

## **Report on National Workshop on Sustainable Energy Materials (SEM - 2023)**

Departments of Chemistry and Physics, KKTM Government College Jointly organized a Two-Day National Workshop on Sustainable Energy Materials (SEM-2023) in association with IQAC, on 23rd and 24th of November, 2023. The workshop aimed to bring together experts, researchers, and practitioners to discuss and explore advancements in the field of sustainable energy materials. The sponsoring agency was Directorate of Collegiate Education, Kerala. A total of 40 participants which included faculty and students from other institutions participated in the workshop.

The two-day workshop commenced on the 23rd of November with a warm welcome address by Dr. Lovely George, Coordinator, and Assistant Professor, Department of Physics followed by presidential address by Dr. Bindu Sharmila. T.K., the Principal. The event was inaugurated by Dr Saji K.J, Director, International School of Photonics, CUSAT, who also delivered a Key Note address. The event focused on addressing the challenges and opportunities in sustainable energy materials and aimed to foster collaboration among participants from diverse backgrounds. Sri Rijoy K J, HoD, Department of Chemistry, Dr. Dhanya N.P, Assistant Professor of Physics, Smt. Preetha K, IQAC member and Student Union Chairman, Sri Vishnu offered felicitations. The inaugural session concluded with a vote of thanks proposed by Dr. Suma C S, Coordinator and Assistant Professor of Chemistry.

Eminent experts delivered speeches on various aspects of sustainable energy materials, including the latest research findings, technological innovations, and their implications for sustainable development. On day 1, Session 1 was handled by Dr. Saji K.J. Director, International School of Photonics, CUSAT and the topic was "Harvesting Mechanical Energy and Enabling Self-powered Sensing with Turboelectric Nanogenerators". Session II was led by Dr. Binitha N N, Professor, Department of Chemistry, University of Calicut, on the topic "Role of Graphene in Sustainable Technology". Session III was led by Dr. Christie Thomas Cherian, Assistant Professor at Digital University, Kerala and the topic was "Two Dimensional Materials: Graphene and Beyond. On the second day, the first session was engaged by Dr. Pramod K. M., Department of Chemistry, St. Joseph's University, Bangalore, on the topic "Materials for Solar Thermal Energy Storage". Second session lead by Dr. Abi. T. G, Department of Chemistry, SH College, Thevara and the topic was "An Introduction to Practical Methods in Computational Chemistry and Drug Design". The III and IV session were hands-on training in

“Computational Methods in Drug Design” by Dr. Abi. T.G., from Department of Chemistry, S. H. College, Thevara. The speakers emphasized the need for interdisciplinary approaches and international cooperation to accelerate progress in this critical field. To enhance practical knowledge, the workshop included interactive sessions, hands-on activities on the topics computational methods in drug design. Participants had the chance to engage with cutting-edge technologies, computational methods with sustainable materials, and gain practical insights into the application of sustainable energy solutions

The National Workshop on Sustainable Energy Materials at KKTm Government College was a resounding success, providing a platform for intellectual exchange and collaboration. Participants left with enhanced knowledge, new perspectives, and a strengthened network of contacts within the sustainable energy materials community.

The two-day events were concluded with a valedictory function and certificate distribution to the participants by Dr. Bindu Sharmila, T. K. Principal, K.K.T.M. Government College, Pullut.

**Day One - 23.11.2023.**

### **Inaugural Session**



Presidential address by Dr. Bindu Sharmila T. K



Inauguration and Keynote address by Dr. Saji. K.J, Director, International School Of Photonics, CUSAT

**Session I : 11.00 a.m -12.30 p.m**



Talk by Dr. Saji K.J. Director, International School of Photonics, CUSAT on “Harvesting Mechanical Energy and Enabling Self-powered Sensing with Turboelectric Nanogenerators”.

**Session II : 1.30 p.m - 3.00 p.m**



Talk on “Role of Graphene in Sustainable Technology” by Dr. Binitha N N, Professor, Department of Chemistry, University Of Calicut.

**Session III : 3.15 p.m – 4.45 p.m**



Talk by Dr. Christie Thomas Cherian, Assistant Professor at Digital University, Kerala on the topic “Two Dimensional Materials: Graphene and Beyond”.



Day Two – 24.11.2023

Session I : 9.30 a.m - 11.00 a.m



Talk by Dr. Pramod K. M, Department of Chemistry, St. Joseph’s University, Bangalore, on the topic “Materials for Solar Thermal Energy Storage”.

Session II – 11.15 a.m – 12.30 p.m



An introduction to practical session on computational methods and drug design by Dr. Aby T. J. Assistant Professor, SH College, Thevara.

**Session III & IV – 1.30 p.m – 4.30 p.m**



Hands-on Training on computational methods and drug design by Dr. Aby T. J. Assistant Professor, SH Collge, Thevara.



Valedictory function and certificate distribution to the participants



Local News paper report about the workshop.



Format of Certificate issued to Participants