Polymer Engineering News Bulletin – 2023

Issue 1

B.S. Abdur Rahman Crescent Institute of Science & Technology

Deemed to be University u/s 3 of the UGC Act, 1956

Department of Polymer Engineering

Editors

Dr. S. Shamshath Begum

Ms. J. Dafini

www.crescent.education

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News Letter (2022-2023)

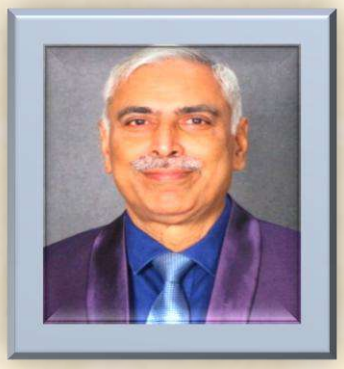
Alhaj Dr. B.S. Abdur Rahman
Founder of the Institution

Mrs.Qurrath Jameela
Chancellor

Mr. Abdul Qadir Abdul Rahman Buhari
Pro-Chancellor

Prof. Dr. T. Murugesan
Vice-Chancellor

Dr. N. Thajuddin
Pro-Vice Chancellor



Dr. N. Raja Hussain
Registrar

News Letter (2022-2023)

ABOUT THE DEPARTMENT

Department of Polymer Engineering was established in the year 1996 to deliver technical support to various academic institutions, polymer industries, and National laboratories. A first-ever four-year undergraduate program Polymer Engineering in Tamil Nadu was started with an intake of 30 students. The department is equipped with better infrastructure, and well-equipped lab facilities. Students will receive hands-on training in equipment handling and industrial practices. Employment in key polymer industries includes Apollo Tyres, Kingfa Science & Technology, Motherson Limited, Asian Paints, TVS, MRF, and JK Tyres etc., The Polymer Engineering course of Crescent Institute is accredited by NBA. Entrepreneurs in this area also greatly valued because of the adaptability and versatility of this course. Higher studies abroad with 100% scholarships are one of the key highlights of this course.

Message from DEAN (SMS)

Dr. H. Siddhi Jailani

Dean

School of Mechanical Sciences

In this edition of our department newsletter, which celebrates the exceptional achievements, steadfast dedication, and enduring spirit of our professors and students, it gives me great pleasure to address here. Looking back over the last year, it's evident that our department of Polymer Engineering has thrived because of the unwavering dedication and creative energy of our faculty members and students.

Leading edge research in Polymer Engineering is being done by our distinguished faculty members, through their involvement in extracurricular activities as well as their academic pursuits.Our students have demonstrated their extraordinary talents. Their excitement for education is an inspiration to all of us.

I want to express my appreciation for your continued support and look forward to see more growth and success in the Department of Polymer Engineering in the upcoming year.

Message from Head of the Department

Dr. S. Shamshath Begum

Head of the Department (i/c)

Polymer Engineering

Department of Polymer Engineering offers four year B.Tech and Ph.D program in Polymer Engineering. The goal of the department is to provide high quality education and training in polymer engineering, enabling us to produce engineers with necessary technical knowledge and expertise to meet the demands in society. Looking back on our amazing journey spanning nearly 27 years, our list is filled with many noteworthy accomplishments and awards. The curriculum includes project-based learning, design courses and industry-based syllabus, hands-on training inequipment's etc. The department regularly organizes conferences, seminars, symposia and workshops to develop relations with industries. Industrial visits and internships are a part of our curriculum and students also encouraged to do the final year projects in the industries. Our department also has numerous publications and patents. Our students also won prizes in various national level paper and poster presentations during the academic year 2022-2023.

DEPARTMENT NEWS

National Level Technical Symposium

"MACRON 2023"

Department of Polymer Engineering organized National Level Technical Symposium, "MACRON 2023" on 6th April 2023. Dr.N.Raja Hussain, Registrar delivered the presidential address. Dr.S. Shamshath Begum, Assistant Professor (Sr.Gr) and HOD (i/c) welcomed the gathering. The symposium was coordinated by Dr.J.Shahitha Parveen, Assistant Professor. Dr. Asis. K. Banerji, Managing Director, Inventa Technologies Pvt Ltd, Chennai was the chief guestof the National Level Technical Symposium. Student Magazine "POLYLINKS 2k23" was released by the chief guest. He delivered a talk on "Future and Scope of Plastics in Automotive and Medical industry".Mr. Basanta Kumar Behera, Assistant Professor (Sr.Gr),Mr. D. Murali Manohar, Assistant Professor and Mrs. R. Daulath Banu, Assistant Professor assisted in conducting technical and non-technical events. Students from various colleges participated in various events such as paper presentation, poster presentation, technical quiz and non-technical events. The certificates and prizes were distributed to the participants.

WE IN MEDIA

2 MAKKAL KATTALAI

வண்டலூரில் கிரசண்ட் பல்கலைகழகத்தில்

பாலிமர் துறை சார்பில் தேசிய அளவிலான சிம்போசியம் நடைபெற்றது...

RNI (TC) No.TNTAM 24362

தளபதி அரசு

வண்டலூரில் கிரசண்ட் பல்கலைகழகத்தில் பாலிமர் துறை சார்பில் 2023 தேசிய அளவிலான சிம்போசியம்

https://www.youtube.com/watch?v=DjQw0N-GAPY

"MACRON Symposium"
6th April, 2023

Seminar on "Career Opportunities for Polymer Engineers"

Department of Polymer Engineering organized a Seminar on "Career Opportunities for Polymer Engineers" on 27th March 2023. Dr.S. Shamshath Begum, Assistant Professor (Sr.Gr) and HOD (i/c) welcomed the gathering. Dr.N.Raja Hussain, Registrar, Dr.H.Siddhi Jailani, Dean, School of Mechanical Sciences and Dr.S.S.M.Abdul Majeed, Professor delivered the felicitations. The Seminar was coordinated by Mrs. R. Daulath Banu, Assistant Professor and she introduced the chief guest to the gathering. Mr. V. Balachandar, Chief Executive, Techcellent Engineers, Chennai was the Invited Speaker. Dr.J.Shahitha Parveen, Assistant Professor delivered the vote of thanks. More than 60 students from CIPET, Chennai and 90 students from B. S. Abdur Rahman Crescent Institute were participated in the seminar. This event was published in Murasoli E paper, Makkal Ullatchi Kural and NEWS7 Tamil channel.

WE IN MEDIA

மக்கள் உள்ளாட்சி குரல்

MAKKAL ULLATCHI KURAL

வண்டலூர் கிரசண்ட் பல்கலைகழகம் இணைந்து

பாலிமர் என்ஜினியரிங் கல்வி மற்றும் வேலைவாய்ப்பு குறித்து சிறப்பு கருத்தரங்கம்

மனசொலி

வண்டலூர் கிரசண்ட் கல்லூரியில் இந்தியன் பிளாஸ்டிக் இன்ஸ்டியூட் மற்றும் கிரசண்ட் பல்கலைகழகம் இணைந்து

பாலிமர் என்ஜினியரிங் கல்வி மற்றும் வேலைவாய்ப்பு குறித்து சிறப்பு கருத்தரங்கம்

வண்டலூர், செங்கல்பட்டு

டெக்ஸெண்ட் தொழில்நுட்ப தலைமை செயல் அதிகாரி பாலசந்தர் சிறப்

பிரசண்ட் பல்கலைகழகம் நடத்திய சிறப்பு வேலை வாய்ப்பு கருத்தரங்கு

GEM

https://www.youtube.com/watch?v=8P8ThG

VISITORS

"Mr. M. K. Sharma" V.P
Bhansali Labs Pvt Ltd, Campus
Recruitment Visit
25th February, 2023

Inaugural Ceremony of "Association of Polymer Engineers"

Department of Polymer Engineering organized Inauguration of Association of Polymer Engineers (APE) on 17th November 2022. Dr. N. Raja Hussain, Registrar and Dr. A. S.Selva Kumar, Dean, School of Mechanical Science delivered the felicitations. Dr. Revathi Purushothaman, HOD gave a glimpse about the achievement of the department and welcomed the gathering. Ms. A. Shanthini Devi, final year, General Secretary, APE gave the annual report. Ms. V. Thanushree, final year introduced the Chief Guest to the gathering. The Inauguration of Association of Polymer Engineers was coordinated by Dr. J. Shahitha Parveen, Assistant Professor. Mr.A.Suresh, General Manager, APPL Industries Ltd Chennai was the Chief Guest and delivered the inaugural address and gave a talk on the placement opportunities in various sectors. Mr. K. Yokesh, final year, Joint Secretary, APE delivered the vote of thanks.

Equipments Purchased

S.No.	Name of the Equipment	Make & Country	Date of Purchase	Date of Installation
1.	International Rubber Hardness Degree Meter	Allonsy ventures Pvt. Ltd, India	10.10.2022	07.11.2022
2.	Specimen Cutting Die	Allonsy ventures Pvt. Ltd, India	10.10.2022	07.11.2022
3.	Impedance Analyzer	IpgiPvt. Ltd, India	20.10.2022	27.12.2022
4.	Centrifuge	Remi, India	14.02.2023	20.3.2023
5.	Weighing Balance	Wensar, India	10.02.2023	29.03.2023
6.	Heating Chamber for Electrode	IpgiPvt. Ltd, India	22.02.2023	09.08.2023
7.	Flammability Tester (UL - 94)	Asian Testing Equipment, India	04.01.2023	14.03.2023

Equipments Purchased

Heating Chamber for Electrode

Weighing Balance

Specimen Cutting Die

Centrifuge

Equipments Purchased

Impedance Analyzer

Flammability Tester

IRHD

FACULTY NEWS

Conferences/ FDPs/ Seminars

S.No.	Name of the Faculty	Training Course	FDP/Training/ STTP	Organizer	Date/ Duration
1.	**Dr. S. Shamshath Begum**	Impact of Originality in Innovative Research	TURNITIN India Private Limited	Office of Dean (Research) & BSACIST	24.11.2022
2.	**Mr. D. Murali Manohar**	International Rubber Conference (IRC2022)	International Conference	IRCO, UK	24.11.2022 to 26.11.2022
3.	**Mrs. R. Daulath Banu**	Faculty in Universities/Colleges/ Institutes for higher education	Faculty Induction/ Orientation Programme	Ramanujan College, University of Delhi	20.09.2022 to 19.10.2022
4.	**Dr. S. Shamshath Begum**	Faculty in Universities/Colleges/ Institutes for higher education	Faculty Induction/ Orientation Programme	Ramanujan College, University of Delhi	20.09.2022 to 19.10.2022
5.	**Dr. J. Shahitha Parveen**	Faculty in Universities/Colleges/ Institutes for higher education	Faculty Induction/ Orientation Programme	Ramanujan College, University of Delhi	20.09.2022 to 19.10.2022
6.	**Dr. S. Shamshath Begum**	Effecting Writing of Research Articles with Grammarly	FDP	BSACIST	20.09.2022
7.	**Dr. J. Shahitha Parveen**	Effecting Writing of Research Articles with Grammarly	FDP	BSACIST	20.09.2022

Conferences/ FDPs/ Seminars

S.No.	Name of the Faculty	Training Course	FDP/ Training/ STTP	Organizer	Date/ Duration
8.	Mr. D. Murali Manohar	Plastotech 2022	Seminar	Indian Plastic Institute, Chennai	10.09.2022
9.	Mr. Basanta Kumar Behera	Plastotech 2022	Seminar	Indian Plastic Institute, Chennai	10.09.2022
10.	Mr. Basanta Kumar Behera	Current Trends in Nanomaterials and its applications	FDP	SRM University of Science and Technology, Chennai	22.08.2022 to 27.08.2022
11.	Dr. S.Shamshath Begum	Current Trends in Nanomaterials and its applications	FDP	SRM University of Science and Technology, Chennai	22.08.2022 to 27.08.2022
12.	Dr. J. Shahitha Parveen	Current Trends in Nanomaterials and its applications	FDP	SRM University of Science and Technology, Chennai	22.08.2022 to 27.08.2022
13.	Mrs. R. Daulath Banu	Current Trends in Nanomaterials and its applications	FDP	SRM University of Science and Technology, Chennai	22.08.2022 to 27.08.2022

Conferences/ FDPs/ Seminars

S.No.	Name of the Faculty	Training Course	FDP/ Training/ STTP	Organizer	Date/ Duration
14.	**Mr. D. Murali Manohar**	Concepts to commercialization of FRP Composites	Short term course/ Workshop	FRP Composite Laboratory, NIT, Rourkela	08.08.2022 to 12.08.2022
15.	**Mr. Basanta Kumar Behera**	Concepts to commercialization of FRP Composites	Short term course/ Workshop	FRP Composite Laboratory, NIT, Rourkela	08.08.2022 to 12.08.2022
16.	**Dr. J. Shahitha Parveen**	Concepts to commercialization of FRP Composites	Short-term course/ Workshop	FRP Composite Laboratory, NIT, Rourkela	08.08.2022 to 12.08.2022
17.	**Mrs. R. Daulath Banu**	Concepts to commercialization of FRP Composites	Short-term course/ Workshop	FRP Composite Laboratory, NIT, Rourkela	08.08.2022 to 12.08.2022

Journal Publications

International Journals

- Basanta Kumar Behera andM.Thirumurugan, “Study of Viscoelastic Behaviour and Mechanical Characteristics of Graphene-Filled ABS composites”, Journal of Mechanical Engineering, Volume 20(1), pp.169-184, 15 January 2023. https://doi.org/10.24191/jmeche.v20i1.21086

- Murali Manohar, B.C. Chakraborty and S.Shamshath Begum, “Investigation of the effect of nanoclay as reinforcing filler for nitrile rubber–polyvinyl chloride blend: frequency response of dynamic viscoelasticity and vibration damping”, Iranian Polymer Journal, pp. 1247-1261, 19 July 2022 https://doi.org/10.1007/s13726-022-01074-4

- Murali Manohar, B.C. Chakraborty and S. Shamshath Begum, “Effect of graphene and nanoclay on the properties of nitrile rubber – polyvinyl chloride blend with a potential approach for shock and vibration damping applications”, Iranian Polymer Journal, pp. 1129–1145, 03 June 2022. https://doi.org/10.1007/s13726-022-01064-6

Conferences

International Conferences

- N. B. Keerthika, S. Shamshath Begum, “Effect of Thermally Induced Grafting of Bismaleimides on Reclaim Rubber and SBR/BR Blends”, 2ndInternational Conference on Science Engineering and Technology, (ICSET 2023), 21st, May 2023, India.

- Tharun.J, S. Gokul Anand, M. Liyakath Ahamed, S. Akash Kumar, V. Krishna Prasad, and S. Shamshath Begum, “A Study on the Preparation and Characterization of Natural Rubber Composites Reinforced with Novel Biochar derived from Agricultural Wastes”, 13thInternational Conference on Science and Innovative Engineering – 2023 (ICSIE 2023), (14th, May 2023), Jawahar Engineering College, Chennai, India, Samarkand State University, Samarkand, Uzbekistan, pp.104, ISBN 978-81-923607-3-7.

Patents and Funded Projects

Patents

Granted

S. Shamshath Begum, "A Synergistic Tyre Tread Formulation and a Composite Comprising the Same", Patent Application (202221029284), Indian Patent Office Journal.

Published

S. Shamshath Begum, "An apparatus for synthesizing polymer-based composites", Patent Application (202141056758), Indian Patent Office Journal.

Funded Projects

Funding Agency: Crescent Seed Money, BSACIST

Ongoing

Principal Investigator: Dr. S. Shamshath Begum

Project: Development and Characterization of Sustainable Polymeric material for Packaging Applications

Principal Investigator: Dr. J. Shahitha Parveen

Project: 3D printing of Hydrogel scaffolds for tissue regeneration

Principal Investigator: Mrs. R. Daulath Banu

Project: Development of Epoxy Benzoxazine Nanocomposites for Flame Retardant applications

Keynote /Invited Talk/Lecture/ Session Chair

S.No.	Name of the Faculty	Title	Organizer	Date/ Duration
1.	**Dr. S.Shamshath Begum**	**Session Chair** Automation, Materials "2nd International Conference on Science Engineering and Technology (2nd ICSET–2023)"	IIRM, Andhra Pradesh	21.03.2023
2.	**Dr. S.Shamshath Begum**	**Session Chair** CH01 – 8th Dec, 2022 "Fourth International Conference on Recent Advances in Materials and Manufacturing, (ICRAAM 2022)"	Department of Mechanical Engineering, Velalar College of Engineering and Technology, Erode	08.12.2022 & 09.12.2022
3.	**Dr. S.Shamshath Begum**	**Invited Talk** "Single Use Plastics" "2nd International Conference on Research & Developments in Engineering&Management, (2nd ICRDEM-2022)"	IIRM, Andhra Pradesh	30.10.2022
4.	**Dr. S.Shamshath Begum**	**Session Chair** ACE 01 "First International Conference on Modern Materials for Engineering and Research, "(ICMMER 2022)"	Department of Mechanical Engineering, Sengunthar Engineering College, Erode	29.09.2022 & 30.09.2022

Keynote /Invited Talk/Lecture/ Session Chair

S.No.	Name of the Faculty	Title	Organizer	Date/ Duration
5.	**Dr. S.Shamshath Begum**	**Session Chair - CH 01** "Global Conference on Recent Advancements in Sustainable Materials (GC-RASM 2022)"	Department of Civil and Mechanical Engineering, A.J. Institute of Engineering & Technology, Karnataka	28.07.2022 & 29.07.2022
6.	**Dr.J.Shahitha Parveen**	**Guest Lecture** "Polymer Nanocomposites for Energy storage Applications"	Department of Chemical Engineering, SRM Institute of Science and Technology, Chennai	27.08.2022
7.	**Dr. S.Shamshath Begum**	**Invited Talk** International Online Conference on Foamed Polymers (ICFP 2022) "Characterization of Flame-Retardant Property in Flexible Polyurethane Foam"	Mahatma Gandhi University, Kerala	08.07.2022 to 10.07.2022

Awards & Honours

- **Dr. S. Shamshath Begum received Best Paper Award** – 13th International Conference on Science and Innovative Engineering – 2023" (ICSIE – 2023), – 14th May, 2023

- **Dr. S. Shamshath Begum received Velayutham Mudaliar Award** under High Impact Journal category – Overall University, –5th September, 2022

- **Dr. S. Shamshath Begum awarded cash prize** under "Research Incentives Scheme of BSACIST" in Research Publications/ Patent Grant category, –5th September, 2022

❖ **Dr. J. Shahitha Parveen awarded Cash prize** under "Research Incentives Scheme of BSACIST" in Research Publicationscategory, –5th September, 2022

❖ **Mrs. R. Daulath Banu awarded Cash prize** under "Research Incentives Scheme of BSACIST" in Research Patent Grant category,–5th September, 2022

STUDENT NEWS

Internship in Industries

S. No.	RRN	Name of the Student	Industry/ Institute Name	Date/ Duration
1.	200131601001	AJEER	JK Fenner Limited, Chennai	06/07/23-19/07/23
2.	200131601002	DEEPAK	JK Fenner Limited, Chennai	22/06/23-06/07/23
3.	200131601003	RAGAMATH RUGHI	Motherson Ltd, Sriperumbudur	19/06/23-01/07/23
4.	200131601004	RAGUNATH	JK Fenner Limited, Chennai	22/06/23-06/07/23
5.	200131601005	SYED YASIR SOHAIL	Carborundum Universal Limited, Chennai	22/06/23-06/07/23
6.	200131602001	AKHIL MOHAMED. M.S	Motherson Ltd, Sriperumbudur	19/06/23-01/07/23
7.	200131602002	HARISH. R	Carborundum Universal Limited, Chennai	22/06/23-06/07/23
8.	200131602003	JAIGANESH. R	Kingfa Science and Technology, Puducherry	21/06/23-18/07/23
9.	200131602004	KENNEDY LAISHRAM	Motherson Ltd, Sriperumbudur	19/06/23-01/07/23
10.	200131602005	KURSHEED SULAIHA. J. N.	JK Fenner Limited, Chennai	06/07/23-19/07/23
11.	200131602006	MAANISH RAJ.B	Schlemmer Technology Pvt Ltd, Pondicherry	19/06/23-01/07/23

S. No.	RRN	Name of the Student	Industry/ Institute Name	Date/ Duration
12.	200131602007	MOHAMMAD MAZOOD	JK Fenner Limited, Chennai	06/07/23-19/07/23
13.	200131602008	MOKITH RAJ	Carborundum Universal Limited, Chennai	22/06/23-06/07/23
14.	200131602009	RIYAZ KHAN. A	JK Fenner Limited, Chennai	06/07/23-19/07/23
15.	200131602010	ROSHAN KUMAR. L	Cori Engineers Pvt. Ltd, Chengalpattu	03/07/23-15/07/23
16.	200131602011	SUIREILIU KAMEI	Cori Engineers Pvt. Ltd, Chengalpattu	03/07/23-15/07/23
17.	200131602012	THANVEER MUHAMMAD. M	SA plastic, Tirupur	06/07/23-19/07/23
18.	200131602013	THINGUJAM LISHIMONDY	CIPET-Imphal, Manipur	21/06/23-12/07/23
19.	200131602014	UVARAJ. B	Motherson Ltd, Pondicherry	22/06/23-06/07/23
20.	200131602015	VICTOR IMMANUEL	Carborundum Universal Limited, Chennai	22/06/23-06/07/23
21.	200131602016	YOKESH. K	Motherson Ltd, Sriperumbudur	19/06/23-01/07/23
22.	200131602017	YUGESH. P. J	Motherson Ltd, Sriperumbudur	19/06/23-01/07/23

Internship in Industries

S. No.	RRN	Name of the Student	Industry/ Institute Name	Date/ Duration
1.	1901313601001	AHAMED HASAN. N. M	Motherson, Sriperumbudur	01/08/2022-11/08/2022
2.	1901313601002	AMJADH HUSSAIN. H	Sun Component	08/08/2022-19/08/2022
3.	1901313601003	ARUN. M	Motherson, Sriperumbudur	01/08/2022-11/08/2022
4.	1901313601004	ASWATH .G	Motherson, Sriperumbudur	01/08/2022-11/08/2022
5.	1901313601005	BALAJI . K	Sujeet Plastics, Chennai	26/08/2022-06/09/2022
6.	1901313601006	DEEPAK. A	Venkateshwara FibreGlass	03/08/2022-13/08/2022
7.	1901313601007	GOKUL ANAND .S	HiTech Arai	05/08/2022-13/08/2022
8.	1901313601008	KAVIARASAN .R	Sujeet Plastics, Chennai	26/08/2022-06/09/2022
9.	1901313601009	KEERTHIKA	Sujeet Plastics, Chennai	04/08/2022-20/08/2022
10.	1901313601010	LIYAKATH AHAMED	Motherson, Thiruvandarkoil	03/08/2022-17/08/2022
11.	1901313601011	MOHAMED MARZUQ .U	Sun Component	08/08/2022-19/08/2022
12.	190131601012	PRAKASH. A	Agaram Paints Pvt Ltd, Chennai	03/08/2022-20/08/2022
13.	1901313601013	SANTHOSH. S	Motherson, Sriperumbudur	01/08/2022-11/08/2022
14.	1901313601015	SHANTHINI DEVI	Kongovi Pvt. Ltd, Bangalore	03/08/2022-17/08/2022
15.	1901313601016	SRI NANDHAN .S	Shri lakshmi Pipe Industry	03/08/2022-17/08/2022
16.	1901313601017	SIVANATHAN .S	Sujeet Plastics, Chennai	26/08/2022-06/09/2022

17.	190131601018	THANUSREE. V	JK Fenner Limited, Chennai	03/08/2022-20/08/2022
18.	1901313601019	THARUN. J	Motherson, Thiruvandarkoil	03/08/2022-17/08/2022
19.	1901313601020	VIJAYARAGAVAN .R	Motherson, Sriperumbudur	01/08/2022-11/08/2022
20.	190131602001	AJAY .P	Motherson, Thiruvandarkoil	03/08/2022-17/08/2022
21.	190131602002	AKASH KUMAR .S	Motherson, Thiruvandarkoil	03/08/2022-17/08/2022
22.	190131602003	ANJANA .J	Kongovi Pvt. Ltd, Bangalore	03/08/2022-17/08/2022
23.	190131602004	KRISHNA PRASAD .V	Motherson, Thiruvandarkoil	03/08/2022-17/08/2022
24.	190131602005	MAHALAKSHMI .J	Kongovi Pvt. Ltd, Bangalore	03/08/2022-17/08/2022
25.	190131602006	MALEMNGANBI KHUMBONGMAYUM	GK Plastics	03/08/2022-18/08/2022
26.	190131602007	MANOJ KUMAR N . S	Sujeet Plastics, Chennai	26/08/2022-06/09/2022
27.	190131602008	SHAKTHIVEL KUMARAN .S	Motherson, Thiruvandarkoil	03/08/2022-17/08/2022
28.	190131602009	SUJEET. P	5M solutions	04/08/2022-20/08/2022
29.	190131602010	TAMIL SELVI	Kongovi Pvt. Ltd, Bangalore	03/08/2022-17/08/2022

Student Projects

Team	RRN	Name of the Student	Project Title	Name of the Supervisor
1.	190131601009	Keerthika. N B	**Effect of thermally induced grafting of Bismaleimides on Reclaim Rubber and SBR/BR blends**	**Dr.S.Shamshath Begum**
2.	190131601007	Gokul Anand. S	**Preparation and Characterization of Natural Rubber Composites with Novel Biochar**	**Dr.S.Shamshath Begum**
	190131601010	Liyakath Ahamed. M		
	190131601019	Tharun. J		
	190131602002	Akash Kumar. S		
	190131602004	Krishna Prasad. V		
3.	1901313601005	Balaji. K	**Development and Characterization of Bio-Degradable Composite for Automobile application**	**Mr. Basanta Kumar Behera**
	1901313601012	Prakash. A		
	1901313601017	Sivanathan. S		
	1901313602001	Ajay. P		
	1901313602009	Sujeet. P		
4.	1901313601006	Deepak. A	**Development of Bio-Hybrid Composite for Helmet application**	**Mrs. R. DaulathBanu**
	1901313601008	Kaviarasan. R		
	1901313602007	Manoj Kumar. N. S		
5.	1901313601015	Shanthini Devi	**Development of Sustainable Bio-based Monomer for Polymer Synthesis (Project funded by Taiwanbased Experience and Education program – TEEP)**	**Mr. D. Murali Manohar**
	1901313602005	Mahalakshmi		
6.	1901313601001	Ahamed Hasan. N. M	**Development of Polylactic acid-based Hydrogel for Biomedical Applications**	**Dr. S. Shahitha Parveen**
7.	1901313601016	Srinandhan. S		

Student Projects

Team	RRN	Name of the Student	Project Title	Name of the Supervisor
8.	1901313602003	Anjana	Development of Sustainable Polymer Composite for Potential Windmill Blade Application	Mr. D. Murali Manohar
	1901313602006	MalemnganbiKhumbongmayum		
	1901313602010	Tamilselvi		
9.	1901313601018	Thanushree	Nanocellulose Crystals as Sustainable Biofiller for Tyre Tread Application	Dr.D.Murali Manohar
10.	1901313601003	Arun. M	Development and characterization of Poly(vinylidene-co-hexafluoropropylene)/Poly(ethylene Oxide) based Polymer electrolytes for Lithium-ion Battery	Dr. J. Shahitha Parveen
	1901313601013	Santhosh. S		
	1901313601020	Vijayaraghavan. R		
	1901313602008	Shakthivel Kumaran. S		
11.	1901313601002	Amjadh Hussain. H	Development of Flame-Retardant Epoxy Nano Composite	Mrs. R. Daulath Banu
	1901313601004	Aswath. G		
	1901313601011	Mohammed Marzuq. U		
	1901313601016	Srinandhan. S		

Student Projects

Journey towards Sustainable Packaging

Myself M. Kalaiselvi and my Team Keerthana.P, Daniel Jospher,





Shashank and Venkatsai

We are currently pursuing third-year B.Tech in polymer engineering and on a mission to transform waste into eco-friendly packaging solutions. Our project tackles plastic pollution by blending recycled PET bottle scraps with bagasse, a renewable sugarcane byproduct. This innovative solution reduces plastic waste and promotes biodegradable material

We meticulously researching and experimenting to create the perfect PET-bagasse blend. Strength, durability, and environmental friendliness are at every stage, from waste collection to production.

This project is about more than sustainability; it's about pioneering change. As consumers embrace eco-conscious choices, we demonstrate the power of repurposing waste into valuable resources. Our work paves the way for a future where responsible manufacturing and innovative design go hand-in-hand.

Driven by a passion for a greener future, we not only navigating the complexities of material science but also shape a sustainable landscape for industries and communities worldwide.

Student Projects

Effect of Thermally Induced Grafting of Bismaleimides on Reclaim Rubber and SBR/BR Blends

Keerthika N B

2019 – 2023 Batch

Myself, Keerthika, a passionate youngster concerned about sustainability and determined to make a difference and a dynamic force driving positive change in our world.Armed with creativity, enthusiasm, and a commitment to environmental stewardship, we lead the charge toward a greener, more sustainable future.

Rapid growth in the number of used tires around the globe was recorded due to the increasing number of vehicles on the road. Landfilling and tiremono-filling were among the earliest ways of tire disposal around the world. Landfilling is one of the most undesirable methods of disposing the used tires as it causes severe environmental problems and holds no promising future. The shape and impermeability of discarded tires allow them to hold water for a long period, providing sites for mosquito larva breeding that are vectors of deadly diseases such as dengue and malaria. Discarded tires could also present breeding grounds to other animals such as rodents and snakes. Moreover, discarded tires pose a fire threat, especially during summer and it is difficult to be extinguished. It therefore inspired me to recycle the old tires into new ones by replacing the traditional rubbers in the conventional tire manufacturing process.

The primary objective of this project is to develop sustainable and cost-effective materials to replace traditional virgin rubbers. To reconstitute a natural rubber, reclaimed rubber is used in the tire tread compound, while maintaining or improving the performance characteristics of the tire. The reclaimed rubber was modified and added to the tire tread compound which mainly consists of SBR/BR blends. The results show a promisingimprovement in mechanical strength.

Overall, the modification of reclaimed rubber is a valuable method for reducing waste and promoting sustainability in the rubber industry. By repurposing old rubber materials and improving their properties, manufacturers can reduce their reliance on virgin materials and help reduce the environmental impact of rubber production.

“High-Value Compounds Extraction from Spent Coffee Grounds: A Deep Eutectic Solvent Approach”.

I’m **Shanthini Devi** from the Department of Polymer Engineering, 2023 Batch. I have been a visiting research student at National Sun Yat University, Taiwan. My Research Project focuses on the synthesis of Hydroxymethyl Furfural (HMF) from Biomass. HMF is a high-value chemical that is a precursor for Furan dicarboxylic acid (FDCA), which is a monomer for the polymer Polyethylene Furonaote (PEF). which can potentially replace the synthetic polymer PET.

Hey fellow readers, this is **Mohamed Fazil (220131601005).** I'm an undergraduate student currently purusing my second year in Polymer Engineering at BSA Crescent University. My learning journey has been both exhilarating and enriching. Delving deeper into the intricacies of polymer science, I've expanded my understanding of molecular structures, polymerization processes, and the diverse applications of polymers in various industries. From mastering the fundamentals of polymer synthesis to exploring advanced topics like polymer rheology and nanocomposites, each lesson has been a building block in my quest for expertise. Through hands-on experiments, collaborative projects, and insightful lectures, I've honed my problem-solving skills and gained invaluable practical experience. I have a strong passion for material science and would like to work under R&D segment for a reupdated aeronautical or aerospace company in the future years.I'm also interested in pursuing my master's at a top ranked university which offers relevant courses to my undergraduate.I'm currently working under a material with unwavering ionic conductivity for my Project Based Learning (course). I'm trying to improve its properties onEMS (Electro Magnetic Shielding)with novel materials with high impact on service condition. I've attended multiple workshops organized by IITM as well as MIT Chennai on behalf of my academic excellence. I have taken part in many events and hackathons, in which I've secured first place in Cresathon (an intercollege 48 hours (about 2 days)-hackathon event) which is worth mentioning. I'm also an existing member of Crescent Energy club and CIIC (Crescent Innovation and Incubation Club). As I embark on this journey, I am excited to uncover new insights, contribute to groundbreaking research, and ultimately make a meaningful impact in the ever-evolving field of polymer engineering.



A warm welcome to the esteemed viewers, I'm **Ms.Logeswari S P (210131601011)**.I'm an undergraduate student currently pursuing third year B.Tech Polymer Engineering at BSA Crescent Institute of Science and Technology. Myself and my teammates **Ms.Ramyashree V (210131601013) and Mr. Daniel C G Jospher (210131601006)**, were more passionate about the sustainable development in this circular economy.

This passion and interest made us to do research in various sustainable projects. Our long-term aspiration and goal to produce a sustainable composite material had given a desirable outcome with good and balanced optimum properties. We used the natural fibers which we extracted through the water retting and mechanical retting process, and we used the thermoplastic plastic resins in both virgin as well as regrind form. Various thermal and mechanical properties were analysed and obtained the optimum properties.

Most prominently, the developed Bio-composite possessed a good bio-degradation property which is the most required necessity of our environment. Further characterization and thermal analysis must be performed and based on all our findings the applications of our bio-composites will be evaluated.

I am **Musthaq Naina B**, pursuing second year polymer engineering at B.S Abdur Rahman Crescent Institute of Science and Technology (treasurer of crescent readers club & associate member of crescent student council). I am more passionate and curious about the packaging technology playing with various plastics, as recycling of those plastics would be a stringent task. Nowadays usage of plastics will be an unavoidable one. As my academic journey is progressing at an intermediate level, i am doing a lot of research and studies under the topics of bio – degradable plastics, which will be better for a sustainable environment. on recycling of plastics, I am sure that it creates new jobs, great revenue, as this is the process of turning waste plastics into new products, reducing environmental impact and creating economic benefits.

I am **Tharun** (2019-2023). The title of my project is “Preparation and characterization of natural rubber composites with novel biochar”. The simplification is that, preparing a natural composite based on rubber obtained from natural sources and adding reinforcements that are obtained from natural sources. Ever since I took up the course of polymer engineering, the most common comment I heard was, “Polymers are harmful and are going to be replaced by natural sources”. This droves me into preparing this project. Preparing a rubber composite with agricultural waste and utilizing them in day-to-day activities is the main idea. Due to people’s much lesser knowledge about this class of engineering materials and their carelessness in disposing them is creating an anti-usage campaign against one of the most important class of materials. Knowingly or unknowingly we are using polymers in our daily activities and it is impossible to eradicate from our lives. Therefore, preparing these kinds of polymeric products will enhance sustainability thereby bettering our ecosystem.

I am **Deepak** (2019-2023). Bio-hybrid composites offer a promising avenue for developing sustainable materials with enhanced thermal and mechanical properties. By combining natural or bio-based materials with synthetic polymers, it is possible to achieve a synergistic effect that leverages the strengths of both components. This project is about combining natural fiber and synthetic fiber using epoxy resin to bring a Bio-hybrid fiber which will be suitable for various applications. By combining both natural and synthetic fiber all the mechanical and thermal properties will give higher results than the normal fibers.

Bio-hybrid composites, which combine natural fibers with traditional reinforcement materials, have garnered significant attention as sustainable alternatives to conventional composites. This research project investigates the characterization, mechanical and thermal properties of incorporating pineapple leaf fiber (PALF) and glass fiber (GF) as reinforcements in an epoxy resin matrix for bio-hybrid composite development. The characterization of bio-hybrid composites using advanced techniques allows for a comprehensive understanding of their structure-property relationships and guides the development of improved materials for various applications, including automotive, aerospace, construction, and packaging industries.

Field Visits/ Industrial Visits organized by the Department in the academic year (July 2022-June 2023)

S. No.	Participant Details				Name of faculty involved	Industry Visited	Date of visit
	Programme	Sem.	Sec.	No. of Students			
1.	B. Tech	V	A	22	Mr. D. Murali Manohar	Motherson Automotive Technologies & Engineering Ltd, Chennai	23.11.2022
2.	B. Tech	VII	A	29	Mrs. R. Daulath Banu	Motherson Automotive Technologies & Engineering Ltd, Chennai	23.11.2022
3.	B. Tech	VII	A	29	Dr. J. Shahitha Parveen & Mr. D. Murali Manohar	Polyhose India (Rubber) Pvt. Ltd, Chennai	09.11.2022
4.	B. Tech	III	A	26	Dr. Revathi Purusothaman & Mr. Basanta Kumar Behera	Carborandum Universal Ltd, Chennai	19.11.2022

Industrial Visit
"Carborandum Universal Ltd,
19th November, 2022

News Letter (2022-2023)

Students Achievements

S. No	Name of the Students	Name of the Event	Name of the Symposium/ Competition	Won (Position)	Organizer	Date of Achievement
1.	A. Riyaz Khan	Poster Presentation	Confluence'23	1st	BSACIST	12/ 04/ 2023
2.	M. Mohammed Mazood	Poster Presentation	Confluence'23	1st	BSACIST	12/ 04/ 2023
3.	J. N. Kursheed	Poster Presentation	Confluence'23	1st	BSACIST	12/ 04/ 2023
4.	S. Ajeer	Poster Presentation	Confluence'23	1st	BSACIST	12/ 04/ 2023
5.	Deepak D	Product Decoding	Elastoplaz 23	Runner	MIT, Anna University	01/ 04/ 2023
6.	Deepak D	Idea Presentation	Elastoplaz 23	Winner	MIT, Anna University	01/ 04/ 2023
7.	Jai Ganesh	Product Decoding	Elastoplaz 23	Winner	MIT, Anna University	01/ 04/ 2023
8.	Keerthika	Paper Presentation	Elastoplaz 23	Winner	MIT, Anna University	01/ 04/ 2023
9.	A. Riyaz Khan	Paper Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
10.	A. Riyaz Khan	Poster Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
5.	M. Mohammed Mazood	Paper Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
6.	M. Mohammed Mazood	Poster Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
7.	J. N. Kursheed	Paper Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022

Students Achievements

S. No	Name of the Students	Name of the Event	Name of the Symposium/ Competition	Won (Position)	Organizer	Date of Achievement
8.	J. N. Kursheed	Poster Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
9.	S. Ajeer	Paper Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
10.	S. Ajeer	Poster Presentation	TEPIC 22	1st	CIPET, Chennai	11/ 11/ 2022
11.	S Ajeer	Poster Presentation	Chemflux 10.0	1st	SRM, Chennai	3/11/ 2022
12.	S Ajeer	Paper Presentation	Chemflux 10.0	2nd	SRM, Chennai	3/ 11/ 2022
13.	M. Mohammed Mazood	Poster Presentation	Chemflux 10.0	1st	SRM, Chennai	3/11/ 2022
14.	M. Mohammed Mazood	Paper Presentation	Chemflux 10.0	2nd	SRM, Chennai	3/11/ 2022
15.	A. Riyaz Khan	Poster Presentation	Chemflux 10.0	1st	SRM, Chennai	3/11/ 2022
16.	A. Riyaz Khan	Paper Presentation	Chemflux 10.0	2nd	SRM, Chennai	3/11/ 2022
17.	J. N. Kursheed	Poster Presentation	Chemflux 10.0	1st	SRM, Chennai	3/11/ 2022
18.	J. N. Kursheed	Paper Presentation	Chemflux 10.0	2nd	SRM, Chennai	3/11/ 2022

NPTEL Courses

S.No	Name of the Student	RRN	Name of the course & Credit	Duration	Grade Obtained
1	Aneesh P. K	210131601002	Polymer Reaction Engineering & 4	12 Weeks	Elite
2	Logeswari S. P	210131601011	Polymer Reaction Engineering & 4	12 Weeks	Elite
3	Ramya Shree.V	210131601013	Polymer Reaction Engineering & 4	13 Weeks	Elite
4	Manoj P. V	210131601015	Polymer Reaction Engineering & 4	12 Weeks	Elite
5.	Kalaiselvi	210131601009	Polymer Reaction Engineering & 4	13 Weeks	Elite

Mr. Deepak of third year (2020-2024) have **won 2nd place** in the event **"Product Decoding"**, organized by Elastoplaz '23, a National Level Technical Symposium on 01.04.2023 at MIT Campus, Anna University, Chennai.

Ms. N. B. Keerthika of final year (2019-2023) have **won 1st place** in the event **"Paper Presentation" titled "Effect of Thermally induced grafting of Bismaleimides on Rubber Blends – A Review"**, organized by Elastoplaz '23, a National Level Technical Symposium on 01.04.2023, at MIT Campus, Anna University, Chennai.

Supervisor:Dr.S.ShamshatjhBegum

Mr. S. Ajeer, Ms. J.N. Kursheed Sulaiha, Mr. A. Riyaz Khan and Mr. Mohammad Mazood of third year (2020-2024) have won 2nd place in the event **"Poster Presentation" titled "Preparation and Characterization of Sustainable Starch Based Bio-Film Reinforced with Novel Filler",** organized by Elastoplaz '23, a National Level Technical Symposium on 01.04.2023 at MIT Campus, Anna University, Chennai..

Supervisor: Dr. S. Shamshath Begum

Mr. Jaiganesh of third year (2020-2024) have **won 1st place** in the event "**Product Decoding",** organized by Elastoplaz '23, a National Level Technical Symposium on 01.04.2023, at MIT Campus, Anna University, Chennai

Mr. A. Riyaz Khan, Mr. S. Ajeer, Ms. J.N. Kursheed Sulaiha, and Mr. Mohammad Mazood of third year (2020-2024) have **won 1st place** in the event **"Poster Presentation" titled "A Scientific Methodology to Extract Energy Oil from Plastic Waste by Pyrolysis Process",** organized by Tepic'22, a National Level Technical Symposium on 11.09.2022 at Central Institute of Petrochemicals Engineering & Technology (CIPET), Chennai.

Supervisor:Dr. S. Shamshath Begum

Ms. J.N. Kursheed Sulaiha, Mr.S. Ajeer, Mr. Mohammad Mazood, and Mr. A. Riyaz Khan of third year (2020-2024) have **won 1st place** in the event **"Paper Presentation" titled "Recover and Reuse of Egg Shell Waste as a Flame Retardant in Flexible Polyurethane Foam",** organized by Chemflux'22, a National Level Technical Symposium on 03.09.2022 at SRM University, Chennai.

Supervisor: Dr. S. Shamshath Begum

Ms. J Mahalakshmi (First from Left) and Ms. A. Shanthini (Second row first from Left) of final year (2019-2023) B. Tech Polymer Engineering program attended a project cum internship at

National Sun Yat-Sen University
Environmental Engineering Research Institute
under TEEP program
(25.03.2023 – 01.07.2023)

https://news.taiwannet.com.tw/c-1/97075/%E5%9C%8B%E7%AB%8B%E4%B8%AD%E5%B1%B1%E5%A4%A7%E5%AD%B8%E7%92%B0%E5%A2%83%E5%B7%A5%E7%A8%8B%E7%A0%94%E7%A9%B6%E6%89%80%E6%9C%80%E6%96%B0%E7%99%BC%E6%98%8E%E6%90%B6%E5%85%88%E7%9C%8B.html?fbclid=PAAabgmbBWg9fam0As3_KD4JVjeWwU3o8XuTQQeccJpmH6tkrAJo_AKdWp11I

Convocation- 2023

-

Degree award ceremony of Batch 2019-2023

Ms. N. B. Keerthika was awarded Gold medal for achieving top ranking position in the academic year 2019-2023

Placement (2019-2023 Batch)

S.No.	RRN	Name	Details
1	1901313601001	AHAMED HASAN .N . M	Higher Studies
2	1901313601002	AMJADH HUSSAIN . H	Higher Studies
3	1901313601003	ARUN .M	Mould Tech Pvt Ltd, Guduvancheri, Chennai
4	1901313601004	ASWATH. G	Indutch Composites, Chennai
5	1901313601005	BALAJI .K	JBM Auto Ltd.
6	1901313601006	DEEPAK .A	Indutch Composite, Chennai
7	1901313601007	GOKUL ANAND .S	Jumbo Bags Pvt.Ltd.
8	1901313601008	KAVIARASAN .R	MATE - Wallajabad
9	1901313601009	KEERTHIKA .N. B	Apollo Tyres Ltd – Tada plant
10	1901313601010	LIYAKATH AHAMED	MATE- Pondur
11	1901313601011	MOHAMED MARZUQ .U	Higher Studies
12	1901313601012	PRAKASH .A	Entrepreneur
13	1901313601013	SANTHOSH .S	MATE - Wallajabad
14	1901313601015	SHANTHINI DEVI. A	Higher Studies
15	1901313601016	SRI NANDHAN .S	Entrepreneur

News Letter (2022-2023)

Placement (2019-2023Batch)

S.No.	RRN	Name	Details
16	1901313601017	SIVANATHAN .S	Apollo Tyres Ltd – Tada plant
17	1901313601018	THANUSHREE .V	Apollo Tyres Ltd- Global R&D Asia, Chennai
18	1901313601019	THARUN .J	MATE- Pondur
19	1901313601020	VIJAYARAGAVAN .R	MATE- Pondur
20	190131602001	AJAY .P	Motherson, Chennai
21	190131602002	AKASH KUMAR .S	Bhansali Engineering Polymers, Chennai
22	190131602003	ANJANA .J	India Japanlighting Pvt Ltd.
23	190131602004	KRISHNA PRASAD .V	Jumbo Bags Pvt Ltd.
24	190131602005	MAHALAKSHMI .J	Renault Nissan Technology,Chennai
25	190131602006	MALEMNGANBI KHUMBONGMAYUM	Higher Studies
26	190131602007	MANOJ KUMAR N . S	MATE- Pondur
27	190131602008	SHAKTHIVEL KUMARAN .S	Higher Studies
28	190131602009	SUJEET .P	Entrepreneur
29	190131602010	TAMILSELVI . K	Kingfa Science& Technology India Ltd.

Higher Studies Abroad (2019-2023Batch)

Mr. N. M. Ahamed Hasan

M.Sc Materials Science and Engineering

Friedrich Alexander Universitat

Erlangen, Germany

Mr. H.Amjadh Hussain

M.Sc Battery Materials and Technology

University of Bayreuth

Germany

Ms. A. Shanthini Devi

M.ScPolymer Science

Technical University, Berlin

Germany

Competitive Exams(2019-2023 Batch)

Mr. N. M. Ahamed Hasan

IELTS

Overall Band Score - 6.5

CEFR Level - B2

Mr. H. Amjadh Hussain

IELTS

Overall Band Score - 6.5

CEFR Level - B2

Ms. A. Shanthini Devi

IELTS

Overall Band Score - 7

CEFR Level - C1

Editorial Team

Staff Coordinators

Dr. S. Shamshath Begum

HoD (i/c)

Ms. J. Dafini

Visiting faculty

Student Coordinators

Thanveer Mohammed

Final Year

(2020-2024 Batch)

Tharik Azeez .M

Second Year

(2022-2026 Batch)

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