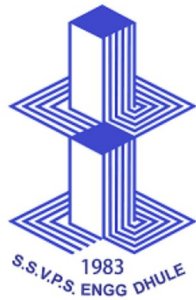


**MATERIAL
ADVANTAGE
CHAPTER
SSVPS DHULE**



**Material Advantage Chapter
S.S.V.P.S. Dhule**

Annual Progress

Report

2024

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Committee members of MAC SSVPS Dhule

1) Faculty Advisor: Prof Dr. Sanjeev D. Suryawanshi



2) Student Chairman: Mr Saurav Pawar BE (Mechanical)



3) Student Vice-Chairman: Mr. Harshwardhan Sawant (Computer)



3) Student Secretary: Mr Saurabh Patil BE (Mechanical)



4) Student Treasurer: Mr. Bhavesh Shimpi(Mechanical)



- **Overview of Chapter**

Introduction:

In the pursuit of academic and professional excellence, the Material Advantage Chapter at SSVPS's Bapusaheb Shivajirao Deore College of Engineering, Dhule, has continued to make significant strides since its foundation on February 14, 2023. Comprising 41 members representing diverse academic streams within the institute, our chapter remains committed to fostering interdisciplinary collaboration and promoting the advancement of materials science and engineering. As we reflect on the accomplishments and challenges of the past year, this annual progress report serves as a testament to our collective dedication and resilience in the face of adversity.

Membership Growth and Diversity:

Over the past year, the Material Advantage Chapter has experienced notable growth in membership, with a current total of 41 members. This diverse involvement of students from various academic backgrounds, enriching our chapter with a wide range of perspectives and expertise. Through targeted recruitment efforts and engagement initiatives, we have successfully expanded our reach within the college community, attracting individuals passionate about materials science and eager to contribute to our chapter's mission.

Leadership and Governance:

Effective leadership is lead to the success of any organization, and our chapter is fortunate to have a dedicated team as its part. The recent election process, overseen by Prof. Dr. Sanjeev D. Suryawanshi, the faculty advisor, and Prof. N.S Deshmukh, the faculty coordinator, resulted in the appointment of a capable student committee. Led by Saurav Pawar as Student Chair, along with Harshwardhan Sawant as Vice-Chair, Saurabh Patil as Secretary, and Bhavesh Shimpi as Treasurer, this team brings a wealth of enthusiasm and expertise to their respective roles. Their collective vision and leadership will guide our chapter's activities and initiatives in the coming year.

Educational and Professional Development:

Central to our mission is the promotion of educational and professional development opportunities for our members. Throughout the past year, we have organized a series of

workshops, seminars, and guest lectures aimed at enhancing students' understanding of materials science concepts and their applications in real-world scenarios. These events have provided valuable insights into emerging trends and technologies in the field, equipping our members with the knowledge and skills needed to succeed in their academic and professional endeavors.

Community Engagement and Outreach:

As advocates for the importance of materials science in society, we recognize the importance of community engagement and outreach. Over the past year, our chapter has been actively involved in various outreach activities aimed at promoting core education and raising awareness about the role of materials science in addressing global challenges. From organizing science fairs and interactive demonstrations for local schools to participating in community service projects, we have sought to inspire the next generation of scientists and engineers while fostering a sense of social responsibility among our members.

Research and Innovation:

Research lies at the heart of materials science, driving innovation and pushing the boundaries of what is possible. In line with this theme, our chapter has actively encouraged and supported student-led research initiatives across a wide range of topics within the field. Through collaboration with faculty mentors and industry partners, our members have had the opportunity to engage in cutting-edge research projects, contributing to advancements in areas such as materials applications in energy for future. These research endeavors not only enhance students' academic experiences but also have the potential to make meaningful contributions to the broader scientific community.

Challenges and Opportunities:

While the past year has been marked by significant achievements, we have also faced various challenges along the way.. However, we have embraced these challenges as opportunities for innovation and adaptation, leveraging technology to maintain continuity in our operations and reach a wider audience. Looking ahead, we remain committed to navigating these challenges with resilience and creativity, ensuring that our chapter continues to thrive in an ever-changing landscape.

With unwavering determination and a spirit of collaboration, we are confident that the Material Advantage Chapter will continue to thrive and inspire future generations of engineers.

- **Events under MAC SSVPS**

Sr Number	Name of Event	Date	Activity Type
1	2 nd ARTH 2K23	23 November 2023	Technical
2	ARTH 2K24	21 February 2024	Technical
3	Pune Start up Fest	26 27 28 Jan 2024	Technical
4	PV solar plant visit	09 March 2024	Technical
5	Shirdi Water Park and Theme Park Visits	09 March 2024	Social/Recreational

- **Chapter Management**

1. Financial Management:

The chapter's financial affairs are overseen collaboratively by the faculty advisor, chapter chair, and treasurer. To ensure transparency in transactions, a bank account has been established with Union Bank of India under the name "MATERIAL ADVANTAGE CHAPTER SSVPSDHULE," operating in accordance with Reserve Bank of India (RBI) regulations.

2. Documentation:

Post-elections, documentation duties are assumed by the Vice-Chair, Secretary, and faculty advisor. All meeting records are meticulously logged in a register, signed by attending members. Furthermore, photographs are captured during and after meetings for archival purposes and to preserve fond memories.

3. Officer Recruitment Process:

New members are briefed on the chapter's regulations, followed by a democratic selection process for the new team. The transition of responsibilities from outgoing to incoming members is conducted in the presence of all Material Advantage Chapter (MAC) members. The recently elected team comprises:

- Student Chair: Saurav Pawar
- Vice-Chair: Harshwardhan Sawant
- Secretary: Saurabh Patil
- Treasurer: Bhavesh Shimpi

4. Membership Drive for Material Advantage:

Collaboratively, the faculty advisor and chapter committee members liaise with department heads throughout the institute to conduct diverse recruitment campaigns, counseling sessions, social media interactions, and interviews. Funds are gathered and routed to the ASM India Chapter, which then allocates them to the Material Advantage Chapter office for student membership fees. This recruitment process remains ongoing, active throughout the year.

- **Technical Programming**

Meetings were convened with all chapter members to deliberate on the technical program for the institute. Following discussions, it was decided to organize a project competition and exhibition in both 2023 and 2024. In 2023, the event was named '2nd Arth 2k23', while in 2024, it was titled 'ARTH 2k24'.

Below are the event details:

➤ **2nd ARTH 2K23**

The consecutive event of ARTH 2K23 named 2nd ARTH 2k23 was held successfully by Material Advantage Chapter (MAC) SSVPS Dhule for the exposure of ongoing development in projects developed by colleagues around from 12th Science, Diploma and Engineering streams.

The 2nd ARTH 2k23 has the theme of 'Innovative Project Ideas'. 2nd ARTH 2k23 concepts initiated from the success of ARTH 2K23.

More than 20 groups with 40 plus students participated successfully in this event. The event has to different categories such as poster presentation and model presentation for different educational groups.

The event inaugurated with ribbon cutting by the event judge Prof Sharad D Kachave (Head at Government College) in presence of Prof Dr Sanjeev D Suryawanshi (Faculty Advisor of MAC SSVPS Dhule) and accompanied judge Prof Dr Deepak C Sonawane (Dean Research and Development) in the presence of media personals.

The nominal fees of Rs.100/- charged per group while entry was absolutely free for enthusiastic 12th science students from Junior Colleges. The budget for this event of Rs 10000 was collected from participation fees, sponsor and grant from host institution.

During the valedictory ceremony the winners received fabulous cash prizes, trophies and certificates for outstanding contributions. All volunteers and committee members were honored with certificates and mementos.



➤ **ARTH 2K24**

The event of ARTH 2K24 was held successfully by Material Advantage Chapter (MAC) SSVPS Dhule for the exposure of ongoing development in projects developed by colleges around from 12th Science, Diploma and Engineering streams.

The ARTH 2k24 had the theme of 'Advances in Innovative Technology'. ARTH 2k24 concepts initiated from the success of ARTH 2K23.

More than 18 groups with 30+ plus students participated successfully in this event. The event had three different categories such as poster presentation, power point presentation and model presentation for different educational groups like 11th/12th students, diploma and undergraduate/postgraduate students.

The event inaugurated with ribbon cutting by the event judge Prof. Sharad D Kachave (Head at Government College) in presence of Prof. Dr. Sanjeev D. Suryawanshi (Faculty Advisor of MAC SSVPS Dhule) and accompanied judges Prof. Dr. Deepak C. Sonawane (Dean Research and Development), Prof. Shailesh S. Deore (Computer Engineering Dept.), Prof. Kiran More (Electronic Engineering Dept.) in the presence of media personals.

The nominal fees of Rs.100/- charged per group while entry was absolutely free for enthusiastic 11th/12th science students from Junior Colleges.

During the valedictory ceremony the winners received fabulous cash prizes, trophies and certificates for outstanding contributions. All volunteers and committee members were honored with certificates.



ARTH 2k2 Prize Distribution

Carrier Development

➤ **Pune Startup Fest**

Faculty advisor of the chapter came to know about Pune startup fest, a startup and patent exhibition will held COEP Technical University, Pune on. It was a great chance for student chapter members to visit and explore various startups and patents.

A committee meeting was conducted with all the members and it was decided that faculty advisor along with specific groups with patent projects would participate in the fest. New recruited members of the chapter were also given chance to participate.

28 students actively participated in Pune Startup Fest and increased their skill level

➤ **Industrial Visit and Fun Trip at Shirdi**

Locations Visited: PV Solar Park, Shirdi, India

Technical Details plant:

SHRI SAIBABA SANSTHAN TRUST, SHIRDI

Solar Steam Cooking System at Shri Sai Prasadalya Sri Sai Prasadalya, Solar Steam Cooking System

World's Largest Solar Steam Cooking Project costing Rs. 1.33 crores

With total solar dish 73 nos.

Participants:

Forty students (MAC SSVPS Members)

Four staff members

Purpose:

The visit aimed to provide students with practical exposure to renewable energy technologies through a tour of the PV Solar Park, followed by a recreational outing to a nearby water and theme park for leisure and team-building activities.

PV Solar Park Visit:

1. Introduction to PV Solar Technology:

Upon arrival at the PV Solar Park, students were given an introduction to photovoltaic (PV) solar technology, its significance in the renewable energy sector, and its contribution to sustainable development.

2. Guided Tour:

Led by knowledgeable guides, students toured the solar park, observing the layout of sheflers, inverters, and other components. The guides explained the functioning of the solar sheflers, the

process of solar energy conversion, and the maintenance practices adopted to ensure optimal performance.

3. Interactive Sessions:

Students engaged in interactive sessions with the park's staff, asking questions about the design, operation, and environmental impact of the solar park. Discussions also centered around the future prospects of solar energy in India and its role in mitigating climate change.

4. Learning Outcomes:

The visit provided students with valuable insights into renewable energy technologies, emphasizing the importance of solar power as a clean and sustainable source of energy. It also highlighted career opportunities in the field of renewable energy and inspired students to consider pursuing careers in this sector.



Felicitation of Chapter at Shirdi Theme Park



Outside Solar PV Park Shirdi

Social Activity

***Fun Trip at Water & Theme Park:**

1. Leisure and Recreation:

Following the educational visit to the solar park, students and staff members enjoyed a fun-filled day at the nearby water and amusement park. They had the opportunity to relax, unwind, and bond with their peers in a vibrant and entertaining environment.

2. Rides and Attractions:

The park offered a variety of rides and attractions, including water slides, roller coasters, and thrill rides. Students enthusiastically participated in the activities, experiencing moments of exhilaration and amusement.

3. Team-Building Activities:

The trip also included team-building activities designed to foster collaboration, communication, and camaraderie among students and staff members. These activities encouraged teamwork, problem-solving, and leadership skills in a recreational setting.



At water park and theme park

Services

During the 2nd ARTH 2K23 and ARTH 2k24 project competition for the development of the students of 12th science the entry fees of the competition was made free of cost so that maximum number of should involve in the event. Also innovation pavilion in the event was made open through out the time for the visitors from 12th science to encourage them to lean towards material engineering.