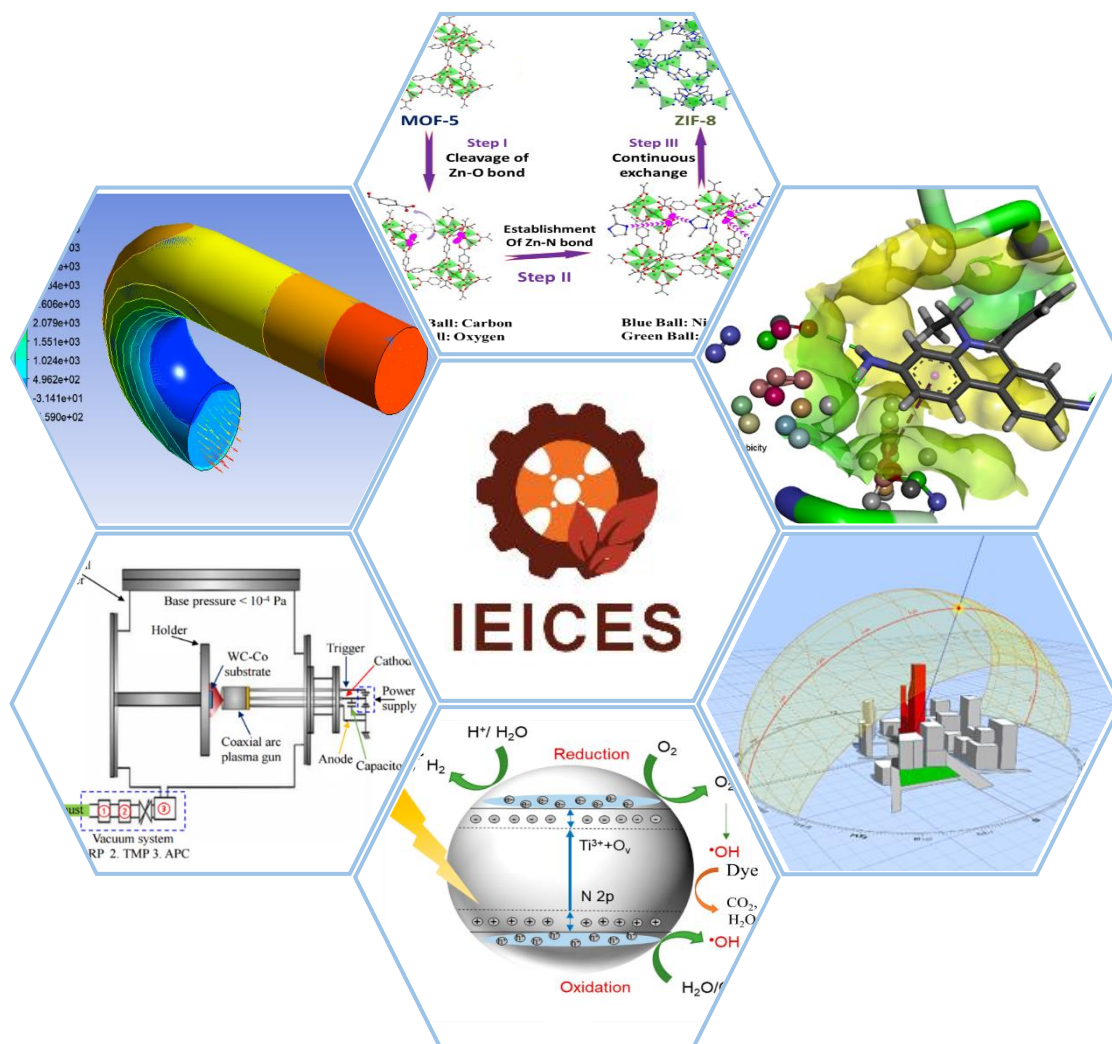




9th International Exchange and Innovation Conference on Engineering & Sciences (IEICES) 2023

October 19 & 20, 2023

IEICES: Scopus Indexed Conference Conference Program



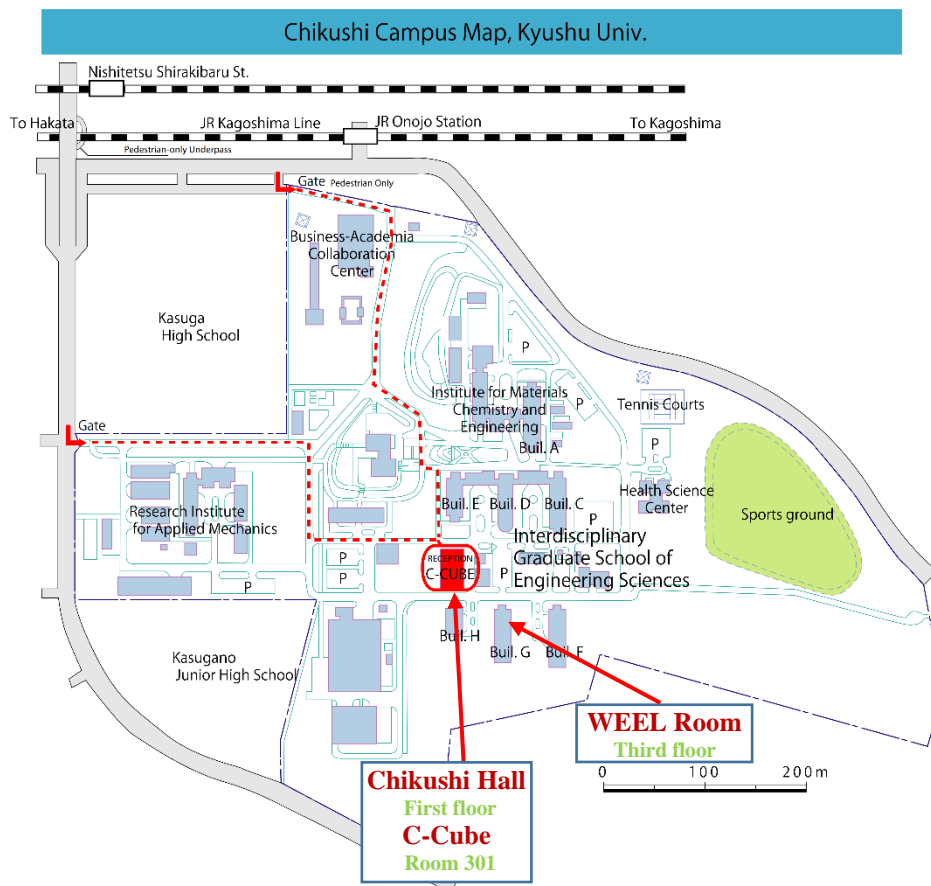
6-1 Kasuga-koen, Kasuga, Fukuoka, 816-8580, Japan

9th International Exchange and Innovation Conference on Engineering & Sciences (IEICES) 2023

October 19 & 20, 2023

❖ *The conference program time follows Japan Standard Time (JST)*

Venue information for physical participants



Chikushi Campus, Kyushu University, 6-1 Kasuga-koen, Kasuga, Fukuoka, 816-8580, Japan.

09:30	10:00	Registration (Lobby, C-Cube Building)	
10:00	10:10	<i>Welcome Speech:</i> Assoc. Prof. Osama Eljamal	
10:10	10:30	Open Remark and Introduction of IGSES: Dean of IGSES Prof. Jun Tanimoto	
10:30	10:50	Photo Session and Coffee Break	
<i>Venue</i>		Keynote Session K1, Chikushi Hall	
<i>Session Chair</i>		<i>Sam Bessai</i>	
<i>Co-chair</i>		<i>Xie Yu</i>	
10:50	11:20	Title: Synthesis of Quenched-produced Diamond by Physical Vapor Deposition for Various Applications <i>Speaker: Associate Professor Abdelrahman Zkria</i> , Kyushu University, Japan	
11:20	11:50	Title: Advanced Nano-bio Technology for Smart Drug Delivery <i>Speaker: Associate Professor Md. Zaved Hossain Khan</i> , Jashore University of Science and Technology, Bangladesh	
11:50	13:30	Lunch Break	
Session 1			
<i>Venue</i>	Chikushi Hall	WEEL Room	
<i>Session Chair</i>	<i>Mehran moradi</i>	<i>Ali Gamal</i>	
<i>Co-chair</i>	<i>Ahmed Adam</i>	<i>Mohamed Diab</i>	
13:30	13:40	Empowering Sustainability: Innovative Deep Learning and Remote Sensing Solutions for Urban Monitoring and Sustainable Development Muhammad Salem, Naoki Tsurusaki, Kyushu University, Japan	Mapping and Estimation of Road Traffic Emission in Caraga Region using Sentinel-5P Satellite Images Benzyl M. Metran, Jomar P. Elumba, Monalaine M. Bermoy, Caraga State University, Philippines
13:40	13:50	Statistical Analysis of Turbulent Flow Over a Building Array using LES Haitham Osman, Muhd Azhar Zainol, Naoki Ikegaya, Kyushu University, Japan	Suitability Mapping for White-fleshed (<i>Hylocereus undatus</i>) and Red-fleshed (<i>Hylocereus costaricensis</i>) Dragon fruit Farming in Butuan City Using Multi-Criteria Decision Analysis and GIS Armdin A. Valmoria, Loven Joy E. Bala, Maria Letecia D. Orag, Caraga State Uni., Philippines
13:50	14:00	The Legacy of Urban Sprawl on Wildlife Conservation: A Case Study of Nairobi National Park Onkangi Ruth Nyabony, Islam M. S. Abouelhamd, Vincent Madadi, Peter Muriithi Maina, Peter Njiri Mwangi, John M. Wanjohi, Frederick D.O. Oduor, Kyushu Uni., Japan	Investigating the Influence of Urban Density and Concentrations on Commuting Distance and Time: Empirical Evidence from Suhag City Islam M. S. Abouelhamd, Ruth N. Onkangi, Paulus Van der Kuil, Uwe-Jens Walther, Kyushu University, Japan
14:00	14:10	Where to build? A suitability Modelling Approach for University Campuses Location-Allocation in Japan Ahmed M.S. Mohammed, Tetsuya Ukai, Kyushu University, Japan	GIS-Based Land Suitability Analysis for Adlai Grits (<i>Coix Lacryma-Jobi L.</i>) Cultivation in Agusan Del Sur Using Multi-Criteria Decision-Making Approach – Analytical Hierarchy Process Technique Armdin A. Valmoria, John Aissac C. Cejula, Reymart A. Dagohoy, Caraga State University Philippines

14:10	14:20	Impact Assessment of Land Use and Land Cover Change of Agusan River Basin to Climate Using Geospatial Techniques and Regression Analysis Aljon E. Bocobo, Sheen P. Camatura, Ann Marie G. Forcadas, Anamarie P. Sajonia, Caraga State University, Philippines	Measuring The Enjoyment of Mobile Library Services among University Students in Bangladesh: A Study Sadia Sultana Emu, Rajshahi University, Bangladesh
14:20	14:30	Exploring the Global Nuclear Safety Regime: A Comparative Analysis of Nuclear Power Generation Practices in Bangladesh & Japan Md. Simul Hasan Talukder, Md. Zoyheroul Islam Bangladesh Atomic Energy Regulatory Authority, Bangladesh	Indicator for Formulating and Measuring the Urban Sustainability Index: A Review Baskaran Venkatesh, R Velkennedy, S Murugan, A Velmurugan, Alagappa Chettiar Government College of Engineering and Technology, Karaikudi, India
14:30	14:40	Molybdenum Disulfide (MoS₂)– based Cathode Materials for Magnesium (Mg²⁺) and Mg²⁺/Li+ hybrid-ion Batteries: Progress and Perspective Omar Falyouna, Toshihiko Mandai National Institute for Materials Science (NIMS), Japan	Assessment on the Level of Mechanization in the Production and Post-Production Systems of Corn in Surigao del Sur, Philippines May Rose Boston-Osoteo, Joe Mark B. Pinggol, Ma. Leah A. Macarayo, Neil Caesar M. Tado, Art M. Dalman, Cindy Mae C. Belivestre, Caraga State University, Philippines
14:40	14:50	Enhanced Biomass Gasification by Catalyzing the Pyrolysis of Cedarwood using Biochar Catalyst Ramadan Eljamal, Eiji Minami, Haruo Kawamoto, Graduate School of energy science, Kyoto University, Japan	Assessment on the Level of Mechanization in the Rice Production and Post-production System in Surigao Del Sur Art M. Dalman, Rogelyn A. Aguhob, Rudy Joy N. Bumiel, Neil Caesar M. Tado, May Rose B Osoteo, Cindy May C. Beivestre, Caraga State University, Philippines
14:50	15:00	Development and Evaluation of na (Colocasia Esculenta) Leaves and Banana Pseudo Stem (Musa Acuminata) as an Alternative Hydrophobic Paper Bag Joan Jane J. Sanchez, Erika T. Honorio, Julius John Ceasar A. Mosquito, Philip Donald C. Sanchez, Caraga State University, Philippines	Understanding students’ Residential Dynamics around University Campuses: A Computational agent-based Modelling Approach Ahmed M.S. Mohammed, Tetsuya Ukai, Kyushu University, Japan

15:00 15:20

Coffee Break

Venue

Keynote Session K2, Chikushi Hall

Session Chair **Ruth Nyabonyi Onkangi**

Co-chair **Mahmoud Basyouni**

15:20 15:50 **Title: Modern Trends in Industrial Burners: Challenges and Opportunities**

Speaker: Professor Hany Ahmed Moneib, Combustion Engineering and Thermal Engines, Helwan University, Egypt

15:50 16:20 **Title: Transforming Foundation Industries: Challenges and Effective Resource-Efficient Strategies**

Speaker: Dr. Ahmed M.E. Khalil, University of Exeter, United Kingdom of Great Britain and Northern Ireland

16:20 16:40

Coffee Break

Session 2

<i>Venue</i>	Chikushi Hall	WEEL Room
<i>Session Chair</i>	<i>Haitham Osman</i>	<i>Mostafa Hassan</i>
<i>Co-chair</i>	<i>Tsinjo Nirina</i>	<i>Islam Abouelhamd</i>
16:40	16:50	Cofiring of Oil and Gaseous Fuels Through an Innovative Coaxial, Double Swirl Burner Ahmed A. Adam, Mahmoud A. Shahein, Ahmed E. El-Kholy, Hany A. Moneib, Kyushu University, Japan
		The Role of Local Energy Markets in low Voltage Networks: Community-based Approaches Mehran Moradi, Hooman Farzaneh, Kyushu University, Japan
16:50	17:00	Effect of Inner Swirl Angle on Flame Stability of a Double-Swirl Burner with Biogas-Methane Co-Firing Ahmed M. Abdalnaim, Ahmed H. Elkholy, Mohamed A. Elmously, Hany A. Moneib, Ayman M. Elbaz, Helwan University, Egypt
		Analyzing the Behavior of Li-B Electrothermal Voltage and Capacity Loss under Varying Temperatures and Discharge rates Muhammad Arsalan, H. Farzaneh, Kyushu University, Japan
17:00	17:10	Study the Heat Exchanger through ANSYS Fluent Muhammad Sufian, Muhammad Javaid Afzal, Farah Javaid, Shahzadi Tayyaba, Muhammad Waseem Ashraf, Govt. Islamia Graduate College Civil Lines Lahore, Pakistan
		Development of a 10 kW Solar Photovoltaic Power Plant for Bonwary Lal Govt. High School Md Saifur Rahman, Tahmid Sadi, Ahsanullah University of Science and Technology, Bangladesh
17:10	17:20	Numerical Study of Jet Inverse Diffusion Flames Issuing from an Elliptical Burner Ahmed A. Mahgoub, Mohamed S. Mohamed Gamal, Ahmed M. Abdalnaim, Helwan University, Egypt
		Design and Development of an Artificial Neural Network-based Maximum Power Point Tracker (ANN_MPPT) for the Residential Solar Photovoltaic Ryotaro Torikai, Hooman Farzaneh, Kyushu University, Japan
17:20	17:30	Stability of Partially Premixed Ammonia/Methane Flames in a Concentric Flow Conical Nozzle Burner Eslam I. Mohamed, Ahmed H. Elkholy, Hany A. Moneib, Ayman M. Elbaz, Helwan University, Egypt
		Analyzing the Viability of Decentralized Renewable Energy Solutions for Rural Electrification in Marginalized Communities of Pakistan Nabeel Ul Rehman, Rafiq Ahmad, Asad Waqar, Kyushu University
17:30	17:40	Comparative Performance Analysis between Multi-Input Boost Converter and Multi-Input SEPIC Converter for Renewable Energy Sources Nayeem Ahmed, Afrid Uddin Araf, BRAC University, Bangladesh
		Effects of Car Wake on Performance of Low-Capacity Wind Turbine Mounted on Highways Minh Duc Le, Thanh Dat Phan, Shiferaw Regasa Jufar, The University of Danang– University of Science and Technology, Vietnam
17:40	17:50	Closing Remarks

Venue		Keynote Session K3, Chikushi Hall	
<i>Session Chair</i>		<i>Xie Yu</i>	
<i>Co-chair</i>		<i>Sam Bessai</i>	
10:00	10:30	Title: Mini-Class Blended Wing-Body Unmanned Aerial Vehicle Aerostructure Design for Fused Deposition Modelling 3D Printing <i>Speaker: Associate Professor, Rizal E. M. Nasir, Universiti Teknologi MARA, Malaysia</i>	
10:30		10:50	
Coffee Break			
Session 3			
Venue		C-Cube Room 301	WEEL Room
<i>Session Chair</i>		<i>Ahmed Adam</i>	<i>Mohamed Diab</i>
<i>Co-chair</i>		<i>Feng Xuening</i>	<i>Ali Gamal</i>
10:50	11:00	Desalination of Seawater Using Reverse Osmosis Method Rituparna Talukder, Pratoy Kumar Proshad, Lamar University, Texas, USA	A Mini Review of Photocatalytic Effects of Nano TiO₂ and an Analysis of their Effectiveness Md. Golam Sazid, Asraf Ibna Helal, Torikul Islam, Semanto Purkaystha, Nano Research Centre, Bangladesh
11:00	11:10	Assessment of Water Safety and Associated Health Risks of Nagaland's Capital, Kohima: a Physico-chemical and Statistical Investigation Senchumbeni Yanthan, Akito I Sema, Deepak Das, Jhimli Bhattacharyya, National Institute of Technology Nagaland, India	A Mini Overview of Post Synthetic Modification of Synthesized Zeolitic Imidazolate Frameworks Kristi Priya Choudhury, Newton Neogi, Tahzib Ibrahim Protik, MD. Golam Sazid, Nano Research Centre, Bangladesh
11:10	11:20	Hydrogen Production of Anaerobic Digestion: A Review Ding Jianning, Osama Eljamal, Kyushu University, Japan	A Mini Overview of Biomedical Utilization of Zeolitic Imidazolate Frameworks Sabbir Hossain, Newton Neogi, Tahzib Ibrahim, Nano Research Centre, Bangladesh
11:20	11:30	Mini Review on the Application Research of Nanometer Zero Valent Iron in Water Treatment Luo Yi, Osama Eljamal, Kyushu University, Japan	Conjugated Polymers and Ring-Opening Metathesis Polymerization (ROMP): Synthesis, Applications, and Prospects for Technological Innovations Mahmoud Z. Basyouni, Jianhao Ye, Andrew M. Spring, Kyushu University, Japan
11:30	11:40	Wave Activated Body Reverse Osmosis with Energy Recovery for Water Desalination Aiza A. Patadlas, Cebu Technological University, Philippines	Irradiation-induced Hardening of Zircaloy-2 at Room Temperature under External Stress Conditions Luwei XUE, Hideo Watanabe, Kyushu University, Japan
11:40	11:50	A study on Zerovalent Iron Nanoparticles, Fe²⁺ and Fe³⁺ Enhanced Double Chamber Microbial Fuel Cells Yu Xie, Osama Eljamal, Kyushu University, Japan	Applications of Spectroscopic-based Techniques for Quality and Safety Evaluation of tomatoes: A mini-review Marjun C. Alvarado, Philip Donald C. Sanchez, University of the Philippines-Los Banos, Philippines

11:50	12:00	A Mini Overview of Wastewater and River Water Treatment by Various Nanoparticles Tahzib Ibrahim Protik, Sabbir Hossain, Torikul Islam, Semanto Purkaysha, Nano Research Centre, Sylhet, Bangladesh	Assessment of Land Use Land Cover Classification using Support Vector Machine and Random Forest Techniques in the Agusan River Basin through Geospatial Techniques Juven G. Luzorata, Aljon E. Bocobo, Liahona M. Detera, Neki Jel B. Pocong, Anamarie P. Sajonia, Caraga State University, Philippines
12:00 14:00		Lunch Break	
<i>Venue</i>		Keynote Session K4, C-Cube Room 301	
<i>Session Chair</i>		<i>Mahmoud Basyouni</i>	
<i>Co-chair</i>		<i>Sam Bessai</i>	
14:00	14:30	Title: Intensifies the Sorption Capacity and Thermal Performance of Adsorption Systems for Cooling and Heat Storage <i>Speaker: Associate Professor. Ahmed Rezk, Aston University, United Kingdom</i>	
14:30	15:00	Title: Advances in Chemical Enhanced Oil Recovery Using Nanofluids <i>Speaker: Associate Professor. Usama Nour Eldemerdash, Japan University of Science and Technology, Egypt</i>	
15:00 15:20		Coffee Break	
		Session 4	
<i>Venue</i>		C-Cube Room 301	WEEL Room
<i>Session Chair</i>		<i>Mahmoud Basyouni</i>	<i>Islam Abouelhamd</i>
<i>Co-chair</i>		<i>Ruth Nyabonyi Onkangi</i>	<i>Haitham Osman</i>
15:20	15:30	Advances in Nitrogen-Vacancy Color Centers in Diamond for Magnetometry: Advantages and Challenges Ali Abdelrahman, Abdelrahman Zkria, Tsuyoshi Yoshitake, Kyushu University, Japan	Estimation of Permeability of Soil-fly Ash Mix Using Machine Learning Algorithms Joanel Galupino, Jonathan Dungca, De La Salle University, Philippines
15:30	15:40	Effects of Target-Substrate Distance on Growth and Mechanical Characteristics of Nanodiamond Composite Coatings Fabricated by Coaxial Arc Plasma Deposition on WC-Co Substrate Mohamed Ragab Diab, Mohamed Egiza, Koki Murasawa, Hiroshi Naragino, Tsuyoshi Yoshitake, Kyushu University, Japan	Image Compression using POCS-based Clustering Algorithm Le-Anh Tran, Dong-Chul Park, Myongji University, South Korea
15:40	15:50	Thickness Optimization of Al₂O₃ Tunneling Layer in CBTS Solar Cells using SCAPS Software Henni Wafaâ, Rahal Wassila Leila, Rached Djaafar, Boukortt Abdelkader, University Abdelhamid Ibn Badis, Mostaganem, Algeria	Integrating Prior Knowledge from Meta-Learning and Large Language Models for Cold-Start Recommendation Yu Li, Yixiao Liu, Tetsuya Furukawa, Kyushu University, Japan
15:50	16:00	Simulation of Two Series Packed-Bed Reactors for SO₂ Oxidation Reaction Alimzhan Kalbekov, Selahattin Gultekin, Kyushu University, Japan	An Overview and Statistical Study on the Photocatalytic Activities of Fe based metal oxide Nanoparticles Tahzib Ibrahim Protik, Kristi Priya Choudhury, Newton Neogi, Sabbir Hossain, Asraf Ibna Helal, Md. Golam Sazid, Nano Research Centre, Bangladesh

16:00	16:10	Exploring the Magnéli Phase of Transition Metal Oxides: A Promising Frontier for Thermoelectric Advancements Mostafa M. Elkady Hakem, Michitaka Ohtaki, Kyushu University, Japan	J-tip Blood Channel Fluid Dynamics Simulation Muhammad Javaid Afzal, Farah Javaid, Shahzadi Tayyaba, Muhammad Waseem Ashraf, Govt. Islamia Graduate College Civil Lines Lahore, Pakistan
16:10	16:20	Nexus Between CO₂ Emission, Economic Development and Energy Consumption in Bangladesh Jamilur Rahman, Gaylan Ibna, Wahid, Sharif Ahmed, F. M. Nizazul Islam, Bidyut Baran Saha, Sampad Ghosh, Chittagong University of Engineering and Technology, Bangladesh	Optimizing Aerodynamic Performance of Selig S3014 Airfoil through Dimensional Parametric Analysis Md Saifur Rahman, Khairun Nasrin Rimi, Tahmid Sadi, Ahsanullah University of Science and Technology, Bangladesh
16:20	16:30	Valorization of Post-consumer Plastic Packaging into a Composite Material RAFENOMANANJARA Tsinjo Nirina, SEKITO Tomoo, ANDRIANARIMANGA Hery Mamisoa Clement, Kyushu University, Japan	Progress and Obstacles in Utilizing Quantum Dot Nanomaterials for Various Industrial Applications Newton Neogi, Kristi Priya Choudhury, Nano Research Centre, Bangladesh
16:30	16:40	Performance Analysis of Robust Acoustic Circular Microphone Array Beamformer Sarah Nigar, Md. Faruk Hossain, Md. Tarek Hossein, Md. Shahel Zakaria, Rajshahi University, Bangladesh	OpenFOAM-based Numerical Simulation on Capillary Flow in Closed Hierarchical Microchannels Gaurav Kumar, Dotong Zhang, Gyoko Nagayama, Kyushu Institute of Tech., Japan
16:40	16:50	Research of Hidrocracking Process of Fuel Oil with Participation of Halloysite Modified by Different Metals Aisha Hasanova Baba, Institute of Bioresources of the Ministry of Science and Education of the Republic of Azerbaijan, Azerbaijan	

16:50 17:10

Coffee Break

Session 5

<i>Venue</i>	C-Cube Room 301	WEEL Room	
<i>Session Chair</i>	<i>Tsinjo Nirina</i>	<i>Sam Bessai</i>	
<i>Co-chair</i>	<i>Mostafa Hassan</i>	<i>Ding Jianning</i>	
17:10	17:20	A Mini Review on Utilization of Nano Cellulose in Sensing Applications Kristi Priya Choudhury, Newton Neogi, MD. Golam Sazid, Nano Rese. Centre, Bangladesh	Utilization of Metal Based Nanoparticles in Biomedical Imaging Technologies Newton Neogi, Kristi Priya Choudhury, Nano Research Centre, Bangladesh
17:20	17:30	Characterization and Evaluation of Aratiles (Muntingia calabura) Fruit Alcoholic Beverage Eldie Rabuya Labisto, Levs A. Mutia, Christine M. Concha, Caraga State University, Philippines	Utilization of Metal-based Nanomaterials in DSSC: A Review Md. Golam Sazid, Shehab Ahamed Chowdhury Mitul, Nano Research Centre, Bangladesh
17:30	17:40	Recent Advances with CNT and Nanocellulose Composites in Different Industries Sabbir Hossain, Nano Research Centre, Sylhet, Bangladesh	An Analysis of the Photocatalytic Activities of ZnO Nanoparticles: Factors Influencing Dye Degradation Asraf Ibna Helal, Newton Neogi, Kristi Priya Choudhury, MD. Golam Sazid, Shahjalal Uni. of Science and Technology, Bangladesh

17:40	17:50	Biophysical Investigation of the Binding Mechanism for Industrial Dye Molecular Association with Serum Protein Rengka Tissopi, Jhimli Bhattacharyya, National Institute of Technology Nagaland, India	Utilization of Nanomaterials in Electrochemical Sensor: A Review Kristi Priya Choudhury, Newton Neogi, Sabbir Hossain, Nano Research Centre, Bangladesh
17:50	18:00	A Preliminary Evaluation on the Development of Edible Drinking Straw from Guso (<i>Eucheuma cottonii</i>) Seaweeds Marjun C. Alvarado, Shiella Grace Nakila Polongasa, Phillip Donald Cabuga Sanchez, Caraga State University, Philippines	Mangrove Forest Conservation-Based Tourism Industry Development in Indonesia Erni Puspanantasari Putri, Bonifacius Raditya Sri Pramana Putra, Agatha Hannabel Avnanta Puteri, Universitas 17 Agustus 1945 Surabaya, Indonesia
18:00 18:10		Closing Remarks: C-Cube Room 301	