International Conference on Material Science (ICMS2020) at Tripura University
Date - 4th March, 2020

[Image of the invitation page]

Department of Physics
Tripura University (A Central University)
Suryamaninagar, Agartala, Tripura

Cordially invites you to the Inaugural Session of the
Third International Conference on
Material Science (ICMS-2020)
On 4th March, 2020 at 10.00 A.M.

Venue:
Conference Hall, Academic Building – XI
Tripura University

Chief Guest:
Shri Ramesh Bais
H.E. The Governor of Tripura & Chief Rector of Tripura University

Guests of Honour:
Prof. Sabu Thomas
Vice Chancellor, Mahatma Gandhi University, Kerala

and

Prof. Sukanta Banik
Dean, Faculty of Science, Tripura University

Prof. M. K. Singh
Vice-Chancellor (Acting), Tripura University

shall preside over the function.

Prof. D. Bhattacherjee
Chairman
Local Organizing Committee

Dr. S. A. Hussain
Convener
Local Organizing Committee

Prof. S. Chattopadhyaya
Head
Department of Physics, TU

International Conference on Material Science (ICMS2020) at Tripura University focusing on the technological development
Materials science is an interdisciplinary field applying the properties of matter to various areas of science and engineering and flourishing with blazing speed and ever growing appreciation. Without the helping hand of smart materials, modern life can’t be imagined. Development of most of the modern electronic gadgets, starting from smart phones to satellite, largely depends on the progress of material science research.

Applications in daily life include - electronics, communications, medicine, transportation, manufacturing, recreation, energy, and the environment etc. In a broad sense Material Science covers Physics, Chemistry and Biology as well as the subjects belonging to social sciences too. This is because commercialization of the machines or devices needs involvements of people from Economics, Marketing as well as other social science subjects.

Development of biomedical devices and as a whole biotechnology is also largely dependent on the progress of research on various aspects of different biomaterials. In this regard Nano-biotechnology, drug delivery using different nanomaterials are very promising. This could include bio-inorganic hybrid systems such as BioMEMS, implants (such as dental materials, cardiac stents made of shape memory alloys, and drug releasing hydrogels), and biomimetic systems, which can mimic the functioning of biological systems.

Material Science is the oldest science in this world. Journey of Material Science and human civilization to this earth are almost parallel and started together. Human civilizations are often divided into ages according to the materials that dominate in the society.

For example Stone Age (lasted roughly 3.4 million years, and ended between 6000 BC and 2000 BC), Bronze Age (3300 BC – 1200 BC, Copper & alloying it with tin & Arsenic), Iron Age and Steel Age (1200 BC – 700 AD) etc. We have now entered the modern materials age, the “Plastic Age” and the “Silicon Age”. The development of new materials have fundamentally transformed our life style forever and made a vast world into a global village.

India as an emerging superpower and we are dreaming to be a developed nation. In order to make India a developed nation we need to be self sufficient in terms of energy and modern technology. This can be possible if we can develop new smart materials suitable for various modern devices.

Therefore, it is high time to make a great stride in Material Science research. In India researchers in different universalities, IITs and research institutes are working on various aspects of Material Science. In Tripura a good number of researchers at Tripura University and NIT Agartala are also engaged in Material Science research.

Researchers at Thinfilm and Nanoscience research group in Department of Physics, Tripura University are working on the development of various supramolecular smart materials and devices. Already they have developed various sensors like arsenic sensor, pH sensor, hard water sensor, ion sensor, DNA sensor etc. Recently they have developed paper based alcohol sensor and soon it will be applied for patent and as well as collaboration with suitable manufacturing companies will be attempted for commercialization.

Also they have designed various organic memory devices suitable for organic RAM and ROM applications. Using natural clay materials a new organo-clay hybrid system has also been developed suitable for optical sensor as well as secret writing. They have research collaboration with researchers from various institutes of India and abroad. Details about these works and related publications can be found at the Tripura University website as well as the research group website at https://sahussaintu.wordpress.com/.

Tripura University has already established a Central Instrumentation Center (CIC) with highly sophisticated costly instrumentation facility with instruments like NMR, FE-SEM, AFM, Lifetime Spectrophotometer, Chemidoc, Chromatography etc. The instruments available in the center are being used by research scholars and faculty members of different departments of this University, NIT Agartala as well as researchers from different institutions of NE states and India. Details about the center and its research facility can be found in the website https://cictu.wordpress.com/.

Department of Physics, Tripura University is going to organize the “Third International Conference on Material Science (ICMS2020)” during 04 – 06 th March, 2020. This conference will include keynotes & invited presentations, contributed oral & poster presentations.

Thirty (30) numbers of International participants from countries like Japan, USA, Germany, Slovakia, Nigeria, Indonesia, Bangladesh, Israel, Poland, Chile, Kazakhstan etc and about 265 researchers from different states of India have confirmed their participation in this conference.

Different central Government organization like University Grant Commission (UGC), Science and Engineering Research Board (SERB), Defence Research Development Organization (DRDO) as well as several private companies like Agilent Technologies, Anton Paar, Carl Zeiss have sponsored the program. Representative from these organizations will also attend and take part in the discussion. Honourable Governor of Tripura Sri Ramesh Bais, the Chief Rector of Tripura University will inaugurate this conference.

This ICMS2020 conference aims to provide a forum for scientists, researchers and educators around the world to exchange state-of-the-art research and development and to identify research needs as well as opportunities in all aspects of Material Science with special emphasis on the issues / challenges faced by the researchers of Tripura, NE states as well as India.

The primary objectives of this conference are to provide scientists, engineers, research scholars, graduate students and other professionals especially from universities and institutions of Tripura and other north eastern states with a forum to actively engage in research discussions, and professional development; and create opportunities for the next generation workforce to develop their professional skills through interactions with eminent scientists from other parts of India and abroad.

This International conference can help the researchers of this region to exchange ideas, knowledge, and potentials for the development of e-pao.net/epPrinter.asp?src=education.Education_Announcements.Edn_Ann_2020.Conference_on_Material_Science_ICMS2020_at_Tripura_Univers...
the subject and also to perform better research in the national and international levels. This surely can open a new window for collaborative research to the researchers of Tripura and NE region in accordance with the national and international level.

In order to encourage the young researchers of this region Royal Society of Chemistry will give Best Young Scientist award and Best Poster Presentation Award among the participants of age below 35 years. Also full research papers of all the presentations (invited/oral/poster) of ICMS2020 conference will be considered for publication in the following journals after peer review process. Each journal will publish a special issue consisting of papers presented during ICMS2020 conference.

1. Materials Today: Proceedings (Elsevier)
2. Invertis Journal of Science & Technology (Invertis University)

It is relevant to mention in this regard that Department of Physics has already organized first and second international conference on Material Science. Second International Conference on Material Science (ICMS2017) was successfully organized during 16-18 February, 2017.

There were one Keynote Lecture, 26 Invited Talk (Indian:15; Foreign: 11) and 196 (Indian: 181; Foreign: 15) contributory presentations and 59 participants without paper. Eleven technical sessions were there. After peer review selected full papers presented in ICMS2017 conference have been published in Elsevier journal “Materials Today Proceedings (Volume 5, Issue 1, Part 2,Pages 2023-2400 (2018))” and World Scientific journal "International J. of Nanoscience (Volume 17, Issue 04 (August 2018)). Website of second conference: https://icms2017.wordpress.com/

The First International Conference on Material Science (ICMS2013) was successfully organized by the Department of Physics, Tripura University during 21-23 February, 2013. There were one Keynote Lecture, 14 Invited Talks (Indian: 09; Foreign: 05) and 176 (Indian: 164; Foreign: 12) contributory presentations and 40 participants without paper. Ten technical sessions were there. Website of first conference: https://icms2013.wordpress.com/

Keeping in mind about the success and output of the earlier two conferences as well as need for the development of Material Science research, it is felt that this conference will be very effective to enhance the research output of this region and will contribute to the development of this states and NE region as well as the country.

Issues to be addressed during the conference:

(a) Current status of Material Science research in Tripura and other North-East India as well as national and international level will be discussed.
(b) Specific requirement of technological growth on priority basis for the development of Tripura and role of Material Scientists towards this.
(c) Issues and challenges faced by researchers of Tripura and NE region w.r.t. national and international level will be identified.
(d) Specific short and long term action plan will be formulated in order to contribute towards the development of the state in terms of energy and technology.
(e) Effort will be given for developing collaborative research work frame with researchers of this region and prominent scientists of reputed institutes of India and abroad.
(f) Brain storming workshop / session by eminent scientists will be organized to motivate and encourage the young generation of this region towards higher education and research.
(g) As a whole emphasis will be given to enhance the quality of research output of the researchers of this region as well as in national level.
(h) A review of the development, especially in terms of collaborative research & project based as well technology on first and second Conference will also be done during this ICMS2020 conference.

Nowadays, there is a decline in enrolment of bright youngsters in the research and developments in the basic sciences. This conference will motivate and encourage the young generation of Tripura as well as of India towards research and development in material science as well as basic sciences. Also the ongoing researchers can update themselves with respect to quality and performance.

In the long run this will enhance the research outputs and productivity in terms of new materials as well as technology. Tripura is a very small and geographically isolated remote state. In order to compete with the mainstream states of India development in terms of science and technology is highly expected. This ICMS2020 conference will help to generate a highly motivated young workforce who will contribute to the development of this state and the country as a whole.

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* This information is sent by Dr. Syed Arshad Hussain who can be contacted at sa_h153(AT)hotmail(DOT)com
This Post is webcasted on February 26 2020