India exhibition at the Bombay Exhibition Centre, Mumbai, during October 17-18, 2019.

15. Others:

15.A. Major innovation developed and marketed by the industry:

- Laser Drilling of Aero-Engine Components: First in India laser drilled actual Aero-engine components
- Laser welding of thin section and crack sensitive materials: Laser welding of solenoid valve, EGT sensors, SAW sensor to flex plate, EMI shielding boxes
- Fabrication of Control and Shield Grids for Pulsed Microwave Source using Ultrafast Laser
- Fabrication of Micro-heaters for Membrane MEMS sensors using Ultrafast Laser
- Micromachining of Low Temperature Co-fired Ceramic (LTCC) Multi-layer Module Boards using Ultrafast Laser

- Laser micromachining of X-ray tube components

15.B. Development of high TRL technologies:

- Development of Laser Surface Texturing technology for automotive applications
- Production of multifunctional surfaces using ultrafast laser
- Laser micro-welding Li-ion batteries
- Laser assisted machining of hard to machine materials

15.C. Work that made major impact on society:

- Research & development in laser processing of materials for solving industrial problems and know-how transfer, with simultaneous development of specialized human resources for knowledge absorption into the industry. Successful implementation of about 15 industry-focused projects. Based on the experience and knowledge acquired at the Centre, has assisted other institutions in setting up laser processing facilities in various academic and R&D institutes and industries. Enhance organizational awareness to build mutually beneficial collaborations with industry, R&D agencies and educational institutions at the national and international levels.
- Laser drilling technology for aero-engine components was demonstrated (First in India such technology on actual Aero-engine components) and assisted them in setting up a laser drilling production facility.
- Laser surface microtexturing of automotive engine component materials for liners, piston rings, and bearings successfully developed and demonstrated decreased frictional losses, reduced particulate matter (gas) emission, and reduced engine oil consumption.
- Setting of laser assisted machining facility for hard to machine thermal power plant components.
- R&D in the field of ultrafast laser processing, leading to several applications in automotive, aerospace, nuclear, energy, defense and electronics.

15.D. Academic Guidance:

- Guidance to 3 - PhD students (ongoing) and more than 20 M.Tech/B.Tech /Graduate&Post-Trainees Projects

15.E. Research Interest/Achievements:

Over 100 publications in international journals reporting research in various fields including:

- Laser Materials Processing
- Ultrafast Laser micro/nano Processing
- Additive Manufacturing
- Colossal Magnetoresistance
- Wide Bandgap Semiconductor
- Thin films
- Pulsed Laser Deposition

15.F. Reviewer of Following Journals: 1) Journal of Applied Physics; 2) Materials & Design; 3) Applied Physics A; 4) Materials Letters; 5) Applied Surface Science; 6) Journal of Manufacturing Processes; 7) The International Journal of Advanced Manufacturing Technology; 8) Optics and Laser Technology; 9) Surfaces and Interfaces; 10) Transactions of the Indian Institute of Metals; 11) Journal of the Mechanical Behavior of Biomedical Materials; 12) Ceramics International; 13) Journal of the European Ceramic Society; 14) Diamond & Related Materials; 15) Journal of Optics; 16) Journal of Materials Processing Tech.; 17) Physica Scripta; 18) Surface Engineering; 19) Bulletin of Materials Science; 20) Journal: Journal of Alloys and Compounds; 21) Journal of Materials Research and Technology; 22) Journal of Magnetism and Magnetic Materials; 23) Results in Optics