**Patron****General Chair****AICTE FDC****Finance Chair****STTP Coordinator****Director****Keynote Speaker**

Prof. (Dr.) Saikat Maitra
Hon'ble Vice Chancellor,
MAKAUT, WB

Dr. Partha Pratim Lahiri
Registrar,
MAKAUT, WB

Col B Venkat
Director, FDC,
AICTE, New Delhi

Dr. Atri Bhowmik
Finance Officer,
MAKAUT, WB

Dr. Subhashis Datta
Controller of Examinations
MAKAUT, WB

Prof. (Dr.) Sukhendu Samajdar
Director, School of Natural,
Applied & Social Sciences
MAKAUT, WB

Prof. (Dr.) Indranil Manna
Vice Chancellor
BIT Mesra, Ranchi

Welcome Address by**Inaugural Speech by****Program Overview by****Introductory Remarks by**

Date:30-08-2021

STTP Coordinator
Dr. Subhashis Datta
Controller of
Examinations,
MAKAUT, WB

Prof. (Dr.) Saikat Maitra
Hon'ble Vice Chancellor
MAKAUT, WB

Program Coordinator
Ms. Monalisa Char
Department of Materials Science &
Technology MAKAUT, WB
Contact: +91 9679341183
Email: monalisa.char@makautwb.ac.in

Dr. Partha Pratim Lahiri, Registrar, MAKAUT, WB
Dr. Atri Bhowmik, Finance Officer, MAKAUT, WB.
Dr. Subhashis Datta, STTP Coordinator, Controller of Examination, MAKAUT, WB
Prof. (Dr.) Sukhendu Samajdar, Director, School of Natural, Applied & Social Sciences, MAKAUT, WB
Ms. Monalisa Char, Program Co-ordinator, Dept. of Materials Science and Technology, MAKAUT, WB

Registration link/Scan the QR Code

<https://sttp.formflix.com/>

**TARGETED PARTICIPANTS**

Faculty members, Research Associate and PhD scholars from college/university/institute involved in teaching and research in Materials Science, Physical Science and other associated relevant subjects/departments

Theme of the Short Term Training Program

- This STTP shall address some of the most advanced materials developmental aspects in terms of processing/synthesis; characterizations and application for better sustainability of the human society
- It will also address topics from basic science as well as engineering application, e.g. novel materials in the aerospace industry, healthcare applications, Energy harvesting materials for photovoltaic and supercapacitor, Piezoelectric materials, high temperature ceramics, advanced materials fabrication and joining.
- The aim of this program is to provide a platform for interaction and exchange knowledge and innovative ideas of current research trends used in the field of Materials Science and Technology. Eminent Scientists from the Industry, R&D sector and Academia shall demonstrate and share their thoughts.

Eminent Speakers including Vice Chancellor from Institute of National Repute, Bhatnagar Awardee and internationally acclaimed scientists

ABOUT THE UNIVERSITY- MAKAUT WB

Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal has started its academic program in 2001 and is the nodal University which provides affiliation to more than 200 Colleges spread throughout the state offering courses in Engineering & Technology, Pharmacy, Architecture, Management, Applied and Social Sciences and various professional courses. At present, the university has seven academic schools with eighteen departments covering all the major engineering, science, and humanities disciplines with professional courses offering BTech, MTech, BSc, MSc and PhD programs. It is imperative in today's market driven economy to make the education application oriented so that, it can lead to creation of wealth and benefit not only the apparent and immediate stakeholders but society at large. As the largest Technological University of the state, MAKAUT is committed to undertake this task, in both letter and spirit.

Registration Fee: 250.00 INR

Last Date to apply: 28th August 2021 till 10 pm

**for more details Logon to
<https://makautwb.ac.in>**

This STTP can be considered as Half Faculty Development Program and shall be counted for Career Advancement Scheme

**For any Query Contact: +91 9679341183
Or
Mail at makautwebinar@gmail.com**

PROGRAM SCHEDULE

DAY 1 Date: 30-08-2021	Session 1 03:00 pm to 04:00 pm	Session 2 04:00 pm to 06:00 pm	Session 3 06:15 pm to 08:15 pm
Name of the Speaker and Topic	Prof. (Dr.) Indranil Manna Novel properties of nanostructured Solids	Prof. (Dr.) Ranjan Ganguly Handling liquid on surfaces using wettability engineering: from sustainability to healthcare	Prof. (Dr.) Amit Kumar Chakraborty Nanostructured metal oxides and their composites for sustainable development
DAY 2 Date: 31-08-2021	Session 4 03:00 pm to 05:00 pm	Session 5 06:00 pm to 08:00 pm	Session 6 06:00 pm to 08:00 pm
Name of the Speaker and Topic	Dr. Shamik Choudhury Optimization of algorithms: Fundamentals to Applications in Materials Science-A Industry Expert View	Dr. Venkateswarlu Karodi Fundamental to applied research on advanced aerospace materials	Dr. Chabita Saha Biodegradable nano materials for targeted drug delivery, sustained release and imaging
DAY 3 Date: 01-09-2021	Session 6 03:00 pm to 05:00 pm	Session 7 06:00 pm to 08:00 pm	Session 8 06:00 pm to 08:00 pm
Name of the Speaker and Topic	Prof. (Dr.) Suhash Ranjan Dey Effects of Nanosize on new age materials development	Dr. Jhuma Ganguli Design and Development of Microgels: The Role of Chemistry	Dr. Mithun Barik Managing Stress for Teachers
DAY 4 Date: 02-09-2021	Session 8 03:00 pm to 05:00 pm	Session 9 06:00 pm to 07:00 pm	Session 10 06:00 pm to 07:00 pm
Name of the Speaker and Topic	Prof. (Dr.) Bikramjit Basu Ultra high temperature ceramics for aero-structural applications	Dr. Avijit Metya Ultrasonic NDE: A Tool for Materials Characterization	Dr. Shrabanee Sen Piezoelectric Nanocomposites Derived Sensors for Multifunctional Applications: An Overview
DAY 5 Date: 03-09-2021	Session 10 03:00 pm to 05:00 pm	Session 11 06:00 pm to 07:00 pm	Session 12 07:00 pm to 08:00 pm
Name of the Speaker and Topic	Dr. Vikas Jindal Computational Thermodynamics and Materials Design	Dr. Abhijit Kar Importance of Advanced Materials Joining: Application of Nano-Scale Effect Towards Handling Industrial Challenges	Dr. Mithun Barik Managing Stress for Teachers
DAY 6 Date: 04-09-2021	Session 13 03:00 pm to 05:00 pm	Session 14 06:00 pm to 07:00 pm	Session 15 07:00 pm to 08:00 pm
Name of the Speaker and Topic	Dr. Vikas Jindal Computational Thermodynamics and Materials Design	Dr. Abhijit Kar Importance of Advanced Materials Joining: Application of Nano-Scale Effect Towards Handling Industrial Challenges	Panel Discussion & Valedictory Session

OJECTIVE OF THE STTP

Rapid technological advancement has led us to develop materials with novel properties e.g. high strength, high temperature resistance light weight and eco friendly. Increasing demand in the industries like aerospace, automotive, power plants, medical and electronics are continuously harnessing new materials. Understanding the behaviour of these materials and development of newer concepts are the need of the hour. The prime objective of this Short Term Training Program is to enrich the knowledge of participants in the emerging areas of newly developed materials, its processing techniques for a sustainable growth. Moreover, a platform will be provided to make the participants aware about the cutting edge research going on in the field of materials science and interdisciplinary sciences, not only in nationally reputed institutes but also in the industry. Participants shall be able to apply these concepts in their teaching and research.

It will help the faculties in Teaching Physics and Chemistry courses in UG/PG courses more effectively

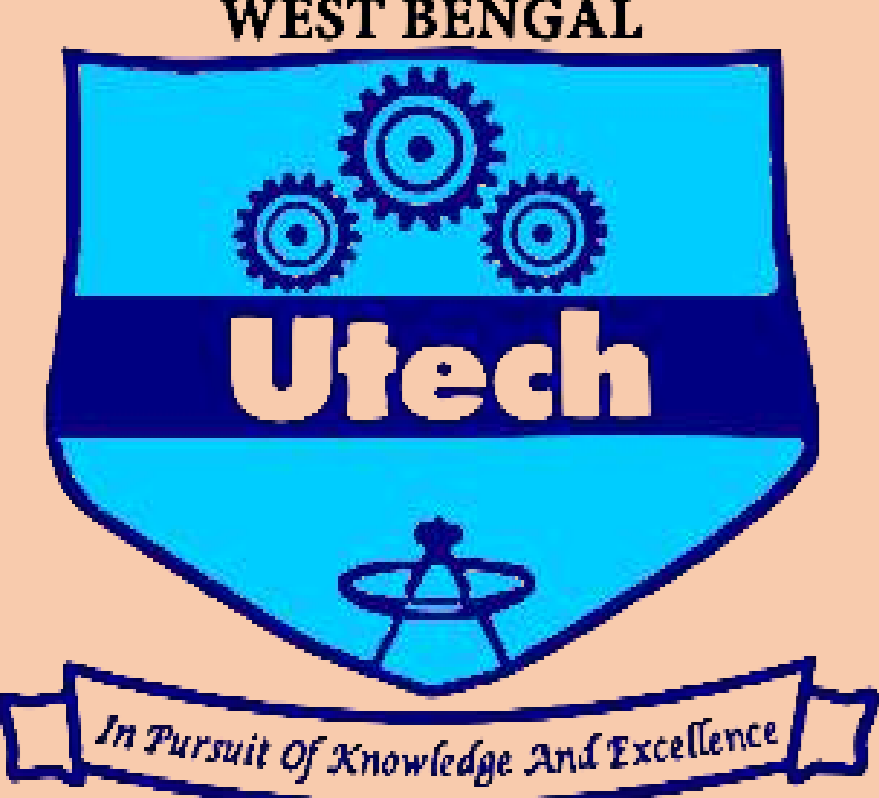
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MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Cordially invites you to join ONLINE (AICTE SPONSORED)
6-Day's Short Term Training Program (STTP)
On
EMERGING NANO-MATERIALS FOR SUSTAINABILITY
Date: 30th August 2021 to 4th September 2021



Invited Speakers		Topic of the Talk	Theme of the talk
Prof. (Dr.) Indranil Manna Vice Chancellor BIT Mesra, Ranchi		Novel properties of nanostructured Solids	The talk shall give an overview of the new advanced opportunities and challenges in the advancement of nanotechnology covering fields from theory and experiments to applications of materials for sustainability. This shall provide the in-depth knowledge of applications of nanomaterials in the different fields of materials science
Prof. (Dr.) Ranjan Ganguli Department of Power Engineering, Jadavpur University, WB		Handling liquid on surfaces using wettability engineering: from sustainability to healthcare	The talk will focus on developing strategies for pumpless fluid transport for lab-on-a-chip applications and on developing wettability-patterned substrates for enhancing dropwise condensation heat transfer
Prof. (Dr.) Amit Kumar Chakraborty, Department of Physics NIT Durgapur		Nanostructured metal oxides and their composites for sustainable development	The focus will be on using Nanotechnology from sustainable energy technologies to dye sensitized solar cells and from super capacitor to clean water. How we can utilize nanostructured metal oxides for sustainable development
Dr. Shamik Choudhury Senior Data Scientist, Walmart Global Tech India, Bengaluru, India		Optimization of algorithms: Fundamentals to Applications in Materials Science-A Industry Expert View	We shall learn from an industry data scientist how to use python tool boxes to apply algorithms for optimization, Single objective and Multi-objective optimization with examples of open source software and their applications in materials science
Dr. Venkateswarlu Karodi Senior Principal Scientist Materials Science Division CSIR - National Aerospace Laboratories-NAL		Fundamental to applied research on advanced aerospace materials	It is desired to develop aircraft productivity and efficiency and this is possible through advances in aircraft aerodynamics, materials, structures, and other disciplines. The presentation mainly is focused on the development of advanced materials for the aerospace sector and the new generation of aircrafts with high efficiency and performance are discussed in detail. The importance of research work and its need is also highlighted
Prof. (Dr.) Suhash Ranjan Dey Department of Materials Science and Metallurgical Engineering; Indian Institute of Technology, IIT Hyderabad, India		Effects of Nanosize on new age materials development	In the talk, the author shall delve into the fundamentals and shall explain a few synthesis/fabrication routes of nanosized/nanostructured materials through various case studies
Dr. Chabita Saha Department of Environmental Science MAKAUT WB		Biodegradable nano materials for targeted drug delivery, sustained release and imaging	Biodegradable nanoparticles have attracted increasing attention in the biomedicine field due to their high drug-loading effectiveness, good selectivity for target tissues, and long circulation time. The talk will focus on the advantages of such delivery vehicles and their ability to improve the solubility of hydrophobic drugs
Prof. (Dr.) Bikramjit Basu Shanti Swarup Bhatnagar Awardee Materials Research Centre Indian Institute of Science(IISc) Bangalore, Karnataka, India.		Ultra high temperature ceramics for aero-structural applications	The talk will focus on the Computational and Experimental Approach towards the design of thermal protection system for aero-structural applications. Also, it will describe the challenges and opportunities of machining and joining UHTC based components for prototype development. And, will give overview on the pathway of R&D projects to get transferred to commercialization
Dr. Jhuma Ganguly Department of Chemistry Indian Institute of Engineering Science and Technology, Shibpur. (IEST), WB, India		Design and Development of Microgels: The Role of Chemistry	The role of chemistry within gel networks is very interesting to study and explain their chemical stabilities as native or in presence of different solvents along with their others potentialities like mechanical, fluorescence and blood transportation supports for various applications. The porous, stimuli-responsive biogel materials can be a good replacement for risky synthetic polymeric based applications
Dr. Shrabanee Sen Principle Scientist Functional Materials & Devices Division, CSIR-Central Glass and Ceramics Research Institute, CGCRI Kolkata		Piezoelectric Nanocomposites Derived Sensors for Multifunctional Applications: An Overview	Harvesting clean and renewable energy holds great promises for powering small electronics and achieving self-powered electronics devices. And, the best effective way is to get it through the piezoelectric effect. The talk will focus on the properties of Piezoelectric ceramic-polymer composites which are the promising materials for energy harvesting
Dr. Avijit Metya Principal Scientist, CSIR-National Metallurgical Laboratory, NML Jamshedpur, India		Ultrasonic NDE: A Tool for Materials Characterization	In this talk, the efficacy of ultrasonic NDE will be discussed for materials characterization starting from conventional ultrasonic to advanced nonlinear ultrasonic technique. Moreover, long range ultrasonic or guided wave ultrasonic technique will also be touched upon for material evaluation
Dr. Mithun Barik Addiction Psychiatrist, NHS Scotland		Managing Stress for Teachers	Writing an effective and sound research article needs a sound and free mind. But are we really in a state of free mind? Whether we are confused, stressed or depressed? Know the science behind it. Analyze yourself and learn how to control it, from a Doctor. So, that we could do our research and teach effectively
Dr. Vikas Jindal Department of Metallurgical Engineering Indian Institute of Technology, IIT BHU, India		Computational Thermodynamics and Materials Design	For any alloy designing, it is very important to know its thermodynamics and phase change. Here, the talk will focus on the very basics of Computational Thermodynamics to its applications. Titanium -Titanium Boride (Ti-TiB) based composite materials. Titanium based Implant Materials, Phase Change Energy Storage Materials & Computational Thermodynamics of Alloys using an Improved CVM
Dr. Abhijit Kar Scientific Officer Jagadis Bose National Science Talent Search (JBNSTS) Kolkata, WB, India		Importance of Advanced Materials Joining: Application of Nano-Scale Effect Towards Handling Industrial Challenges	Joining has become a very important part of developing new materials and technologies in recent times. Depending on different needs and applications, it is necessary to apply different joining techniques in every step of our modern developments. Different advanced materials joining techniques shall be discussed during this session. How the effect of nano-scale can be utilized towards solving different industrial challenges of recent times that we face during materials fabrication shall also be discussed

Last Date:
28th Aug
2021 till
10 pm

Limited
Seats 60
(first come
first serve
basis)

Registration
Fee: 250.00
INR

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