



**CHRIST**

(DEEMED TO BE UNIVERSITY)  
BANGALORE | DELHI NCR | PUNE

# AFFORDABLE & CLEAN ENERGY

## SDG-7

## ANNUAL REPORT 2023-24

*Powering Progress  
with Clean Energy*



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## SDG 7: Affordable & Clean Energy

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## **Sustainable Development Goals (SDG) Events\_ Stall Exhibition on Renewable Energy 14 February 2024**

**Venue:** Garden Street, Bangalore Central Campus

**No. of Participants:** open to all

The Department of Physics and Electronics at CHRIST (Deemed to be University) organised a Stall Exhibition on Renewable Energy on 14 February 2024 as part of its initiatives to advance the Sustainable Development Goals (SDGs), particularly SDG 7 – Affordable and Clean Energy, and SDG 13 – Climate Action. The exhibition featured interactive models, informative posters, and live demonstrations that showcased various renewable energy technologies, including solar, wind, hydro, and biomass energy. The initiative provided students and visitors with an engaging platform to explore sustainable alternatives to traditional energy sources and understand their environmental impact. Faculty members and student volunteers collaboratively designed the display to promote awareness of clean energy innovation and the urgent need for global transition toward renewable resources. The exhibition attracted a large number of attendees from the university community, fostering meaningful discussions on sustainability and practical applications of renewable technologies in daily life.



**CHRIST**  
UNIVERSITY  
Bangalore, India

**SDG CELL PHYSICS &  
ELECTRONICS DEPARTMENT**

*PRESENTS*

# **AWARENESS CAMPAIGN**




**DATE:**  
14TH FEBRUARY

**VENUE:**  
GARDEN STREET

**Stall 1: Demonstrations on renewable forms  
of energy and its usage**

**Stall 2: E-waste management**

**IN COLLABORATION WITH**



## **Sustainable Development Goals (SDG) Events\_ E-waste management and awareness talk**

**Venue:** KE Auditorium, Block 4, Bangalore Central Campus

**No. of Participants:** open to various programs

As part of the same Sustainable Development Goals (SDG) initiative, the Department of Physics and Electronics, CHRIST (Deemed to be University), conducted an Awareness Talk on E-Waste Management on 14 February 2024, led by Mr Nischith Shetty from SOGO Synergy. The session aimed to sensitise students and faculty about the growing challenge of electronic waste and its impact on environmental and human health. Mr Shetty highlighted the importance of proper disposal methods, recycling, and sustainable consumption of electronic devices to minimise toxic waste. The talk was attended by students from BSc PCM, PME, PC, PM, and MSc programs, along with faculty members, who actively participated in discussions and a Q&A session. The event effectively deepened participants' understanding of responsible e-waste management. This initiative not only strengthened environmental awareness among the academic community but also encouraged behavioural change towards sustainable living practices.

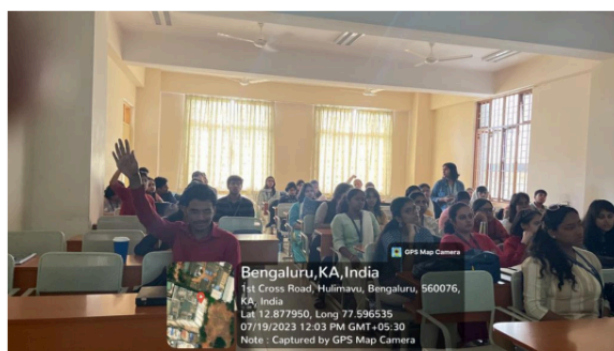


### Introduction to SDG's 19 July 2023

**Venue:** Room 401

**No. of Participants:** 97

The Department of Media Studies, CHRIST (Deemed to be University), organised an offline orientation session titled “*Introduction to SDGs*” on 19th July 2023 under the guidance of Dr Jais Merlin P. Augustine, Assistant Professor, and presented by Ms Labdhi Pirgal (3 JOUH). The session aimed to introduce first-year students to the 17 Sustainable Development Goals (SDGs) established by the United Nations and to emphasise their relevance within the university and departmental context. The presentation provided a comprehensive overview of global sustainability objectives such as poverty alleviation, gender equality, clean energy, and climate action, while highlighting the department’s specific goals SDG 7: Affordable and Clean Energy, SDG 15: Life on Land, SDG 16: Peace, Justice, and Strong Institutions, and SDG 17: Partnerships for the Goals. Students actively participated, sharing their insights and perspectives on the integration of sustainability within media education. The session successfully familiarised students with the SDG framework and encouraged them to align their academic and creative pursuits with sustainable development principles.



## **Introduction to SDG's** **19 July 2023**

**Venue:** Room 403,

**No. of Participants:**

An offline orientation session on “*Introduction to SDGs*” was conducted on 19th July 2023, led by Ms Gowri Jagdish (3 JOUH) under the guidance of the Department of Media Studies. The session aimed to familiarise first-year students of 1 BAM&J with the 17 Sustainable Development Goals (SDGs) formulated by the United Nations, emphasising the department’s assigned goals: SDG 7: Affordable and Clean Energy, SDG 15: Life on Land, SDG 16: Peace, Justice, and Strong Institutions, and SDG 17: Partnerships for the Goals. Through an engaging presentation and interactive discussions, students explored the relevance of SDGs in media education and their role in driving sustainable change. The Q&A session sparked curiosity and meaningful dialogue, with many students expressing enthusiasm to volunteer for the Media Studies Department’s SDG Cell. The session not only enhanced awareness of sustainability and global responsibility but also inspired active participation in campus-level SDG initiatives, aligning with SDG 4.7 – Quality Education for Sustainable Development.



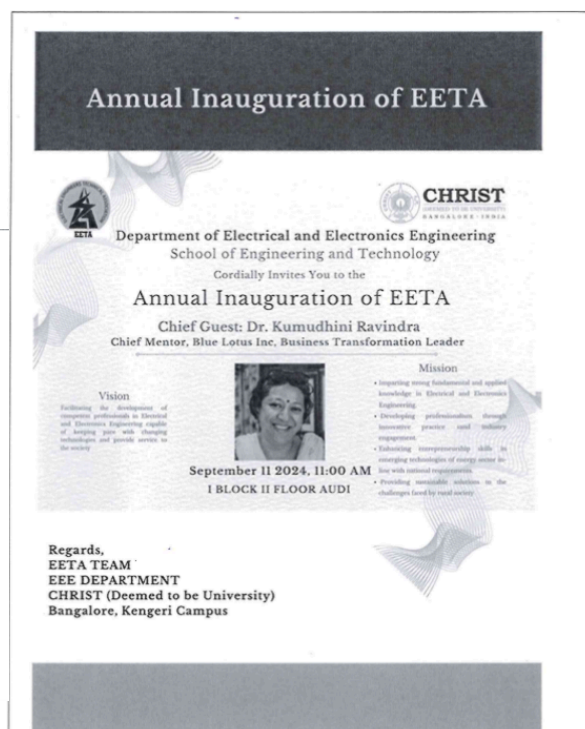


### SDG 7: Affordable And Clean Energy Guest Talk 09 November, 2024

**Venue:** Block 1 Auditorium, Kengeri Campus

**No. of Participants:** 65

The SDG-7 Affordable and Clean Energy event, conducted by Dr Kumudheni Ravindra, offered students valuable insights into the importance of sustainable energy solutions. Through expert interactions and engaging discussions, students developed a deeper understanding of the global challenges and opportunities in achieving energy sustainability. The session highlighted how innovation and technology play a key role in expanding access to clean and affordable energy. Students were encouraged to think critically about real-world applications and innovative approaches to address energy-related issues. Networking with professionals in the field further enriched their learning, motivating them to explore careers in renewable energy and sustainability. Overall, the event fostered environmental awareness, inspired proactive engagement, and strengthened the participants' sense of responsibility toward promoting clean energy practices, aligning with the goals of SDG 7—ensuring access to affordable, reliable, sustainable, and modern energy for all.



## **Photoresponse and Electrochemical Behaviour of Azobenzene Anchored Graphene Oxide for Energy Storage Application- Research**

**07 March, 2023**

**Venue:** Department of Chemistry, CHRIST (Deemed to be University), Bengaluru, Nano Laboratory, School of Physics, Madurai Kamaraj University

**No. of Participants:** 5 scholars

The Department of Chemistry, CHRIST (Deemed to be University), Bengaluru, in collaboration with the Nano Laboratory, School of Physics, Madurai Kamaraj University, conducted a research initiative titled “*Photoresponse and Electrochemical Behaviour of Azobenzene Anchored Graphene Oxide for Energy Storage Application.*” The project, led by Dr Sreeja P. Balakrishnan and Dr Sujin P. Jose, aimed to develop innovative photoactive hybrid materials capable of storing solar energy efficiently. This study explored the synthesis and characterisation of azobenzene-functionalized graphene oxide, focusing on its photoisomerisation and electrochemical performance for use in solar thermal fuels and energy storage devices.

The research demonstrated enhanced energy density and power output, highlighting the material’s potential for clean and sustainable energy applications. By advancing solar energy storage technologies, this initiative contributes directly to the United Nations Sustainable Development Goal (SDG) 7 – Affordable and Clean Energy, and supports SDG 9 – Industry, Innovation, and Infrastructure through scientific innovation.

This collaborative work reflects the University’s commitment to sustainable research and innovation, encouraging interdisciplinary collaboration among students and researchers in pursuit of renewable energy solutions for a more sustainable future.

**Strategically designed multiwalled carbon nanotube/bismuth ferrite/ polyaniline nanocomposites and unlocking their potential for advanced supercapacitors**

**01 March, 2023**

**Venue:** Department of Chemistry, CHRIST (Deemed to be University), Bengaluru

**No. of Participants:** 5 scholars

The research paper titled “*Strategically Designed Multiwalled Carbon Nanotube/Bismuth Ferrite/Polyaniline Nanocomposites and Unlocking Their Potential for Advanced Supercapacitors*” was conducted at the Department of Chemistry, CHRIST (Deemed to be University), Bengaluru, in collaboration with King Saud University, Riyadh (Saudi Arabia), and Sunway University, Malaysia. The study was published on March 1, 2023, in the journal *Materials Chemistry and Physics (Elsevier)*.

The research was carried out by Ms Anjana Baby and Ms Tejashwini V., under the supervision of Dr Sreeja P. Balakrishnan, Department of Chemistry, CHRIST (Deemed to be University). The international collaborators included Dr K. Kaviyarasu from King Saud University and Dr V. M. Sivakumar from Sunway University.

This project focused on developing high-performance nanocomposites (MWCNT/BF/PANI) for advanced supercapacitor applications, achieving a specific capacitance of  $3640 \text{ F g}^{-1}$  at  $5 \text{ A g}^{-1}$  and retaining 95% capacity after 6000 cycles. The findings highlight the potential of nanostructured materials for sustainable and efficient energy storage solutions. Aligned with SDG 7 – Affordable and Clean Energy and SDG 9 – Industry, Innovation, and Infrastructure, this research promotes innovation in clean energy materials and sustainable technological development.



## **One-pot hydrothermal synthesis of MWCNTs/NiS/graphitic carbon nitride as next-generation asymmetric supercapacitors**

**16 April, 2024**

**Venue:** Department of Chemistry, CHRIST (Deemed to be University), Bengaluru

**No. of Participants:** 4 scholars

The Department of Chemistry at CHRIST (Deemed to be University), Bengaluru, in collaboration with the Nano Laboratory, School of Physics, Madurai Kamaraj University, successfully conducted an advanced research initiative on *One-pot Hydrothermal Synthesis of MWCNTs/NiS/Graphitic Carbon Nitride as Next-Generation Asymmetric Supercapacitors*. The study was led by Ms Anjana Baby under the supervision of Dr Sreeja P. B., with contributions from Dr J. Vigneshwaran and Dr Sujin P. Jose. The project focused on developing efficient electrode materials with superior capacitive properties for sustainable energy storage. The work demonstrated how integrating multiwalled carbon nanotubes (MWCNTs), nickel sulfide, and graphitic carbon nitride enhances electrical conductivity and stability, achieving a remarkable specific capacitance of  $2432 \text{ F g}^{-1}$  and retaining 98% performance after 10,000 cycles. This innovation highlights the department's commitment to research that advances clean energy solutions and sustainable technologies. The paper was published in the *Journal of Alloys and Compounds* (Vol. 992, 2024).

## **Hybrid Architecture of Multiwalled Carbon Nanotubes/Nickel Sulphide/Polypyrrole Electrodes for Supercapacitor**

**05 March, 2024**

**Venue:** Department of Chemistry, CHRIST (Deemed to be University), Bengaluru

**No. of Participants:** 5 scholars

The Department of Chemistry at CHRIST (Deemed to be University), Bengaluru, in collaboration with the Nano Laboratory, School of Physics, Madurai Kamaraj University, successfully carried out a research project titled “*Hybrid Architecture of Multiwalled Carbon Nanotubes/Nickel Sulphide/Polypyrrole Electrodes for Supercapacitor.*” The study, published in *Materials Today Sustainability* (Elsevier) on March 5, 2024, focused on synthesising advanced nanocomposites to develop high-performance and sustainable energy storage systems.

The researchers employed a two-step hydrothermal and in-situ polymerisation technique to fabricate the MWCNT/NiS/PPy composite, which displayed a unique tube-in-tube structure. The hybrid electrode demonstrated a specific capacitance of  $1755 \text{ F g}^{-1}$  at  $3 \text{ A g}^{-1}$  and maintained 97% coulombic efficiency after 10,000 cycles, indicating superior stability and performance. Furthermore, an asymmetric coin cell fabricated using this material achieved an energy density of  $33.12 \text{ Wh kg}^{-1}$  and a power density of  $6750 \text{ W kg}^{-1}$ , marking its potential for future hybrid energy storage systems.

This study reflects the institution’s strong commitment to sustainable technological research, aligning with SDG 7 – Affordable and Clean Energy and SDG 9 – Industry, Innovation, and Infrastructure, through innovations that promote clean energy technologies and industrial advancements.

## **Photoresponsive Carbon-Azobenzene Hybrids: A Promising Material for Energy Devices**

**28 February, 2024**

**Venue:** Department of Chemistry, CHRIST (Deemed to be University), Bengaluru

**No. of Participants:** 3 scholars

The Department of Chemistry, CHRIST (Deemed to be University), Bengaluru, carried out an extensive research review titled “*Photoresponsive Carbon-Azobenzene Hybrids: A Promising Material for Energy Devices.*” The paper, published in *ChemPhysChem* (Wiley-VCH) on February 28, 2023, was authored by Ms Anjana Baby, Ms Athira Maria John, and Dr Sreeja Puthenveetil Balakrishnan.

The study explored the role of azobenzene-based photoresponsive materials in the development of solar thermal fuels and energy storage systems. It examined the functionalization of carbon materials such as graphene and carbon nanotubes with azobenzene to enhance energy density, photoisomerisation efficiency, and stability. The review highlighted how carbon-azo hybrids can store solar energy chemically through trans-cis isomerisation and release it as heat upon stimulation, offering a clean and renewable approach to energy storage.

The research concluded that optimising substituents, molecular interactions, and hybrid configurations can significantly improve energy conversion and storage capabilities, paving the way for next-generation sustainable energy devices.

This work aligns with SDG 7 – Affordable and Clean Energy and SDG 9 – Industry, Innovation and Infrastructure, by promoting innovation in renewable energy materials and sustainable technological advancement.

## **Azopyridine as a Linker Molecule in Polyaniline-Grafted Graphene Oxide Nanocomposite Electrodes for Asymmetric Supercapacitors**

**03 October, 2023**

**Venue:** Department of Chemistry, CHRIST (Deemed to be University), Bengaluru

**No. of Participants:** 7 Authors

The study reports the synthesis of a polyaniline (PANI)-grafted graphene oxide (GO)-azopyridine (Azo) nanocomposite for use in high-performance asymmetric supercapacitors. Using interfacial polymerisation, azopyridine molecules were covalently anchored to GO, serving as spacers that prevent GO agglomeration and enhance surface area for charge storage. PANI was then polymerised onto this functionalized structure to form the PANI/GO-Azo nanocomposite. Structural and chemical characterisations (FTIR, XRD, Raman, XPS, SEM, TEM) confirmed successful synthesis, with improved thermal stability and mesoporous morphology facilitating efficient ion transport. Electrochemical tests showed a specific capacitance of  $426 \text{ F g}^{-1}$  at  $0.25 \text{ A g}^{-1}$  and 98.5% Coulombic efficiency after 5000 cycles, indicating excellent stability. When assembled into an asymmetric supercapacitor using activated carbon as the negative electrode, the device achieved an energy density of  $12.45 \text{ Wh kg}^{-1}$  and a power density of  $274.9 \text{ W kg}^{-1}$ , successfully powering a red LED. The results highlight the synergistic role of azopyridine in enhancing conductivity and preventing restacking, demonstrating that the PANI/GO-Azo nanocomposite is a promising electrode material for next-generation energy storage applications.

## **2024 Year of Climate Action**

**Venue:** CHRIST (Deemed to be University), Central Campus, Bangalore, India.

CCA Office: Cabin No. 20, Block 3, Central Campus

The *Christites for Climate Action (CCA)* is a student-led movement initiated by Rev. Fr. Dr Jose C.C., Vice Chancellor of CHRIST (Deemed to be University), Bangalore. Guided by the vision of fostering harmony between humanity and nature, CCA focuses on raising awareness and encouraging sustainable practices aligned with the United Nations Sustainable Development Goal 13: Climate Action. Through a series of impactful initiatives such as *plogging treks*, *tree plantation drives*, and *seed distribution campaigns*, the organisation actively promotes environmental conservation. Notably, its *Menstrual Sustainability Week* combined creative awareness with traditional dance to advocate for sustainable menstrual products and women's health. Students and alumni testimonials highlight CCA as a transformative platform that nurtures leadership, responsibility, and environmental consciousness. By engaging communities within and beyond the university, CCA continues to inspire proactive action towards combating climate change and building a sustainable future. The movement stands as a model of how collective student energy can bring about tangible ecological and social impact.



## **Detailed Energy Audit- Report**

**May 2024**

**Venue:** CHRIST (Deemed to be University), Central Campus, Bangalore, India.

The detailed energy audit conducted at CHRIST (Deemed to be University), Bangalore, provides a comprehensive analysis of campus-wide energy usage and identifies practical strategies to reduce consumption and operational costs. The audit highlights the institution's major energy loads—lighting, HVAC systems, fans, motors, and pump sets—and evaluates consumption patterns across seasons and daily operations. A major benefit of the study is the identification of targeted, cost-effective interventions such as upgrading to BLDC fans, installing sensor-based lighting systems, and adopting sub-metering across blocks. These measures help reduce unnecessary energy use, improve load management, and enhance accountability.

The audit also emphasises renewable energy expansion, with strong recommendations to install an additional 200 kW rooftop solar plant. This upgrade is projected to provide substantial long-term financial savings while significantly reducing carbon emissions. Existing solar installations have already shown clear benefits in CO<sub>2</sub>, NO<sub>x</sub>, and SO<sub>2</sub> reductions. Further, the report recommends efficiency improvements in pumping systems, HVAC optimisation, and the adoption of smart monitoring tools. By implementing these measures, the university can lower its grid dependency by up to 5%, reduce electricity bills, and move toward a more sustainable, smart-campus model. Overall, the audit provides a clear roadmap for long-term ecological and financial benefits.

**Preliminary Energy Audit of CHRIST (Deemed to be University), Kengeri Campus**  
**June 2024**

**Venue:** CHRIST (Deemed to be University), Kengeri Campus, Bangalore, India.

The Preliminary Energy Audit of CHRIST (Deemed to be University), Kengeri Campus, provides a detailed assessment of the institution's electricity consumption patterns, connected loads, and operational efficiencies. The campus consumes an average of 200,000 kWh per month, with peak usage influenced by seasonal changes and academic schedules. A comprehensive survey revealed a total connected load of over 2.14 MW across academic blocks, laboratories, common areas, hostels, and administrative spaces. Major loads include HVAC systems, laboratory equipment, computers, and extensive socket usage, indicating diverse power demands.

The audit highlights significant opportunities for energy savings, such as replacing 1,000 conventional fans with 28 W BLDC fans, which can save 76,800 kWh annually. The installation of sub-meters is recommended to track block-wise usage more accurately and support better load management. A major sustainability recommendation is the installation of a 400 kW rooftop solar plant, projected to generate 7.3 lakh kWh annually and reduce long-term electricity costs while lowering carbon emissions.

Overall, implementing these measures could reduce campus energy consumption by at least 5%, enhance operational efficiency, and strengthen the university's commitment to sustainability and environmental stewardship.



### National conference featuring discussions, activities, and presentations on sustainable energy conversion and storage technology

18-20 April 2024

**Venue:** Department of Physics and Electronics, School of Sciences, CHRIST (Deemed to be University), Bengaluru, India

NCSECS-2024 (National Conference on Sustainable Energy Conversion and Storage), hosted by the Department of Physics and Electronics at CHRIST (Deemed to be University), brought together researchers, scholars, and industry experts to explore advancements in sustainable energy materials and technologies. The conference focused on batteries, supercapacitors, fuel cells, hydrogen systems, solar energy conversion, material modelling, and flexible energy-harvesting solutions, providing a platform for presenting cutting-edge research and fostering academic-industry collaboration. By emphasising cleaner, efficient, and renewable energy technologies, the conference supports global efforts to transition toward low-carbon systems. The event directly aligns with SDG 7 (Affordable and Clean Energy) by advancing research and innovation that enable more accessible, reliable, and sustainable energy solutions for the future.

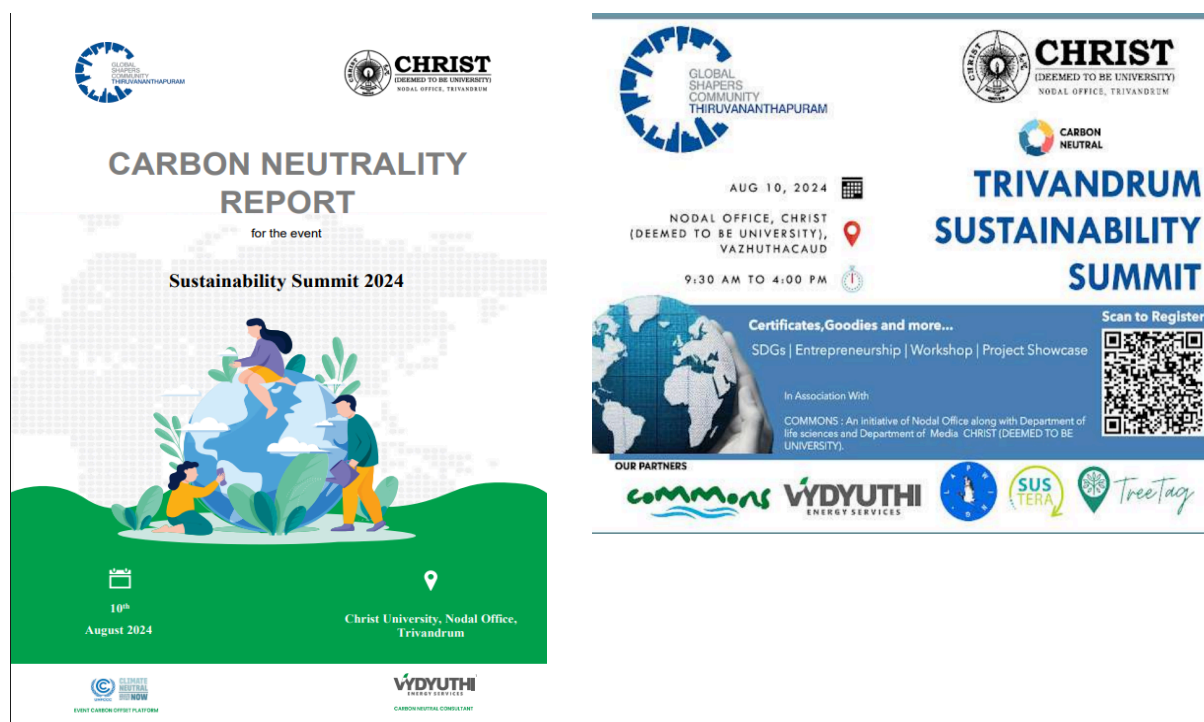
Call for Papers	Important Dates	
<p>The National Conference on Sustainable Energy Conversion and Storage: Functional Materials, Systems and Applications (NCSECS-2024) intends to bring together researchers from the following main subjects and its allied areas. The themes and more details about the topics are listed in the NCSECS-2024 conference website.</p> <p><b>1 Battery Technologies</b></p> <p>Materials development for batteries Cell design, optimisation Performance enhancement and durability Safety considerations Emerging battery chemistries and technologies</p> <p><b>2 Supercapacitors and Energy Storage Devices</b></p> <p>Materials advancements for supercapacitors Design and optimisation of energy storage devices Performance characterisation and evaluation Integration of supercapacitors into energy systems</p> <p><b>3 Electrolyte Materials</b></p> <p>Development of novel electrolyte materials Electrolyte design and optimisation</p>	<p><b>Abstract submission closes</b> :12-04-2024</p> <p><b>Notification of Acceptance</b> :12-04-2024 (On or before)</p> <p><b>Last date for Registration</b> :12-04-2024</p> <p><b>Last date for Accommodation Request</b> :12-04-2024</p> <p><b>Abstracts can be submitted through the link provided in the conference website.</b></p> <p><b>Registration</b></p> <p>The registration is open for all Post Graduate Students, Researchers, Faculty, Scientists and Industry Partners. There are separate registrations for NCSECS-2024 Conference Participation and Accommodation. Certificate will be issued to all.</p>	



## **Carbon Neutrality Report for the Sustainability Summit 2024 18-20 April 2024**

**Venue:** Nodal Office, CHRIST (Deemed to be University)

The Carbon Neutrality Report for the Sustainability Summit 2024, organised by the Global Shapers Community (Thiruvananthapuram Hub), outlines the process through which the event achieved carbon-neutral status in accordance with PAS 2060:2014 standards. Held on 10 August 2024 at Christ University, Nodal Office, Trivandrum, the summit aimed to promote youth-led climate action while minimising its environmental impact. The report quantifies greenhouse gas (GHG) emissions based on ISO 14064-1:2018 guidelines, covering direct and indirect emissions from electricity consumption, transportation, food, paper, and materials used during both the planning and execution phases. Total emissions amounted to approximately 2 tCO<sub>2</sub>e, after applying a conservative uncertainty factor. The largest contributors were transportation and energy use. To counterbalance these emissions, the organisers purchased Certified Emission Reductions (CERs) through the UN's Climate Neutral Now initiative, sourced from a wind energy project in Maharashtra. Various on-ground mitigation measures—such as avoiding single-use plastics, promoting carpooling, reducing paper usage, and encouraging sustainable food practices—further lowered the event's footprint. By achieving carbon neutrality, the summit demonstrates leadership in sustainable event management, enhances participant awareness, strengthens organisational credibility, and aligns with national and global targets for climate action and net-zero pathways.



## **Sustainable Construction Practices**

**12-14 June 2024**

**Venue:** CHRIST (Deemed to be University), Kengeri Campus

The Department of Civil Engineering, School of Engineering and Technology, CHRIST (Deemed to be University), Kengeri Campus, organised a workshop titled “Sustainable Construction Practices” from 12 to 14 June 2024. Held at the Multi-purpose Hall in the Devadan Block, the workshop aimed to introduce students and participants to core principles of sustainability in the construction sector. Key topics included an introduction to sustainability, sustainable design philosophy, the use of sustainable and eco-friendly building materials, natural building technologies, and hands-on miniature modelling activities. The workshop was led by Er. Basithali EK, a structural engineer and the Founder–Chairman of Naamearth as well as Director of Coearth Foundations, brings expertise in regenerative and environmentally responsible building methods. Through interactive sessions and practical demonstrations, the workshop encouraged participants to explore low-impact construction solutions. The initiative supports SDG 11: Sustainable Cities and Communities by promoting greener design, responsible resource use, and environmentally conscious engineering practices. It also supports SDG 7 (Affordable and Clean Energy) in meaningful ways. By introducing participants to sustainable design philosophy, the workshop encourages the adoption of energy-efficient building techniques, such as passive cooling, natural lighting, thermally efficient materials, and designs that reduce long-term energy consumption in buildings.



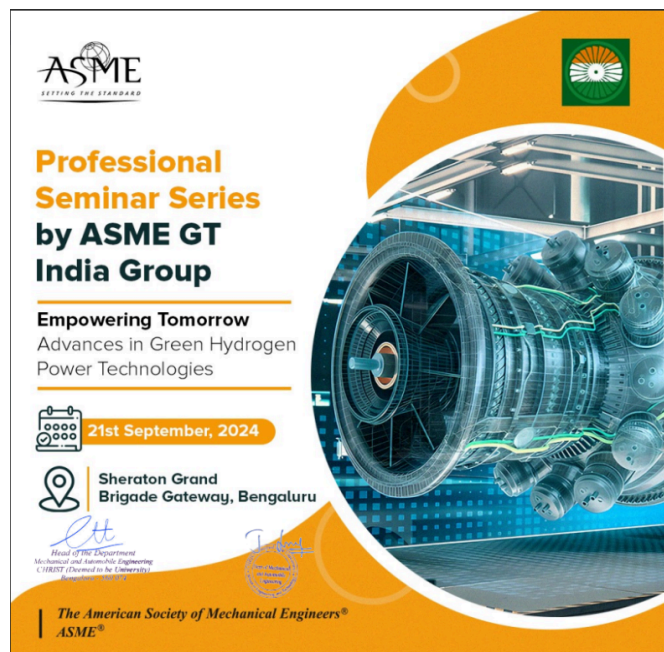
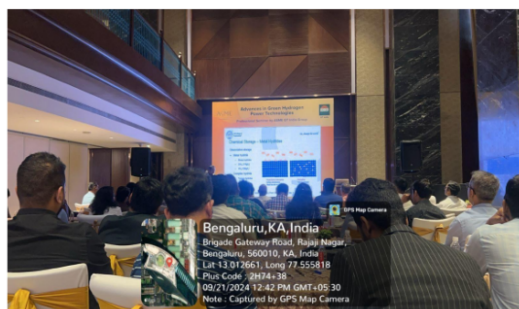
## **ASME Professional Seminar on “Advances in Green Hydrogen Power Technologies”**

**21 September, 2024**

**Venue:** Sheraton Grand Brigade Gateway, Bengaluru

**No. of participants:** 4

The ASME Professional Seminar on “Advances in Green Hydrogen Power Technologies”, conducted by the ASME GT India Group, was held on 21 September 2024 at the Sheraton Grand Brigade Gateway, Bengaluru, from 8:00 am to 4:00 pm. Students from CHRIST (Deemed to be University)—Tushar Vishwakarma, D. Joshua Daniel, Inguva Karthik, and Sudharshan Rayal—attended the full-day session, which explored several critical advancements in green hydrogen applications for future energy systems. The seminar featured a series of expert presentations and discussions centred on hydrogen’s pivotal role in the global energy transition. Key topics included the use of hydrogen fuel in gas turbine engines, the importance of reverse electrolysis for polygeneration, advancements in micro gas turbines for sustainable power generation, and detailed insights into hydrogen storage and handling technologies. Experts also examined the combustion challenges associated with hydrogen and ammonia in next-generation engines, along with the engineering considerations needed for safe and efficient implementation. A panel discussion highlighted the principles and practices of hydrogen combustion and its profound implications for clean power generation and propulsion. By focusing on renewable hydrogen technologies, the seminar significantly contributes to SDG 7: Affordable and Clean Energy, promoting innovation toward a low-carbon future.





### India Sustainability Startathon 2024

22 and 23 June, 2024

**Venue:** Seminar Hall, Ground Floor, BLOCK 2

**No. of participants:** 100+

The two-day bootcamp began with an inspiring address by Dr Leena James, setting a motivating tone for an engaging and intellectually stimulating experience. The sessions, led by Ms Supriya and Mr Rohan Subhash, were thoughtfully organised into mandatory, exploratory, and self-explanatory modules, ensuring that participants received a holistic and well-structured learning journey. A standout feature of the bootcamp was the mentorship provided by former participants who have since become successful entrepreneurs, offering valuable real-world perspectives and practical guidance. A key highlight of the program was its strong alignment with SDG 7 (Affordable and Clean Energy) and SDG 11 (Sustainable Cities and Communities). Through problem-solving activities, participants identified pressing sustainability challenges and collaboratively brainstormed feasible, impactful solutions. The bootcamp emphasised practical application, encouraging participants not just to ideate but to refine their concepts into realistic, implementable solutions. On the second day, participants presented their innovative ideas before a panel of judges, concluding the bootcamp with a platform to demonstrate what they had learned. By the end of the program, participants had strengthened their problem-solving skills, presentation abilities, and gained a deeper understanding of sustainability-driven innovation and real-world solution building.



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Participate in the India Sustainability Startathon 2024 and 15 PARTICIPANTS stand a chance to win a fully-funded scholarship to Singapore and be part of the **ASEAN - CHINA - INDIA YOUTH LEADERSHIP SUMMIT 2024!**

In addition to this:

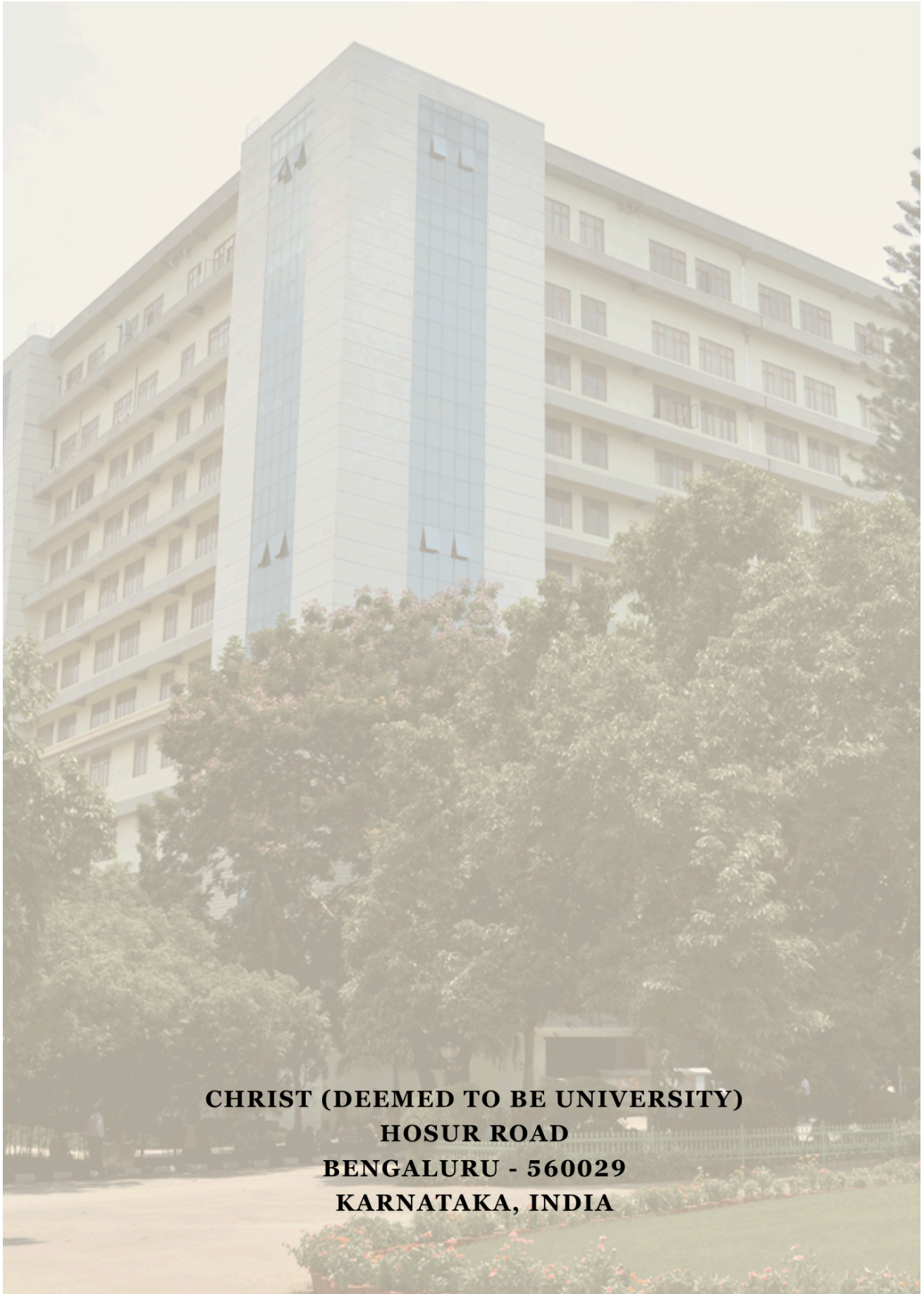
- Get evaluated for the Climate Ninja Program from Sus-Mafia
- Get free access to online courses worth USD 375
- Attend 10 Masterclass by international faculty
- Get mentored by international mentors on your sustainability idea



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