

## Dr. Virupaxi Auradi

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### Education

	Degree	Year	Institute	Specialization
1	PhD	2007	VTU, Belagavi	Mechanical
2	M.Tech.	2002	K R E C, Surathkal, Karnataka	Metallurgical and Materials Engineering
3	B.E	1996	Gulbarga University, Gulbarga	Ceramics Engineering

### Professional Experience

	Date (from-to)	Designation	Organization
1	26-09-2024-p resent	Professor	Siddaganga Institute of Technology, Tumkur
2	27-02-2012 to 26-09-2024	Associate Professor	Siddaganga Institute of Technology, Tumkur
3	27-02-2009 to 27-02-2012	Assistant Professor	Siddaganga Institute of Technology, Tumkur
4	5-03-2007 to 27-02-2009	Lecturer	Siddaganga Institute of Technology, Tumkur

*(Please fill in reverse order. Current designation should be at the top)*

### Patents

- A Metal Matrix Composite and Method thereof, **V Auradi, Manjunath V, Bharath V and Madeva Nagaral**, Patent No. 563523, Engineering and Technology, Filed 2024-07-11, Granted and on Published 2025-03-25.
- Spring Loaded Fastener for Diffusion welding of metals and alloys, **V Auradi, Manjunath V, Bharath V and Madeva Nagaral**, Patent No. 400834-001, Engineering and Technology, Published, 2024-12-28.

### Positions held

(Please give details of any administrative posts, co Ordinator roles/ responsibilities held)

1. Head of the Department – Mechanical Engineering – 29<sup>th</sup> April 2025 onwards
2. Member – Institute Ranking Improvement Committee (NIRF) – SIT, Tumkur – February 2017
3. Assisting TEQIP Coordinator of SIT Tumkur in TEQIP related activities since March 2013.
4. Member- Board of Studies (VTU Nominee), PDA College of Engineering, Gulbarga.
5. Deputy Warden, Allama Prabhu Block, SIT, Tumkur (Since, Sept 2016)
6. R & D Coordinator, Dept. Of Mechanical Engg., SIT, Tumkur
7. Co-ordinator (Examinations), Autonomous Examination, SIT, Tumkur
8. ISO 9001:2008 Internal Auditor , SIT, Tumkur, Since 2012
9. Member, Board of Studies, Dept. Of Mechanical Engg., SIT, Tumkur
10. Member, Board of Examinations, Dept. Of Mechanical Engg., SIT, Tumkur
11. Subject Expert, AICTE Funded Project, Dept. Of Mechanical Engg., SIT, Tumkur
12. Deputy Warden, Basaveshwara Block, SIT, Tumkur ( Sept 2008-2016)
13. Treasurer- Momentum'2011, Momentum'2012, Department of Mechanical Engg., SIT, Tumkur

### Affiliations of Professional Organizations

- Fellow – Institution of Engineers (F-120590-7)
- Life Member - Karnataka Rajya Vignyan Parishath
- Life Member - Tribological Society of India
- Founder Member – Society for Failure Analysis

### Awards and Honors

- Manjunath Vatnalmath, V Auradi, Bharath V and Madeva Nagaral has received a **BEST PAPER AWARD** for **“Microstructural Evolution in Non-Vacuum Solid State Diffusion Bonded Joints of AA2219”** 4<sup>th</sup> INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING (ICAME-2022) (Mechanical Engineering) **March 24-26, 2022.**
- Recipient of **Subject Prize** for the research paper entitled **Characterization and Mechanical Properties of 2014 Aluminum Alloy Reinforced with Al<sub>2</sub>O<sub>3</sub>p Composite Produced by Two-Stage Stir Casting Route (published in the Series C Journal of IEI, Vol. 100, Issue 2)** by the **36<sup>th</sup> Indian Engineering Congress** to be held at Vigyan Bhawan, Maulana Azad Road, New Delhi 110003 on December 26, 2021.

- **Chaired Technical Sessions** at the International Conference on **Smart and Sustainable Developments in materials, manufacturing and energy engineering (SME2021)**, held during 19-20 November 2021, **Nitte, Karnataka**
- **Guest Editor** for the Special Issue on **"Polymeric Composites Reinforced with Natural Fibers and Nanofillers"** **Journal of Composites Science, MDPI publishers.**
- Recipient of **ARP Award** by **Vision Group of Science and Technology, Department of Science and Technology, Government of Karnataka** for the year 2017-18.
- **Member - Advisory Committee** at the International Conference on **"Advances in Ceramic and Cement Manufacturing – Materials and Manufacturing"** held by **Indian Ceramic Society in Association with PDACE, Gulbarga** during 13-14 December 2021.
- Bharath V, V Auradi, Madeva Nagaral, Satish Babu Boppana and Samuel Dayanand has received a **BEST PAPER AWARD** for **"Impact of Alumina Particulates Addition on Hardness and Wear Behaviour of 2014Al Metal Matrix Composites by Vortex Method"** by International Conference on Futuristic Trends in Mechanical Engineering PRESIDENCY UNIVERSITY, Bengaluru, India, 2020 in association with UCSI UNIVERSITY, Kuala Lumpur, Malaysia . 11th and 12th September 2020
- Research paper entitled **"Experimental Investigation on Wear Behaviour of 2014Al-Al<sub>2</sub>O<sub>3</sub> Composites"** by Bharath V, Santhrust A, Madeva Nagaral; Auradi V has received **BEST PAPER AWARD** International Conference on SME-2019, held at **NITTE, Karkala, Udupi. 23rd -24th May 2019**
- **Best Technical Paper Award in the Non-Ferrous Category for the year 2017** for the paper published in Indian Foundry Journal entitled **"Effects of Individual Titanium and Combined additions of Titanium- Boron on microstructure and Mechanical properties of Hypereutectic Al-Si alloys"** Vol.63, No.1, January 2017 Issue.
- Recipient of **SAP fellowship award** in a Four-week AICTE approved Faculty Development Programme on "Use of ICT in Education for Online and Blended Learning" was organized by **IIT Bombay in association with AICTE, New Delhi** from 2 May to 10 July 2016.
- Recipient **Engineer's Day** award towards contribution to research on the eve of Engineers day celebrations by **Lions Club Peenya-Dasarahalli, Bangalore** held at hotel Grand Bee on 29<sup>th</sup> September 2013.
- Secured **1<sup>st</sup> Rank** to the University at **Post graduate (M.Tech) level.**

- **Reviewer** for the “International Conference on Emerging Research in Civil, Aeronautical and Mechanical Engineering” (ERCAM-2017) during July 21-22, 2017, Nitte Meenakshi Institute of Technology (NMIT), Bangalore. Proceedings will be published by Trans-tech Publishers.
- **Organizing Committee** Member for the **INTERNATIONAL CONFERENCE ON ADVANCES IN MECHANICAL ENGINEERING SCIENCES” (ICAMES) -2017** held during 21-22 April 2017 jointly organized by at PES College of Engineering, Mandya, Karnataka and Institute for Engineering Research and Publication.
- Chaired a **Technical Session** at the International Conference on “Advances in Materials, Manufacturing, Management and Thermal Sciences”, held at Siddaganga Institute of Technology, Tumkur during 3-4<sup>th</sup> May 2013.
- Chaired a **Technical Session** at the International Conference on “Advances in Materials, Manufacturing, Management and Thermal Sciences”, held at Siddaganga Institute of Technology, Tumkur during 18-19<sup>th</sup> November 2010.
- Chaired a **Technical Session** at the International Conference on “Recent Advances in Mechanical Engineering”, held at SUCET, Mohali during 23-25<sup>th</sup> January 2008.
- Research paper entitled “Optimization of Process parameters for the manufacture of Al-Ti and Al-B master alloys” by V. Auradi and S. A. Kori, has received **second prize** for the **best oral presentation** at NMD-ATM-2005 held during 14-16<sup>th</sup> November 2005 at **Indian Institute of Technology Madras, Chennai**.
- Research paper entitled “PROCESSING AND WEAR BEHAVIOR OF AL2O3 PARTICULATES REINFORCED AL-4.5 % CU ALLOY COMPOSITES” by SHIVANANDA B.K, MADEVA NAGARAL, AURADI V has received **best paper award** at ICMCECE-2016 held at **BIT, Bangalore** on 23rd April 2016.
- Research paper entitled “Performance of Al-1Ti-3B master alloy with different microstructures on grain refinement of Al-7Si alloy” by **V. Auradi** and S. A. Kori, has received **award** for the **best oral presentation** at **Nat. Conf. on Research Scholars (NCRS-2007)**, 12-13<sup>th</sup> March 2007, **BEC, Bagalkot**.
- Was a **Juror Member** at the National Level Technical Symposium on “**MECH TRENDZ-2012**”, held at Sridevi Institute of Engineering and Technology, Tumkur on 31<sup>st</sup> October 2012.
- Amar Futane, Kumar Amitesh, T. M. Chandrashekharaiyah, **V. Auradi** and S. A. Kori “**Metal Matrix Composites – An overview**” has won **Third Prize** at

the National Technical Symposium KALP – 03, held at **Goa**, 29<sup>th</sup> April-1<sup>st</sup> May 2003.

- Maruti B Koligudd, Muralikrishna C M and **V. Auradi** " Wear properties of  $Al_2O_3$  particulate reinforced 6061Al composites prepared by novel three stage melt stirring method" has won **First Prize** at National Technical Symposium **Cogniescience-2013**, held at The National Institute of Engineering Mysore ,11<sup>th</sup> MAY 2013.
- Shambhuling V. S. and **V. Auradi** " Synthesis of 6061Al – $Al_2O_3$  metal matrix composites by stir casting and evaluation of mechanical and wear properties" has won **First Prize** at the **National Conference on "Emerging trends in Engineering Technologies ETET2013"** held at Jyothi Institute of Technology, Tataguni, Kanakapura Road, Bangalore during 15-16<sup>th</sup> March 2013.

#### Courses Taught

- Foundations of Mechanical Engineering Science
- Computer Aided Engineering Drawing
- Foundry Technology
- Composite Materials
- Manufacturing Process-I
- Metrology and Measurements
- Engineering Materials
- Non-Destructive Testing
- Advanced Materials Technology
- Advanced Joining and Welding Processes

#### Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
1	<b>Madeva Nagaral</b>	Studies on Mechanical and Tribological Properties of 6061 Aluminium reinforced with SiC, $Al_2O_3$ and Graphite Composites"	2020
2	<b>Bharath. V.</b>	Microstructural and Mechanical Characterization of 2014Al reinforced with $Al_2O_3$ particulates produced by melt stirring method. (AWARDED)	2021
3	<b>Manjunath V</b>	Diffusion Bonding of AA2219 with Ti-6Al-4V alloys	Thesis Submitted
4	<b>SATHISH A M</b>	"Studies on Characterization, Mechanical Properties and Mathematical Modelling of	Completed Course work

		Optimized Process Parameters of Al2219-Ti-6Al-4V by Diffusion Bonding”	
5	SHANTHARAJ P	Studies on Influence of Cu-coated Alumina Particles Addition on Fatigue and Fracture Toughness of Al2014 Alloy Composites	(Course work-Under Process)

## Research Areas

### Grain Refinement of Aluminium and its Alloys

- Development of Grain Refiners for Aluminium Alloys
- Modification of Al-Si Alloys;

### Grain Refinement Cum modification of Al-Si alloys

- Development of Combined Grain Refiner cum Modifier for Al-Si alloys

### Metal Matrix Composites (MMCs)

- Creep studies of Al-SiC<sub>p</sub> Composites and Development of in-situ Al-TiB<sub>2</sub> MMCs
- 6061Al-Al<sub>2</sub>O<sub>3</sub>, 6061Al-Graphite metal matrix composites
- Low temperature processing of 6061Al-B<sub>4</sub>C particulate composites.

### Diffusion Bonding

- Optimization of process parameters for solid state joining of Ti-6Al-4V and AA2219 alloys

### Tribology

- Dry sliding wear behaviour of Al-Si alloys (room temperature and high temperature)
- Dry sliding wear characteristics of 6061Al-Al<sub>2</sub>O<sub>3</sub>, 6061Al-Graphite and 6061Al-B<sub>4</sub>C particulate composites

### Ceramics

- Thermal Shock Studies of Alumina (Al<sub>2</sub>O<sub>3</sub>) Ceramics.

## Sponsored Projects

### Ongoing Projects:

1. Title: “Development of 2014Al -Cu coated Alumina Particulate Composites Produced by novel two-step vortex method for Fork Hinge of Rudder”  
Funding Agency: Vision Group of Science and Technology, Department of Science and Technology, Government of Karnataka  
Amount: 30 lakhs ; Duration: 3 years  
Role: Principal Investigator
2. Title: Product Development work on use of 6061Al-nano B<sub>4</sub>Cp composite as Chassis Material – Feasibility Study  
Funding Agency: Intel India Ltd.

Amount: Phase I - 1.78 lakhs ; Duration: 2 years

Role: Principal Investigator

### Completed Projects:

1. Title: “An Investigation of micro-structural and mechanical properties of diffusion bonded Al2219 -Ti-6AL-4V alloy joints”

Funding Agency: AICTE (RPS)

Amount: 22.3 lakhs;

Duration: 2 years

Role: Principal Investigator

2. Title: Studies on Development of 6061Al alloy reinforced with B4C particulate composites for use in small turbofan compressor modules  
Funding Agency: Aeronautical Research and Development Board, New Delhi

Amount: 9.4 lakhs ;

Duration: 2 years

Role: Principal Investigator

### **Publications**

#### International/National Journals (Peer Reviewed and Scopus Indexed)

- Vijaykashimatt M G, Manjunath Vatnalmath, **Virupaxi Auradi** “A review on conductive polymer composites focusing on advancements in electrical conductivity, and electromagnetic shielding capabilities” **Polymer Composites**, Wiley Publication [[H-index-106; Q-1 series; SJR-0.8](#)]
- Krishnappa A, Ramesh S, Murthy B.V, Siddagangappa R, Ashokkumar S, Nagaral M, **Virupaxi Auradi**. Effect of hybrid nano particle reinforcements on fractographic, mechanical and wear behavior of Al6061 alloy composites manufactured by ultrasonic assisted stir casting technique **Fratturae Integrita Strutturale**, Volume 19, Year 2025, Pages 285-Issue 62, Year 2022 [[H-index-25; Q-2 series; SJR-0.45](#)]
- Siddalingayya Mathad, Raghavendra C R, Manjunath Vatnalmath, K.C. Vishwanath, Bharath V, **Virupaxi Auradi**, Nagaraj Namdev, Madeva Nagaral, Fazil Nalband “High Temperature Wear Performance of micro and nano Coatings by Thermal Spray Technique- A Critical Review” Volume 73(3) **Journal of Mines, Metals and Fuels- 2025** [[H-index-15; Q-4 series; SJR-0.13](#)]
- Annapoorna K, Shobha R, Bharath V, Rajanna S, Manjunath Vatnalmath, Madeva Nagaral, **Virupaxi Auradi**, C G Shivaprasad “Optimization of stir casting parameters for the tensile behavior of nano Al<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub>”

**reinforced Al-Mg-Si alloy metal composites” Research on Engineering Structures and Materials, 2024 [H-index-12; Q-3 series; SJR-0.248]**

- Manjunath Vatnalmath, **Virupaxi Auradi**, Bharath Vedashantha Murthy, Madeva Nagaral, “**Microstructure, Mechanical and Fractographic behaviour of the Diffusion Welded Joints of AA2219 and Ti-6Al-4V for aerospace applications**” **Fracture and Structural Integrity**, Volume 19 (71), Year 2025 [H-index-30, Q-2 series: SJR- 0.398]
- **Vatnalmath M, Virupaxi Auradi, Murthy B.V, Nagaral M. Influence of bonding temperature on solid-state diffusion bonded joints of AA2219 and Ti-6Al-4V dissimilar alloys—microstructure and mechanical characterisation** **Welding in the World** Volume 68 (11), Year 2024 [H-index-56, Q-1 series: SJR- 0.599]
- Manjunath Vatnalmath, **Virupaxi Auradi**, Bharath Vedashantha Murthy, Madeva Nagaral, A Anbarasa Pandian, Saiful Islam, Mohammad Shahiq Khan, Chandrashekar Anjinappa, Abdul Razak “**Impact of Bonding Temperature on Microstructure, Mechanical, and Fracture Behaviours of TLP Bonded Joints of Al2219 with a Cu Interlayer**” **ACS omega**, Volume 08(29), Year 2023 [H-index-77; Q-1 series; SJR-0.69]
- Bharath Vedashantha Murthy, **Virupaxi Auradi**, Madeva Nagaral, Manjunath Vatnalmath, Nagaraj Namdev, Chandrashekar Anjinappa, Shanawaz Patil, Abdul Razak, Abdullah H Alsabhan, Shamshad Alam, Mohammad Obaid Qamar “**Al2014–Alumina Aerospace Composites: Particle Size Impacts on Microstructure, Mechanical, Fractography, and Wear Characteristics**” **ACS omega**, Volume 08(14), Year 2023 [H-index-77; Q-1 series; SJR-0.69]
- **Ananthakrishna Somayaji, Madeva Nagaral, Chandrashekar Anjinappa, Meshel Q Alkahtani, Ravikiran Kamath Billady, Nithin Kumar, Virupaxi Auradi, Saiful Islam, J Ranga Raya Chowdary, Abdul Razak, Mohammad Amir Khan, Channa Keshava Naik “Influence of Graphite Particles on the Mechanical and Wear Characterization of Al6082 Alloy Composites” ACS omega, Volume 08, Year 2023 [H-index-77; Q-1 series; SJR-0.69]**
- Manjunath Vatnalmath, **Virupaxi Auradi**, V Bharath, Madeva Nagaral, N Nagaraj, A Haiter Lenin “**Microstructural Evolution in Nonvacuum Solid-State Diffusion Bonded Joints of AA2219**” **Advances in Materials Science and Engineering, Hindawi**, Year 2023 [H-index-59; Q-2 series; SJR-0.46]
- Hemanth Kumar, R Saravanan, Madeva Nagaral, Samuel Dayanand, **V Auradi** “**Synthesis, microstructure and tensile characterization of B4C**

**particulates reinforced Al7085 alloy aerospace composites”** **Research on Engineering Structure and Materials** Volume 08, Year 2023 [[H-index-6; Q-4 series; SJR-0.19](#)]

- P Rajendra, KR Phaneesh, CM Ramesha, Madev Nagaral, **V Auradi** “**Effect of the Cooling Condition and Corresponding Microstructure on Tensile and Impact Behaviour of Low Carbon Steel (EN8).**” **Journal of Mines, Metals & Fuels**, Volume 71(1), Year 2023 [[H-index-12; Q-4 series; SJR-0.16](#)]
- Manjunath Vatnalmath, CR Raghavendra, **V Auradi**, V Bharath, N Nagaraj, Madeva Nagaral “**Optimization of Coating Parameters on Dry Sliding Wear Behaviour of Ni-Al<sub>2</sub>O<sub>3</sub> Composite Coatings using Taguchi Method**” **International Journal of Vehicle Structures & Systems** Volume 15(1), Year 2023 [[H-index-20; Q-4 series; SJR-0.19](#)]
- Kotresha Mydur, Mahendra Kumar, Madeva Nagaral, **Virupaxi Auradi**, V Bharath, TA Sudarshan, **Microstructure, physical, tensile and wear behaviour of B<sub>4</sub>C particles reinforced Al7010 alloy composites**, **Manufacturing Review, EDP Sciences** Volume 10, Year 2023 [[H-index-19; Q-2 series; SJR-0.46](#)]
- R Murali Mohan, UN Kempaiah, B Manjunatha, Madeva Nagaral, **V Auradi** “**Processing and wear behavior optimization of B<sub>4</sub>C and rice husk ash dual particles reinforced ADC12 alloy composites using Taguchi method.**” **Materials Physics & Mechanics**, Volume 50(2), Year 2022 [[H-index-21; Q-4 series; SJR-0.2](#)]
- Nithin Kumar, HS Vasanth Kumar, T Hemanth Raju, Madeva Nagaral, **V Auradi**, RK Veeresha, “**Microstructural characterization, mechanical and taguchi wear behavior of micro-titanium carbide particle-reinforced Al2014 alloy composites synthesized by advanced two-stage Casting Method**” **Journal of Bio-and Tribo-Corrosion**, Volume 8(4), Year 2022 [[H-index-32; Q-2 series; SJR-0.42](#)]
- Anjan Babu V A, Saravana R, Bharath V, **Virupaxi Auradi**, and Madeva Nagaral, “**Mechanical and wear characterisation of boron carbide particles reinforced Al2030 alloy composites developed by two stage stir cast method**” **Advances in Materials and Processing Technologies, Taylor and Francis Publisher**, Volume 8(4), Year 2022 [[H-index-19; Q-2 series; SJR-0.4](#)]
- P Rajendra, KR Phaneesh, CM Ramesha, Madev Nagaral, **V Auradi**, **Grain Growth Inhibition By Second Phase Particles: A Two-Dimensional Monte Carlo Computational Study.** **Journal of Mines, Metals & Fuels**, Volume 70, Year 2022 [[H-index-12; Q-4 series; SJR-0.16](#)]

- G Veerasha, B Manjunatha, V Bharath, Madeva Nagaral, and **Virupaxi Auradi** “Synthesis, microstructural characterization, mechanical, fractographic and wear behavior of micro B<sub>4</sub>C particles reinforced Al2618 alloy aerospace composites.” **Frattura e Integrita Strutturale**, Issue 62, Year 2022 [[H-index-25; Q-2 series; SJR-0.45](#)]
- S Krishna Prasad, Samuel Dayanand, M Rajesh, Madeva Nagaral, **V Auradi**, Rabin Selvaraj, “Preparation and Mechanical Characterization of TiC Particles Reinforced Al7075 Alloy Composites” **Advances in Materials Science and Engineering, Hindawi** Year 2022 2023 [[H-index-59; Q-2 series; SJR-0.46](#)]
- Mahendra KV, Madeva Nagaral, **V Auradi**, Subbaraya Mohan Kumar “Influence of Casting Die Diameter Size on Microstructure and Mechanical Fractography of Al-7Si Alloy with Flyash and Graphite Composites.” **Journal of Mines, Metals & Fuels**, Volume 70 Year 2022 [[H-index-12; Q-4 series; SJR-0.16](#)]
- Gopal Krishna UB, **Virupaxi Auradi**, Madeva Nagaral “Preparation and Evaluation of Hardness and Wear Properties of WC-Co Particulates Reinforced 7075Al Composites. **Journal of Mines, Metals & Fuels**, Volume 70 Year 2022 [[H-index-12; Q-4 series; SJR-0.16](#)]
- Manjunath Vatnalmath, **V Auradi**, M Sudhakar, TR Jeevan, ML Vinod, KS Amoghavarsha “Temperature Effect on Non-Vacuum Solid State Diffusion Bonded Joints of Al 2014” **Journal of Mines, Metals & Fuels**, Volume 70 Year 2022 [[H-index-12; Q-4 series; SJR-0.16](#)]
- Bharath V, **Auradi V**, Veeresh Kumar G.B, Nagaral M, Chavali M, Helal M, Sami R.;Aljuraide N.I, Hu J.W, Galal A.M, “Microstructural Evolution, Tensile Failure, Fatigue Behavior and Wear Properties of Al<sub>2</sub>O<sub>3</sub> Reinforced Al2014 Alloy T6 Heat Treated Metal Composites”, **Materials, MDPI Publishers**, Volume 15, Year 2022 [[H-index-128; Q-2 series; SJR-0.6](#)]
- Gopal Krishna U.B, Vasudeva B, **Auradi V**, Nagaral M., “Mechanical characterization and tensile fractography of Al7075-WCP-CoP composite” **Frattura ed Integrita Strutturale**, Volume 16, Year 2022, Pages 283-290 [[H-index-22; Q-2 series; SJR-0.49](#)]
- Nagaral M, Murali Mohan R., **Auradi V**, Bharath V, “Mechanical Characterization And Fractography Of 100-125 Micron Sized Silicon Carbide Particles Reinforced Al6061 Alloy Composites” **Metallurgical and**

**Materials Engineering**, Volume 28, Year 2022, Pages 17-32 [\[H-index-4; Q-4 series; SJR-0.17\]](#)

- Veerasha G.;Manjunatha B.;Bharath V.;Nagaral M.;**Auradi V**, “**Influence of Ceramic Particle Size and Weight Percentage on the Mechanical Behavior and Tensile Fractography of Boron Carbide Reinforced Al2618 Alloy Composites**” **Journal of Failure Analysis and Prevention**, Year 2022 [\[H-index-29; Q-3 series; SJR-0.29\]](#)
- Anjan Babu V, Saravanan R, Bharath V, **Virupaxi Auradi** and Madeva Nagaral “**Mechanical and Wear Characterization of Boron Carbide Particles Reinforced Al2030 Alloy Composites Developed by Two Stage Stir cast Method**”, **Advances in Materials and Processing Technologies**, Year 2022 [\[H-index-14; Q-2 series; SJR-0.4\]](#)
- Hiremath V.;Bharath V.;**Auradi V**.;Dundur S.T.;Nagaral M., “**Machining of Hard-to-Cut Materials: Impact of Varying Weight Proportion of Boron Carbide Particle Addition on Cutting Force and Surface Roughness of Al6061**”, **Journal of Materials Engineering and Performance**, Volume 31, Year 2022, Pages 3784–3791 [\[H-index-72; Q-2 series; SJR-0.47\]](#)
- Matti S., Shivakumar B.P, Nagaral M, Shashidhar S, Siddappa P.N, **Auradi V**, “**Mechanical and tribological behavior of flyash, red mud and mica particles reinforced Al7075 alloy hybrid metal composites**”, **Manufacturing Review**, Volume 9, Year 2022. [\[H-index-16; Q-2 series; SJR-0.48\]](#)
- Ramesha C.M.;Rajendra P.;Anilkumar T.;Nagaral M.;**Auradi V**., “**Fatigue Analysis of a Forged Medium Carbon Low Alloy Steel Quenched in a Polymer for Vehicle Structures Applications**”, **International Journal of Vehicle Structures & Systems**, Volume 14, Year 2022, Pages 1-4. [\[H-index-18; Q-3 series; SJR-0.23\]](#)
- Algur V.;Hulipalled P.;Lokesha V.;Nagaral M.;**Auradi V**., “**Machine Learning Algorithms to Predict Wear Behavior of Modified ZA-27 Alloy Under Varying Operating Parameters**” **Journal of Bio- and Tribo-Corrosion**”, Volume 8, Year 2022 [\[H-index-25; Q-1 in Materials Science \(Metals and Alloys\); SJR-0.44\]](#).
- Bharth V, **V Auradi**, Palanikumar K, Madeva Nagaral, Satish Babu Boppana and S Ramesh, “**Microstructural and Wear behaviour of Al2014-Alumina composites with varying Alumina Content fabricated by a Novel two stage Stir casting method**” **Transactions of Indian Institute**

of Metals, 2022. Volume 75, Year 2022, Pages 133-147 [H-index-31; Q-2 series; SJR-0.37]

- Madeva Nagaral, V Auradi, Shanawaz Patil and Bharth V, "Influence of micro graphite particles on the microstructure and wear behaviour of aluminium 6061 alloy composites developed by two step casting process" Journal of Mines, Metals and Fuels, 2021. Accepted for Publication. [H-index-11; Q-4 series; SJR-0.13]
- Balaraj V, NagarajKori, Madeva Nagaral, V Auradi, Influence of Al<sub>2</sub>O<sub>3</sub> and B<sub>4</sub>C Dual Particles Addition on the Mechanical Characterization of Al6061 Alloy Hybrid Metal Composites for Automotive Applications, International Journal of vehicle Structures and Systems Accepted for publication. [H-index-16; Q-3 series; SJR-0.26]
- Madeva Nagaral, Murali Mohan R, V Auradi, Bharath V, "Mechanical characterization and fractography of 100-125 micron sized silicon carbide particles reinforced al6061 alloy composites", Journal of Metallurgical and Materials Engineering, Accepted for publication. [H-index-2; Q-4 series; SJR-0.16]
- Bharath.V, Madev Nagaral, and V. Auradi "Fractographic Characterization of Al<sub>2</sub>O<sub>3</sub> particulates reinforced Al2014 alloy composites subjected to Tensile loading", Journal of Frattura ed Integrita Strutturale (Fracture and Structural Integrity). Vol.15, No.57 (2021); July 2021, <https://doi.org/10.3221/IGF-ESIS.57.02>. [H-index-19; Q-3 series; SJR-0.37]
- Madeva Nagaral, Raghavendra Pai K, V Auradi, Bharath V, Shanawaz Patil, Mahantesh S Tattimani, "Effect of Micro Graphite Particles on the Microstructure and Mechanical Behavior of Aluminium 6061 (Al-Mg-Si) Alloy Composites Developed by Novel Two Step Casting Technique" Journal of Metals, Materials and Minerals, vol. 31, no. 2, June 2021, pp. 38-45, DOI: 10.14456/jmmm.2021.17 [H-index-4; Q-4 series; SJR-0.2]
- Satish Babu Bopanna, Samuel Dayanand, Bharath V, Madeva Nagaral, Aravinda T , Vijee Kumar and V Auradi "Development and Mechanical Characterization of Al6061-Al<sub>2</sub>O<sub>3</sub>-Graphene Hybrid Metal Matrix Composites" Journal of Composites Science, MDPI, Vol.5, issue 6, 155, (2021); June 2021, <https://doi.org/10.3390/jcs5062155>. [Under Scopus]
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- Madeva Nagaral, Bharath, and V. Auradi, “Effect of Al<sub>2</sub>O<sub>3</sub> Particles on Mechanical and Wear Properties of 6061Al Alloy Metal Matrix

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#### **Editor/ Reviewer of Journal**

- Journal of institution of Engineers – Series C, Springer Publications
- Advanced Materials and Processing, Taylor and Francis Publications
- International Journal of Bio and Tribo Corrosion, Springer Publications
- International journal of SN Applied Sciences, Springer Publications
- International Journal of Machining Science and Technology, Taylor and Francis Publications
- Journal of Materials Science and Chemical Engineering, Scientific Publishing
- International Journal of Materials Research (Formerly known as Metalkundae), Hanser publications.
- Recent Patents on Materials Science, Bentham Science Publishers
- 3rd Global Conference on Materials Science and Engineering, to be held during October 20-23 at Shanghai, China. International Journal of Engineering Science and Technology, Springer Publications.

#### **Invited Lectures, talks and workshops**

- Invited Lecture on **Micro structural Characterization and property evaluation of 6061 Aluminum with B<sub>4</sub>C reinforced advanced composite** at the AICTE Sponsored ATAL –FDP on ADVANCED MATERIALS IN MODERN MANUFACTURING AND SUSTAINABILITY held at [PDA College of Engineering](#), during 8-12 of Feb 2021.
- Lecture on **Room and High Temperature Tribological Behaviour of Ceramic Boron Carbide Particulate reinforced 6061Al metal matrix composites** at the one week online workshop on “Tribology and its Applications” held at [Acharya Institute of Technology, Bangalore](#) during 18-22 January 2021.
- Invited Lecture on **Synthesis and Property evaluation of Insitu reinforced AMMC’s generated by Halide salts Route**, [PDA College of Engineering, Gulbarga](#) on 13-01-2020 at ACITE, Sponsored FDP.
- Guest lecture on **Ceramic Boron Carbide Particulate reinforced 6061Al metal matrix composites - Synthesis, Mechancial and Wear Properties**, [Cambridge Institute of Technology, North Campus, Bengaluru](#) on 22-09-2019.
- Invited Talk on **“Ceramic Boron Carbide Particulate Reinforced Aluminium Metal Matrix Composites processed via Two Stage Melt Stirring”** on 14-15 of May 2017 at [Basavakalyan Engineering College, Basavakalyana](#).
- Invited speech on **“Best practices in doing a good project work”** on 29-03-2016 at [Anjuman Institute of Technology, Bhatkal](#).

- Technical Talk on **“Metal matrix Composites- Synthesis, properties and Applications”**, on 29-03-2016 at [Anjuman Institute of Technology, Bhatkal](#).
- Invited lecture on **“Development of an efficient grain refiner for Aluminium-Silicon Alloys”** on 23<sup>rd</sup> December 2015 organized by [Indian Institute of Foundrymen \(IIF\), Bangalore Chapter at Hotel Chalukya, Bangalore](#).
- Guest lecture on **“Synthesis, properties and Applications of Metal matrix Composites”** at “Advanced Materials & Manufacturing Technology” on 8-10<sup>th</sup> October 2015, [BVB Hubli](#).
- Guest lecture on **“Processing, Characterization, Properties and Applications of Metal Matrix Composites”** at FDP on “Materials for Future Technology”, at [Sridevi Institute of Engineering and Technology, Tumkur](#) on 27<sup>th</sup> July 2015.
- Invited lecture on **“Metal Matrix Composites-Synthesis, Properties and Applications”** at Three –day FDP on “Materials for Future Technology”, at [Siddaganga Institute of Technology, Tumkur](#) during 17-19<sup>th</sup> July 2015.
- Invited lecture on **“Insitu Metal Matrix Composite and their Application in Grain Refinement of Al-7Si Alloys”** at VTU-VGST sponsored four days faculty development program on “Advanced Materials and Nanotechnology for Engineers, Researchers and HealthCare Organizations” from 4-7<sup>th</sup> June 2015, [Shaikh Engg. College, Belgaum](#).
- Guest Lecture on **“Insitu Composites – Processing, properties and Applications”** at the workshop on “Recent trends in Advanced Materials” at [MSRIT Bangalore](#) during 29<sup>th</sup> Dec 2014 to 10<sup>th</sup> Jan 2015.
- Invited lecture on **“Metal Matrix Composites” at Two-day workshop on “Composites and their Applications”**, at [Basaveshwar Engineering College, Bagalkot](#), 14-15<sup>th</sup> March 2014.
- Invited lecture on **“Development of Efficient grain refiner for Hypoeutectic Al-7Si alloys”** at Two Days Workshop on “Manufacturing and Applications of Advanced Materials” at [Alva's Institute of Engineering and Technology \(AIET\), Moodabidere](#), 27- 28<sup>th</sup> January 2014.
- Talk on **“Metal matrix Composites”** during Lecture meeting at [Institution of Engineers Gulbarga Local Centre, \(Karnataka\)](#), 19<sup>th</sup> July 2013.
- **Talk on In-situ metal matrix composites** during one day workshop on **“EMERGING TRENDS IN MANUFACTURING SCIENCE AND ENGINEERING”** 5<sup>th</sup> May 2012, Alpha College of Engg., Bangalore.
- **Talk on In-situ metal matrix composites** during VGST, Govt. of Karnataka sponsored FDP on **“RECENT DEVELOPMENTS IN MATERIALS TECHNOLOGY”** 12-16 march 2012, SJMIT, Chitradurga.
- **Talk on Grain Refinement and Modification of Al-Si alloys** during AICTE, New Delhi sponsored SDP on **“ADVANCED MATERIALS AND MATERIALS PROCESSING”**. 8-13<sup>th</sup> June 2009, Siddaganaga Institute of Technology, Tumkur.

- Talk on **“Composite Materials”** during VTU sponsored FDP on **“MATERIALS AND PROCESSING”**, 14-19<sup>th</sup> December 2009, Siddaganaga Institute of Technology, Tumkur.
- Talk on **“Heat Treatment of Steels”** during VTU sponsored FDP on **“MATERIALS AND PROCESSING”**, 14-19<sup>th</sup> December 2009, Siddaganaga Institute of Technology, Tumkur.
- Talk on **“Insitu Composite Materials”** during VTU sponsored FDP on **“RECENT TRENDS IN TRIBOLOGY”**, 19-23<sup>rd</sup> December 2009, Basaveshwar Engineering College, Bagalkot.
- Talk on **“Power Point Presentation skills”** during Work Shop Series XXXII Sponsored under TEQIP, 19-24 June 2009, Mechanical Engineering Department, Siddaganaga Institute of Technology, Tumkur.