



IGNITE - 2022

A DAILY NEWSLETTER



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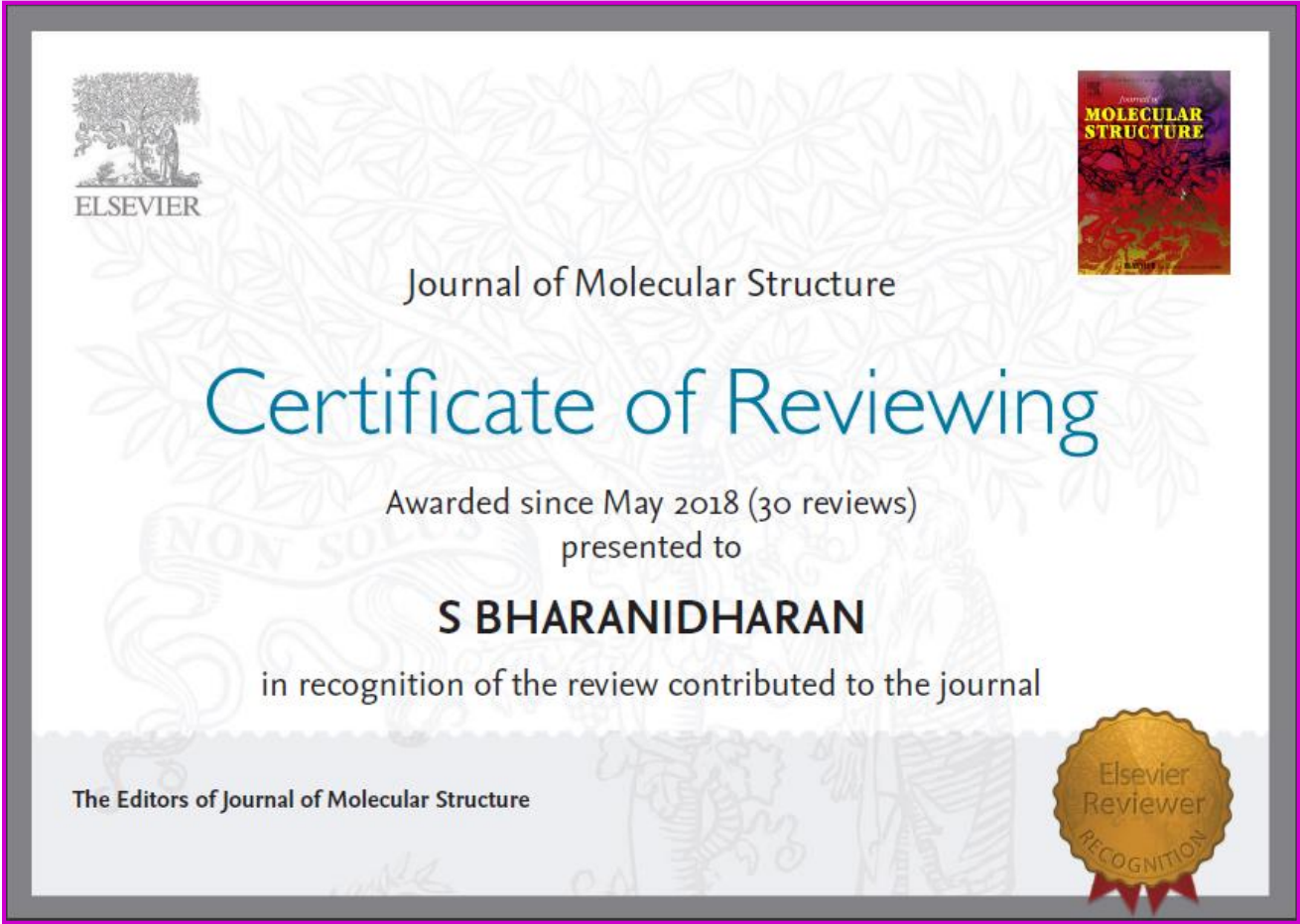


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FACULTY ACHIEVEMENT



**Dr. S. Bharanidharan, Sr. Assistant Professor,
Department of Science and Humanities
(Physics) is recognized for reviewing the
“Journal of Molecular Structure”.**

FACULTY ACHIEVEMENT



Science Publishing Group
1 Rockefeller Plaza, 10th and 11th Floors,
New York, NY 10020 U.S.A.

Certificate of Editorial Board Membership

Reference: AJQCMS

Date: January 14, 2022

The certificate is awarded to

Bharanidharan Sarangapani, Department of Physics, Agni College of Technology, Chennai, India

In recognition of the appointment as an **Editorial Board Member** of *American Journal of Quantum Chemistry and Molecular Spectroscopy(AJQCMS)*

<https://www.sciencepg.com/j/ajqcms>
from January 14, 2022 to January 14, 2024

For and on behalf of
SCIENCE PUBLISHING GROUP INC

Alan Smith
Authorized Signature(s)

Dr. S. Bharanidharan, Sr. Assistant Professor, Department of Science and Humanities (Physics) is appointed as an editorial board member of “American Journal of Quantum Chemistry and Molecular Spectroscopy”.

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NAAC PRE-PREPARATION



NAAC Criteria coordinators and Criteria in-Charges of Department of Science and Humanities are preparing and discussing about the NAAC files as a part of NAAC pre-preparation work in Physics lab on 22nd January 2022.

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FACULTY ENRICHMENT



Dr. Arul. K, ASP, Department of Mechanical Engineering has attended a webinar organized by AICTE on **Project & Internship Opportunities.**

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RESEARCH ARTICLE

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Physical and mechanical properties of AA2219/BN composites

S. Rajkumar^a, K. Arul^b, K. Mageshkumar^{c,*}, T. Maridurai^d, Ram Subbiah^e, V. Mohanavel^f, M. Ravichandran^g

^aDepartment of Mechanical Engineering, Faculty of Manufacturing, Institute of Technology, Hawassa University, Ethiopia

^bDepartment of Mechanical Engineering, Agni College of Technology, Thalambur, Chennai, India

^cSchool of Mechanical Engineering, Vellore Institute of Technology, Vellore 632014, Tamil Nadu, India

^dDepartment of Mechanical Engineering, Saveetha School of Engineering, SIMATS, Chennai 602105, Tamil Nadu, India

^eDepartment of Mechanical Engineering, Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, Telangana 500090, India

^fCentre for Materials Engineering and Regenerative Medicine, Bharath Institute of Higher Education and Research, Chennai 600073, Tamil Nadu, India

^gDepartment of Mechanical Engineering, K. Ramakrishnan College of Engineering, Trichy 621 112, Tamil Nadu, India

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ABSTRACT

The main purpose of this paper is to compare the impacts of multiple Boron Nitride particle weight percentages of micro-sized particles and nano-sized particles on the AA2219 hybrid nanocomposite produced via sintering and hot extrusion procedures. The finalized materials are structurally and metallurgically characterized. To conduct a comparative analysis, the weight percentages of Boron Nitride-reinforced particles are varied. When compared to the other samples, the yield strength (270 MPa) and ultimate tensile strength (UTS) of the AA2219 hybrid composite sample-3 (S3) are greatly enhanced.

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Selection and peer-review under responsibility of the scientific committee of the International Conference Virtual Conference on Technological Advancements in Mechanical Engineering

1. Introduction

Nowadays, metal matrix composites' mechanical, wear, and corrosion properties are evaluated using a highest wt % or tonnage % of matrix and a minimal amount of refinement. SiC, BN, and B4C particles are frequently used to reinforce MMCs [1–5]. The Powder Metallurgy method overcomes the disadvantages of the stir casting method, such as reinforcement particle agglomeration and segregation. PM is a patented manufacturing process for filaments conductive metal, dust filters, and bearings [6–9]. Extrusion results in superior surface characteristics, mechanical properties, and porosity in the finished product. AMMC that is extruded is stronger and more resistant to wear than AMMC that is cast. In terms of strength and wear resistance, hot extruded AMMC products outperformed casted composites. By incorporating reinforcement particles, the material's microstructure is altered, resulting in an increase in its wear resistance, stamina, and abrasion resistance [10–50]. Finally, the authors conclude that there is a paucity of literature discussing the unique industry suitability of aluminium metal matrix com-

posites in terms of reinforcement synthesis, mechanical properties, and metallurgical characterization [20]. As a result, the authors were motivated to create the AA2219 hybrid composite with Boron Nitride reinforcement in a range of weight percentages (1 to 10 percent) and particle sizes (micro/nano). Hybrid composite materials are made using sintered and extruded techniques, then characterized mechanically and metallurgically.

2. Experimental details

2.1. Materials

Aluminum alloy (AA2219) is recognised as a composite materials in this investigation's AA2219 hybrid composite. Fig. 1 illustrates the AA2219's fundamental components. The AA2219 matrix contains approximately 92.35 percent aluminium.

2.2. Reinforcement

Composite matrix materials are reinforced with fibres or fragments of reinforcing materials. Particle reinforcement has a number of advantages, including increased toughness, a high

* Corresponding author.

E-mail address: mageshkumar.phd@gmail.com (K. Mageshkumar).

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Dr. Arul K, ASP, Department of Mechanical Engineering had published a research article on “Physical and Mechanical Properties of AA2219/BN Composites” in Elsevier publications.

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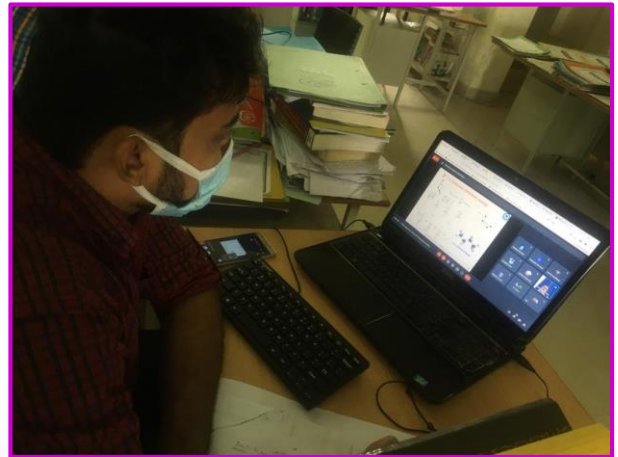
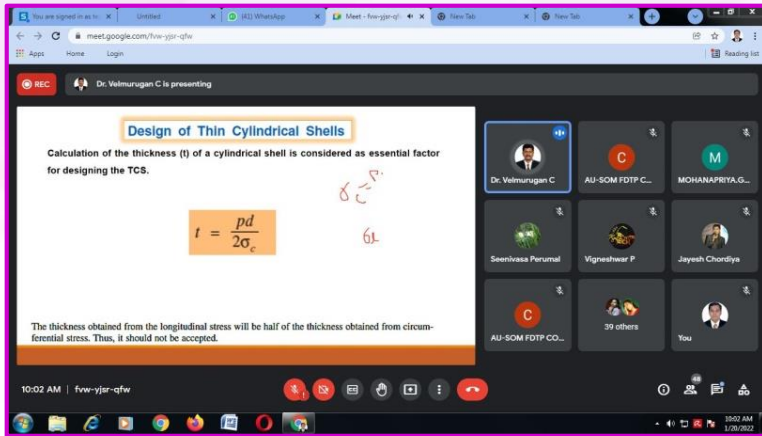


STUDENT PLACEMENT



Final year students (**Asvin R, Karthikeyan A, Monish I, Adhithya Prasath P A, Deepak Giri J**), Department of Mechatronics have got placed in **Malles Automated and Robotics Systems** for Internship cum placement.

FACULTY PARTICIPATION



Dr. V. Parthiban, Dr. Jayesh Chordiya, Assistant Professors, Department of Mechatronics has successfully completed CFD - Anna university sponsored online FDP on CE8395 - Strength of Materials for Mechanical Engineers organized by Government College of Engineering, Srirangam.

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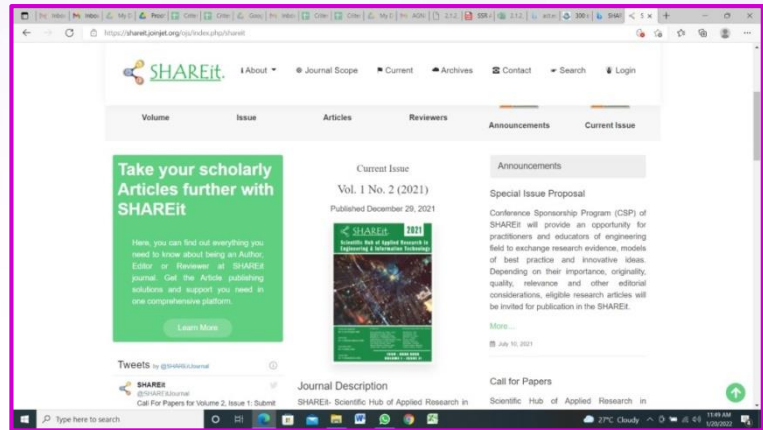


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RESEARCH ACTIVITY



[SHAREit] Reviewer Registration received Successfully

Dear Dr.Pandiyarajan,

Greetings...!!!

We are happy to have you on board.
You will be notified with your login credential once your application gets processed.

Thanks & Regards,
Editorial Office,
SHAREit Journal.

Dr. R. Pandiyarajan, Head, Department of Mechatronics has got approval as a board reviewer on “Scientific Hub of Applied Research in Engineering & Information Technology”

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ALUMNUS INTERACTION



Mr. M. Seenivasa Kumar, AP, Department of Mechanical and Automation had an interaction with the Alumnus Mr. Vijayanarayanan and also encouraged him to motivate the present batch students for their future endeavours.

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INDUSTRY CONNECT



As a part of placement activity an industry connect with Hanon Systems Pvt Ltd, Maraimalai Nagar, Chennai, Dr. S. Chandravadhana, Placement Dean and Ms. Vidhya, Placement Coordinator met the HR Mr. Sanjay and Associate HR Ms. Malini and interacted with them for the students' placements, internships and to undergo Projects.

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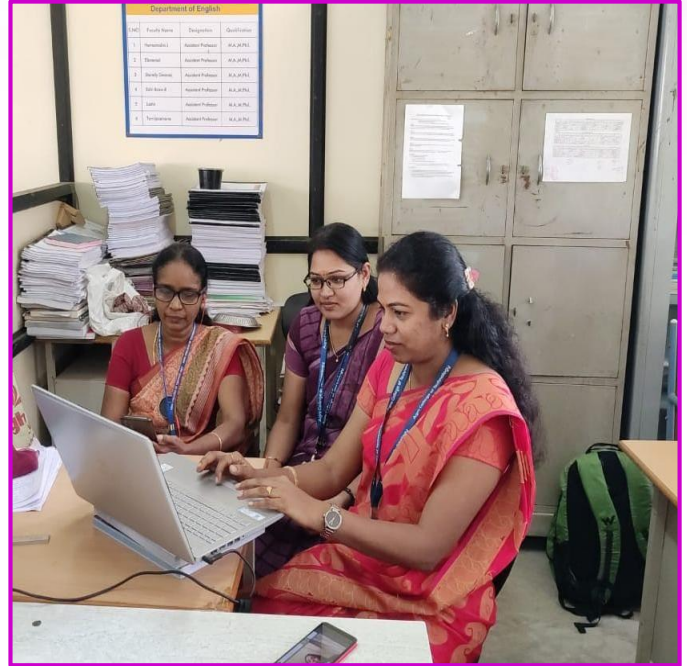
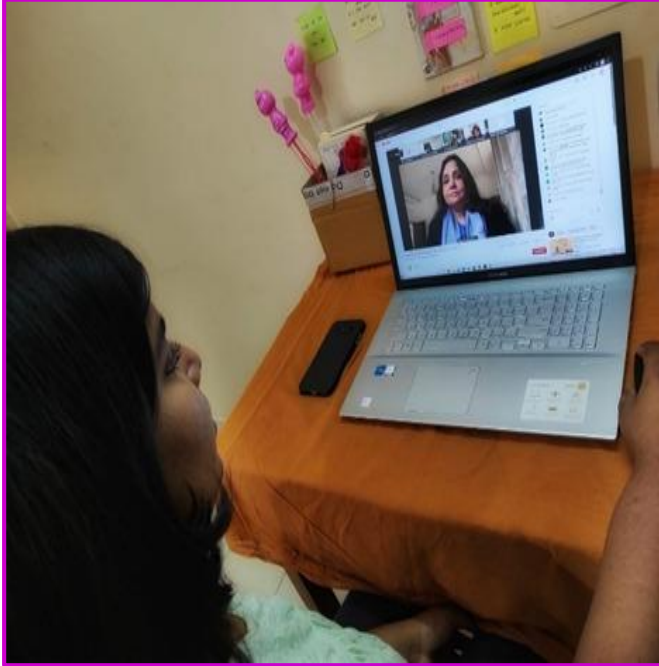


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"NATIONAL GIRL CHILD DAY" CELEBRATION



The faculty members from the Department of S&H along with the girl students have attended a National Level Webinar to celebrate "National Girl Child Day" Under "Azadi Ka Amrit Mahotsav" on 24th January 2022 organized by AICTE.

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