TENTATIVE PROGRAM

August 3rd, 2022	
Main Room	
09:00 - 12:00	**Registration**
12:00 - 13:00	Lunch
13:00 - 16.00	**Workshop/Lecture**
13.00 - 13.50	Dr.Pongtanawat Khemthong (On site) National Nanotechnology Center National Science and Technology Development Agency “Speciation of catalysts by in situ XAFS under oxidation, reduction and reaction conditions”
14.00-14.50	Dr.Bunyarat Rungtaweevoranit (On site) National Nanotechnology Center National Science and Technology Development Agency “Applications of in situ and operando Fourier transform infrared spectroscopy for liquid- and gas-phase heterogeneous catalysts”
15.00-15.50	Dr. Nattawut Osakoo (Online) Institute of Research and Development, Suranaree University of Technology “An operando time-resolved XAS-MS-GC for investigating the insight nature of materials”
13:00 - 16:00	Research demonstration
	from the Fundamental Fund of Khon Kaen University,
	and the National Science, Research and Innovation Fund (NSRF).

August 4th, 2022	
Main Room	
08:00 - 09:00	Registration
09:00 - 09:20	Opening Plenary and Welcome Address
09:20 - 09:50	Plenary Speaker #1 Prof. Bunsho OHTANI (Online) Professor Emeritus Hokkaido University and Nonprofitable Organization touche NPO, Japan “True Design and Precise Characterization of Functional Materials through Electron Trap-distribution Analysis”
09:50 - 10:20	Keynote Speaker #1 Prof. Behzad SHAHMORADI (On site) Department of Environmental Health Engineering, Faculty of Health, Kurdistan University of Medical Sciences, Sanandaj, Iran “Photodegradation of disinfection byproducts using Sn:TiO_2 nanoparticles”
10:20 - 10:45	Coffee Break
Session 1:	Chairman:Dr. Behzad Shamoradi, Kurdistan University of Medical Sciences, Iran
Energy & Storage	Co-Chairman:Dr. Anilkumar KM, JSS Academy of Higher Education and Research, India
10:45-11:00	AMEEHA2022-ES 001
11:00-11:15	AMEEHA2022-ES 002
11:15-11:30	AMEEHA2022-ES 003
11:30-11:45	AMEEHA2022-ES 004
11:45-12:00	AMEEHA2022-ES 005
12:00 - 13:00	Lunch
Session 2:	Chairman: Dr. Prakash Kariyajjanavar, Gulberga University, India
Mat. Syn & Charac. Envi.Application	Co-Chairman: Dr. Ekkachai Kanchanatip, Kasetsart University Chalermphrakiat Sakon Nakhon Province Campus, Thailand
13:00-13:15	AMEEHA2022-MC 002
13:15-13:30	AMEEHA2022-MC 003
13:30-13:45	AMEEHA2022-EA 001
13:45-14:00	AMEEHA2022-EA 002
14:00-14:15	AMEEHA2022-EA 004
14:15-14:30	AMEEHA2022-EA 013
14:30-14:45	AMEEHA2022-EA 011

August 4th, 2022	
Main Room	
14:45 - 15:00	Coffee Break
15:00 - 15:30	Keynote Speaker #2 Dr. Sami RTIMI (online) Director of innovation and Technology Global institute for Water, environment and Health Geneva, Switzerland “Photocatalytic thin films for microbial disinfection at the solid-air interface”
15:30 - 16:00	Keynote Speaker #3 Dr. David F L JENKINS (online) Associate Prof of Nanomaterials and Devices University of Plymouth, UK “Low-cost graphene based nanostructures for the efficient removal of toxic metals from rural drinking water supplies.”
16:00 - 16:30	Keynote Speaker #4 Dr. Diganta Bhusan DAS, FHEA, FRSC, FRSB (Online) Reader in Porous Media Department of Chemical Engineering, Loughborough University, UK “Developing Enabling Technologies Using Concepts of Porous Media”

August 5th, 2022	
Main Room	
Session 3: **Envi.Application/ Medical App.**	Chairman: Dr. Shivaraju H P, JSS Academy of Higher Education and Research, India Co-Chairman: Assit. Prof. Panitan jutaporn, Khon Kaen University, Thailand
08:30 - 09:00	Keynote Speaker #5 Dr. Puttaswamy MADHUSUDAN (Online) Research Professor Department of Civil and Environmental Engineering, Hanyang University, Seoul, South Korea "Rational design and construction of nanostructured advanced materials for energy and environmental remediation"
09:00 - 09:15	AMEEHA2022-EA 005
09:15 - 09:30	AMEEHA2022-EA 014
09:30 - 09:45	AMEEHA2022-EA 015
09:45 - 10:00	AMEEHA2022-EA 018
10:00 - 10:15	AMEEHA2022-EA 023
10:15 - 10:30	AMEEHA2022-EA 026
10:30 - 10:45	AMEEHA2022-MA 004
10:45 - 11:00	Coffee Break
11:00 - 11.30	Plenary Speaker # 2 Prof. (Dr) Sabu THOMAS, D.Sc., Ph.D., FRSC, FEurASc (Online) Vice-Chancellor, Mahatma Gandhi University, Kottayam, Kerala, India "Engineering at the Nanoscale: A Strategy for Developing High-Performance Functional Materials from Biopolymers"
11.30 - 12.00	**Poster session**
12:00 - 13:00	**Lunch**

August 5th, 2022	
Virtual Presentation	
Session 4: Envi.Application/ Energy & Storage	Chairman: Prof. C.T. Aravindakumar, Mahatma Gandhi University, India Co-Chairman: Assist. Prof. Thunyalux Ratpukdi, Khon Kaen University, Thailand
13:00-13:15	AMEEHA2022-EA 010
13:15-13:30	AMEEHA2022-EA 017
13:30-13:45	AMEEHA2022-EA 019
13:45-14:00	AMEEHA2022-EA 022
14:00-14:15	AMEEHA2022-EA 028
14:15-14:30	AMEEHA2022-EA 029
14:30-14:45	AMEEHA2022-ES 007
15:00 - 15:15	Coffee Break

August 5th, 2022	
Virtual Presentation	
Session 5: Mat. Syn & Charac./Adv. Material / Medical App.	Chairman: Assoc. Prof. Kitirote Wantala, Khon Kaen University, Thailand Co-Chairman: Assist. Prof. Ratabal Khunphonoi, Khon Kaen University, Thailand
13:00-13:15	AMEEHA2022-MC 001
13:15-13:30	AMEEHA2022-MC 004
13:30-13:45	AMEEHA2022-MC 006
13:45-14:00	AMEEHA2022-MC 007
14:00-14:15	AMEEHA2022-AM 007
14:15-14:30	AMEEHA2022-AM 008
14:30-14:45	AMEEHA2022-MA 003
14:45-15:00	AMEEHA2022-MA 009
15:00 - 15:15	Coffee Break

August 5th, 2022	
Poster Session	**(**11.15 - 12.00)
Mat. Syn & Charac./ Adv. Material / Envi.Application / Medical App.	
Onsite	AMEEHA2022-MC 005
Onsite	AMEEHA2022-EA 024
Onsite	AMEEHA2022-EA 025
Virtual	AMEEHA2022-MC 010
Virtual	AMEEHA2022-AM 002
Virtual	AMEEHA2022-EA 006
Virtual	AMEEHA2022-EA 008
Virtual	AMEEHA2022-EA 009
Virtual	AMEEHA2022-EA 020

Plenary Speaker #1

Name, designation & affiliation	Professor Bunsho OHTANI, Professor Emeritus, Hokkaido University and Nonprofitable Organization touche NPO, Japan
Photographs	
Research details	The research work on photocatalysis by Professor Bunsho Ohtani started in 1981 when he was a Ph. D. course student in Kyoto University. Since then, he has been studying photocatalysis and related topics for more than 40 years and published more than 300 original papers (h-index: 72) and two single-author books. After gaining his Ph. D. degree from Kyoto University in 1985, he became an assistant professor in the university. In 1996, he was promoted to an associate professor in Graduate School of Science, Hokkaido University and was then awarded a full professor position in the Catalysis Research Center (presently Institute for Catalysis), Hokkaido University in 1998 and retired at the end of March, 2022. After the reirement, he established a nonprofitable organization, touche NPO, and working as the chairman. He was awarded several times form the societies related to chemistry, photochemistry, electrochemistry and catalysis chemistry.
Tentative title of talk	True Design and Precise Characterization of Functional Materials through Electron Trap-distribution Analysis

Plenary Speaker #2

Name, designation & affiliation	Prof. (Dr) Sabu THOMAS, D.Sc., Ph.D., FRSC, FEurASc Vice-Chancellor, Mahatma Gandhi University, Kottayam, Kerala, India
Photographs	
Research details	Prof. Sabu Thomas is one of India's most renowned scientists known for his contributions in polymer science and Nanotechnology. He is a scientist, administrator and an excellent teacher who has students all over the world. He joined Cochin University of Science and Technology to pursue his bachelor's degree in Polymer science and Rubber Technology. He went on to complete his Ph.D at the Indian Institute of Technology, Kharagpur under the eminent guidance of Prof. S K De. After attaining industrial experience, he returned to serve his homeland, Kottayam and joined Mahatma Gandhi University as a lecturer. He has been the Visiting Professor of several institutes abroad. He currently serves as the Vice Chancellor of the Mahatma Gandhi University. He has guided over 118 Ph.D students. He has received several national and International awards for best researcher and is a member of numerous scientific bodies and committees. So far, 3 universities have honored him with honorary doctorates, which include University of South Brittany, France, University of Lorraine, France and Siberian Federal University, Russia. He received a total grant of Rs. 40 crores for research funding from India and abroad and have organised 50 international conferences in the campus. He has authored more than 1,200 research publications and 160 books. He has a notable h-index of 122 and has accumulated over 71,842 citations. Recently, he has been ranked 114 th in the list of the world's best scientists that has been compiled by Stanford University in the US. He figures in the list as the 2 nd - best scientist in India in the field of polymer science. This year he was also selected for the DST Nanomission award 2020. He received Honorary Professorship from Siberian Federal University on May 2020. Last year he was honoured with C.N.R Rao Award Prize Lecture in Advanced Materials by Materials Research Society of India (MRSI). He was elected as the Foreign Fellow of the European Academy of Sciences (EurASc)-2019. He had also won the 6th contest of "mega-grants" organized by the Government of the Russian Federation designed to support research projects implemented under the supervision of the world's leading scientists - 2017.Recently he was honored with Bailey Medal Award. In January 2021 Prof Sabu Thomas was awarded the Kairali Lifetime Research Award 2021 by Kerala Government. As per the

new report of German based “European Science Evaluation Centre” Prof Sabu Thomas is ranked 1st in the Kerala state 19th in the Country and 236th in Asia. Recently Prof Thomas was elected as a member of Editorial Boards and Editorial Key Reviewers Committees member in the World Academy of Materials and Manufacturing Engineering and the Association of Computational Materials Science and Surface Engineering, Poland. He is ranked as the best scientist in the state of Kerala and 19 th in India in the ranking by AD Scientific Index 2022. Professor Thomas has contributed a major part of their academic life to the up-gradation of Mahatma Gandhi University to an international level. Prof Sabu Thomas has contributed a lot academically and under his tremendous effort and leadership, Under his leadership, now the University has been ranked 713 in the world University ranking and 154 in the Asian Ranking by TIMES and 142 The Times Higher Education -THE Young University Rankings 2021. Mahatma Gandhi University could bag Chancellor's award, NIRF ranking of 30 and “A” grade in NAAC
reaccreditation. Recently Mahatma Gandhi University could win the Chancellors Award for the best University under his excellent leadership.

Tentative title of talk	Engineering at the Nanoscale: A Strategy for Developing High-Performance Functional Materials from Biopolymers

Keynote Speaker #1

Name, designation & affiliation	Professor Behzad SHAHMORADI, Department of Environmental Health Engineering, Faculty of Health, Kurdistan University of Medical Sciences, Sanandaj, Iran
Photographs	
Research details	Chlorination is one of the common steps practiced in water treatment plants to ensure the health of the consumers. However, it has some drawbacks, particularly producing byproducts suspected to have carcinogenic effects on the consumers, human beings. For this purpose, Sn:TiO_2 nanoparticles were synthesized through mild hydrothermal conditions. The XRD pattern showed high crystallinity and SEM images revealed low agglomeration. Effects of operational parameters studied were contact time, pH, the dosage of nanoparticles, and concentration of the byproducts. Doping enhanced photodegradation under both UV and sunlight illumination. Although high efficiency was observed for photodegradation of bromoform, bromomethane chloride, dichlorobromomethane, and total trihalomethane, the batch study revealed that no chloroform could be degraded.
The tentative title of the talk	Photodegradation of disinfection byproducts using Sn:TiO_2 nanoparticles

Keynote Speaker #2

Name, designation & affiliation	Dr. Sami RTIMI Director of innovation and Technology Global institute for Water, environment and Health Geneva, Switzerland
Photographs	
Research details	Dr. Rtimi's expertise relates to the design, synthesis, evaluation, and surface properties of catalytic materials for the sustainability. He published several papers in high impact journals in the field, numerous book chapters, patents and presented in several national and international conferences. He is currently Editor in Environmental Science and Pollution Research journal (Springer-Nature) and guest-edited many special issues in Chemical Engineering Journal, Applied Catalysis B: Environment, MDPI-Coatings and many others. He received some outstanding awards from prestigious universities and organizations.
Tentative title of the talk	Photocatalytic thin films for microbial disinfection at the solid-air interface.

Keynote Speaker #3

Name, designation & affiliation	Dr David F L JENKINS Associate Profesor of Nanomaterials and Devices University of Plymouth, UK
Photographs	
Research details	David Jenkins has a PhD in Physics with eleven PhD completions and six current PhD students. Dr Jenkins has a long research background with over 120 publications and conference presentations. The focus of his research has been in the area of sensor development for the characterisation and optimisation of materials and devices. His research is focused on 2-dimensional materials such as graphene and its derivatives, along with thin films for solar cells, nanoporous aerogels for water treatment and in nano-toxicology using surface plasmon resonance for detecting ultra-low concentrations of nano particles in water. He has been very active in the area of water contaminants and has hosted a number of workshops in India. Most recently pre-Covid, IUKWC Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management, Mysore in 2019. Before this a Researcher Links Workshop “Clean water through Advanced and Affordable materials “ in 2016 and a National Conference on Sustainable Clean Water Technology at B S A Crescent University 2017. A recently completed project was Global Challenges Research Fund “Portable device for multiplexed detection of water-borne pathogens and heavy metals using aptamer conjugated functionalized nanomaterials “, with IISc Bangalore.
Tentative title of talk	Low-cost graphene based nanostructures for the efficient removal of toxic metals from rural drinking water supplies.

Keynote Speaker #4

Name, designation & affiliation	Dr. Diganta Bhusan DAS, FHEA, FRSC, FRSB Reader in Porous Media Department of Chemical Engineering, Loughborough University, UK
Photographs	
Research details	My research relates to fluid flow, mass transport and reactions in porous media, spanning between water and process systems engineering to bioengineering. I am a keen collaborator and team builder on a range of multidisciplinary porous medium topics such as (i) coupled free and porous flow (e.g., leakage in fluid distribution pipes, membrane separation), (ii) two-phase flow in porous media (iii) membrane water treatment (iv) chemical transport in porous tissues and tissue engineering bioreactors (v) drug delivery devices. Full details of my research activities may be found here: https://www.lboro.ac.uk/departments/chemical/staff/diganta-b-das/
Tentative title of talk	Developing Enabling Technologies Using Concepts of Porous Media

Keynote Speaker #5

Name, designation & affiliation	Dr. Puttaswamy MADHUSUDAN Research Professor, Department of Civil and Environmental Engineering, Hanyang University, Seoul, South Korea Email: madhu2010@hanyang.ac.kr
Photographs	
Research details (maximum 150-200 words)	Dr. Puttaswamy Madhusudan received his MSc., and PhD from University of Mysore, India. He did his postdoctoral research at the State Key Laboratory of Advanced Technology for Material Synthesis and Processing, Wuhan University of Technology, China (2010 to 2016), In 2012 he worked as Postdoctoral Researcher with the Niigata University, Japan. Later, he worked as visiting scientist from 2018 to 2019 and Senior Research Scientist from 2019 to 2021 at Southern University of Science and Technology (SUSTech), Shenzhen, China. Since 2021, he is Research Professor with Hanyang University, Department of Civil and Environmental Engineering, Seoul campus, South Korea. His current research interests focus on the synthesis and applications of nanostructured materials for photocatalytic applications such as Hydrogen evolution reaction, CO_2 reduction to hydrocarbon fuels, photoelectrochemical water splitting, indoor air purification, energy conversion and storage. Besides, he is involved in fabrication of porous nanomaterials for environmental applications such as phosphate adsorption, nitrate. ammonia adsorption, and organic dye degradation from waste water. Dr. Puttaswamy Madhusudan has published his research work in top 5% SCI papers in International Journals which are highly cited.
Tentative title of talk	Rational design and construction of nanostructured advanced materials for energy and environmental remediation