



BCSIR Congress-2023

Chief Patron

Architect Yeafesh Osman

Honorable Minister, Ministry of Science & Technology
Government of the People's Republic of Bangladesh

Patron

Mr. Md. Ali Hossain

Secretary, Ministry of Science & Technology
Government of the People's Republic of Bangladesh

Organizing Committee

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Chairman, Bangladesh Council of Scientific and Industrial Research (BCSIR)
Professor, Department of Chemistry, University of Dhaka

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BCSIR Congress-2023

Program Summary

08/03/2024	First Day (Friday)														
Inaugural Ceremony (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)															
09:00-09:05	National Anthem														
09:05-09:15	Welcome Address by the President, Organizing Committee, BCSIR Congress-2023														
09:15-09:35	Speech by Special Guests														
09:35-09:50	Inaugural Speech by the Chief Patron														
09:50-10:10	Speech by the Chief Guest														
10:10-10:15	Word of Thanks by the Secretary, Organizing Committee, BCSIR Congress-2023														
10:25-11:10	Theme Lecture by Nobel Laureate Professor Dr. Yoshinori Ohsumi, Head of the Cell Biology Research Unit, Institute of Innovative Research, Tokyo Institute of Technology, Japan														
11:10-11:30	Tea and Refreshment														
Plenary Session-1 (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)															
11:30-12:00	PL-1	Professor Dr. Nobuo N. Noda, Institute for Genetic Medicine, Hokkaido University, Japan													
12:00-12:30	PL-2	Emeritus Professor Dr. Makoto Ubukata, Graduate School of Agriculture, Hokkaido University, Japan													
12:30-13:00	PL-3	Professor Dr. Calum J. Drummond AO, School of Science, STEM College, RMIT University, Australia													
13:00-14:00	Lunch														
Plenary Session-2 (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)															
14:00-14:30	PL-4	Professor Dr. Dilip K. Maiti, Vice-Chancellor, Biswa Bangla Biswabidyalay, India and Professor, Department of Chemistry, University of Calcutta, India													
14:30-15:00	PL-5	Emeritus Professor Dr. Keiichi N. Ishihara, Open Innovation Institute, Kyoto University, Japan													
15:00-15:30	PL-6	Professor Dr. Faisal Ibney Hai, School of Civil, Mining, Environmental and Architectural Engineering, University of Wollongong, Australia													
15:30-16:00	PL-7	Professor Dr. Jian Ping Gong, Faculty of Advanced Life Science, Institute for Chemical Reaction Design and Discovery (WPI-ICReDD), Hokkaido University, Japan													
16:00-16:15	Tea and Refreshment														
Technical Session-1, First Day (Friday), Time: 16:15-18:00															
Time	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
16:15-16:40	KN-A1	KN-B1	KN-C1	KN-D1	KN-E1	KN-F1	KN-G1	KN-H1	KN-I1	KN-J1	KN-K1	KN-L1	KN-M1	KN-N1	KN-O1
16:40-17:00	IL- A1	IL- B1	IL- C1	IL- D1	IL- E1	IL- F1	IL- G1	IL- H1	IL- I1	IL- J1	IL- K1	IL- L1	IL- M1	IL- N1	IL- O1
17:00-17:10	OP-A1	OP-B1	OP-C1	OP-D1	OP-E1	OP-F1	OP-G1	OP-H1	OP-I1	OP-J1	OP-K1	OP-L1	OP-M1	OP-N1	OP-O1
17:10-17:20	OP-A2	OP-B2	OP-C2	OP-D2	OP-E2	OP-F2	OP-G2	OP-H2	OP-I2	OP-J2	OP-K2	OP-L2	OP-M2	OP-N2	OP-O2
17:20-17:30	OP-A3	OP-B3	OP-C3	OP-D3	OP-E3	OP-F3	OP-G3	OP-H3	OP-I3	OP-J3	OP-K3	OP-L3	OP-M3	OP-N3	OP-O3
17:30-17:40	OP-A4	OP-B4	OP-C4	OP-D4	OP-E4	OP-F4	OP-G4	OP-H4	OP-I4	OP-J4	OP-K4	OP-L4	OP-M4	OP-N4	OP-O4
17:40-17:50	OP-A5	OP-B5	OP-C5	OP-D5	OP-E5	OP-F5	OP-G5	OP-H5	OP-I5	OP-J5	OP-K5	OP-L5	OP-M5	OP-N5	OP-O5
17:50-18:00	OP-A6	OP-B6	OP-C6	OP-D6	OP-E6	OP-F6	OP-G6	OP-H6	OP-I6	OP-J6	OP-K6	OP-L6	OP-M6	OP-N6	OP-O6



09/03/2024	Second Day (Saturday)
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Plenary Session-3 (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)	
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09:00-09:30	PL-8	Professor Dr. Abul Hussam, Department of Chemistry and Biochemistry, George Mason University, USA
09:30-10:00	PL-9	Mr. Warren J. Bruckard, Research Group Leader, Process Engineering & Chemistry, CSIRO Mineral Resources, Australia
10:00-10:30	PL-10	Professor Dr. Kazuhisa Sekimizu, Faculty of Pharmaceutical Sciences, Teikyo University, Tokyo, Japan

10:30-10:45	Tea and Refreshment
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Technical Session-2, Second Day (Saturday), Time: 10:45-12:30	
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Time	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
10:45-11:10	KN-A2	KN-B2	KN-C2	KN-D2	KN-E2	KN-F2	KN-G2	KN-H2	KN-I2	KN-J2	KN-K2	KN-L2	KN-M2	KN-N2	KN-O2
11:10-11:30	IL- A2	IL- B2	IL- C2	IL- D2	IL- E2	IL- F2	IL- G2	IL- H2	IL- I2	IL- J2	IL- K2	IL- L2	IL- M2	IL- N2	IL- O2
11:30-11:40	OP-A7	OP-B7	OP-C7	OP-D7	OP-E7	OP-F7	OP-G7	OP-H7	OP-I7	OP-J7	OP-K7	OP-L7	OP-M7	OP-N7	OP-O7
11:40-11:50	OP-A8	OP-B8	OP-C8	OP-D8	OP-E8	OP-F8	OP-G8	OP-H8	OP-I8	OP-J8	OP-K8	OP-L8	OP-M8	OP-N8	OP-O8
11:50-12:00	OP-A9	OP-B9	OP-C9	OP-D9	OP-E9	OP-F9	OP-G9	OP-H9	OP-I9	OP-J9	OP-K9	OP-L9	OP-M9	OP-N9	OP-O9
12:00-12:10	OP-A10	OP-B10	OP-C10	OP-D10	OP-E10	OP-F10	OP-G10	OP-H10	OP-I10	OP-J10	OP-K10	OP-L10	OP-M10	OP-N10	OP-O10
12:10-12:20	OP-A11	OP-B11	OP-C11	OP-D11	OP-E11	OP-F11	OP-G11	OP-H11	OP-I11	OP-J11	OP-K11	OP-L11	OP-M11	OP-N11	OP-O11
12:20-12:30	OP-A12	OP-B12	OP-C12	OP-D12	OP-E12	OP-F12	OP-G12	OP-H12	OP-I12	OP-J12	OP-K12	OP-L12	OP-M12	OP-N12	OP-O12

12:30-14:00	Lunch and Poster Session-A (PP-1 to PP-229)
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09/03/2024	Second Day (Saturday)
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Plenary Session-4 (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)	
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14:00-14:30	PL-11	Professor Dr. Tatsuya Tsukuda, Department of Chemistry, Graduate School of Science, The University of Tokyo, Japan
14:30-15:00	PL-12	Dr. Ashraf Islam, Chief Researcher, Photovoltaic Materials Group, National Institute for Materials Science (NIMS), Japan
15:00-15:30	PL-13	Dr. Shaikh Mohammad Bokhtiar, Executive Chairman, Bangladesh Agricultural Research Council (BARC), Bangladesh
15:30-16:00	PL-14	Sir Dr. Walter F Bodmer, Emeritus Professor, Department of Oncology, University of Oxford, United Kingdom

16:00-16:15	Tea and Refreshment
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Technical Session-3, Second Day (Saturday), Time: 16:15-18:00	
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Time	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
16:15-16:40	KN-A3	KN-B3	KN-C3	KN-D3	KN-E3	KN-F3	KN-G3	KN-H3	KN-I3	KN-J3	KN-K3	KN-L3	KN-M3	KN-N3	KN-O3
16:40-17:00	IL- A3	IL- B3	IL- C3	IL- D3	IL- E3	IL- F3	IL- G3	IL- H3	IL- I3	IL- J3	IL- K3	IL- L3	IL- M3	IL- N3	IL- O3
17:00-17:10	OP-A13	OP-B13	OP-C13	OP-D13	OP-E13	OP-F13	OP-G13	OP-H13	OP-I13	OP-J13	OP-K13	OP-L13	OP-M13	OP-N13	OP-O13
17:10-17:20	OP-A14	OP-B14	OP-C14	OP-D14	OP-E14	OP-F14	OP-G14	OP-H14	OP-I14	OP-J14	OP-K14	OP-L14	OP-M14	OP-N14	OP-O14
17:20-17:30	OP-A15	OP-B15	OP-C15	OP-D15	OP-E15	OP-F15	OP-G15	OP-H15	OP-I15	OP-J15	OP-K15	OP-L15	OP-M15	OP-N15	OP-O15
17:30-17:40	OP-A16	OP-B16	OP-C16	OP-D16	OP-E16	OP-F16	OP-G16	OP-H16	OP-I16	OP-J16	OP-K16	OP-L16	OP-M16	OP-N16	OP-O16
17:40-17:50	OP-A17	OP-B17	OP-C17	OP-D17	OP-E17	OP-F17	OP-G17	OP-H17	OP-I17	OP-J17	OP-K17	OP-L17	OP-M17	OP-N17	OP-O17
17:50-18:00	OP-A18	OP-B18	OP-C18	OP-D18	OP-E18	OP-F18	OP-G18	OP-H18	OP-I18	OP-J18	OP-K18	OP-L18	OP-M18	OP-N18	OP-O18



10/03/2024	Third Day (Sunday)
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Technical Session-4, Third Day (Sunday), Time: 09:00-10:45

Time	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
09:00-09:25	KN-A4	KN-B4	KN-C4	KN-D4	KN-E4	KN-F4	KN-G4	KN-H4	KN-I4	KN-J4	KN-K4	KN-L4	KN-M4	KN-N4	KN-O4
09:25-09:45	IL- A4	IL- B4	IL- C4	IL- D4	IL- E4	IL- F4	IL- G4	IL- H4	IL- I4	IL- J4	IL- K4	IL- L4	IL- M4	IL- N4	IL- O4
09:45-09:55	OP-A19	OP-B19	OP-C19	OP-D19	OP-E19	OP-F19	OP-G19	OP-H19	OP-I19	OP-J19	OP-K19	OP-L19	OP-M19	OP-N19	OP-O19
09:55-10:05	OP-A20	OP-B20	OP-C20	OP-D20	OP-E20	OP-F20	OP-G20	OP-H20	OP-I20	OP-J20	OP-K20	OP-L20	OP-M20	OP-N20	OP-O20
10:05-10:15	OP-A21	OP-B21	OP-C21	OP-D21	OP-E21	OP-F21	OP-G21	OP-H21	OP-I21	OP-J21	OP-K21	OP-L21	OP-M21	OP-N21	OP-O21
10:15-10:25	OP-A22	OP-B22	OP-C22	OP-D22	OP-E22	OP-F22	OP-G22	OP-H22	OP-I22	OP-J22	OP-K22	OP-L22	OP-M22	OP-N22	OP-O22
10:25-10:35	OP-A23	OP-B23	OP-C23	OP-D23	OP-E23	OP-F23	OP-G23	OP-H23	OP-I23	OP-J23	OP-K23	OP-L23	OP-M23	OP-N23	OP-O23
10:35-10:45	OP-A24	OP-B24	OP-C24	OP-D24	OP-E24	OP-F24	OP-G24	OP-H24	OP-I24	OP-J24	OP-K24	OP-L24	OP-M24	OP-N24	OP-O24

10:45-11:00	Tea and Refreshment
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Technical Session-5, Third Day (Sunday), Time: 11:00-12:45

Time	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
11:00-11:25	KN-A5	KN-B5	KN-C5	KN-D5	KN-E5	KN-F5	KN-G5	KN-H5	KN-I5	KN-J5	KN-K5	KN-L5	KN-M5	KN-N5	KN-O5
11:25-11:45	IL- A5	IL- B5	IL- C5	IL- D5	IL- E5	IL- F5	IL- G5	IL- H5	IL- I5	IL- J5	IL- K5	IL- L5	IL- M5	IL- N5	IL- O5
11:45-11:55	OP-A25	OP-B25	OP-C25	OP-D25	OP-E25	OP-F25	OP-G25	OP-H25	OP-I25	OP-J25	OP-K25	OP-L25	OP-M25	OP-N25	OP-O25
11:55-12:05	OP-A26	OP-B26	OP-C26	OP-D26	OP-E26	OP-F26	OP-G26	OP-H26	OP-I26	OP-J26	OP-K26	OP-L26	OP-M26	OP-N26	OP-O26
12:05-12:15	OP-A27	OP-B27	OP-C27	OP-D27	OP-E27	OP-F27	OP-G27	OP-H27	OP-I27	OP-J27	OP-K27	OP-L27	OP-M27	OP-N27	OP-O27
12:15-12:25	OP-A28	OP-B28	OP-C28	OP-D28	OP-E28	OP-F28	OP-G28	OP-H28	OP-I28	OP-J28	OP-K28	OP-L28	OP-M28	OP-N28	OP-O28
12:25-12:35	OP-A29	OP-B29	OP-C29	OP-D29	OP-E29	OP-F29	OP-G29	OP-H29	OP-I29	OP-J29	OP-K29	OP-L29	OP-M29	OP-N29	OP-O29
12:35-12:45	OP-A30	OP-B30	OP-C30	OP-D30	OP-E30	OP-F30	OP-G30	OP-H30	OP-I30	OP-J30	OP-K30	OP-L30	OP-M30	OP-N30	OP-O30

12:45-14:15	Lunch and Poster Session-B (PP-230 to PP-458)
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Plenary Session-5 (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)
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14:15-14:45	PL-15	Professor Dr. Patrick R. Unwin, Department of Chemistry, University of Warwick, United Kingdom
14:45-15:15	PL-16	Mr. Md. Abul Kalam Azad, MP and Chairman, Committee on Public Undertakings, Government of the People's Republic of Bangladesh
15:15-15:45	PL-17	Rear Admiral (Retd.) Md. Khurshed Alam, Secretary, Head of the Maritime Affairs Unit, Ministry of Foreign Affairs, Bangladesh; President, 26th session of the Council of the International Seabed Authority
15:45-16:15	PL-18	Professor Dr. Bidyut Baran Saha, International Institute for Carbon-Neutral Energy Research (WPI-I2CNER) and Mechanical Engineering Department, Kyushu University, Japan

16:15-16:30	Tea and Refreshment
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10/03/2024	Third Day (Sunday)
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Closing Ceremony (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)

17:30-17:40	Concluding Address by the President, Organizing Committee, BCSIR Congress-2023
17:40-18:00	Best Poster Award
18:00-18:45	Speech by Special Guests
18:45-19:10	Speech by the Chief Guest
19:10-19:15	Word of Thanks by the Secretary, Organizing Committee, BCSIR Congress-2023

Cultural Program and Conference Dinner (Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh)

19:30-20:30	Cultural Program
20:30-22:30	Conference Dinner



Session Code	Topics	Venue of Parallel Session
A	Agriculture and Food Security	Institute of Technology Transfer and Innovation (ITTI, Room No-611)
B	Cyber Security and ICT	Institute of Technology Transfer and Innovation (ITTI, Room No-612)
	A Vision to Smart Bangladesh	
	Achievement of SDG's in Bangladesh	
	Microbiology and Virology	
C	Polymer and Bio-refinery	BCSIR Dhaka Laboratories (Conference Room)
	Forestry and Biodiversity	
	Waste Management	
D	Analytical and Electrochemistry	Institute of National Analytical Research and Services (INARS) (Conference Room)
	Clean Water and Sanitation	
	Waste Management	
E	Biochemistry, Biotechnology and Genomics	BCSIR Dhaka Laboratories (Genomic Research Laboratory)
F	Nutrition and Food Science	Institute of Food Science and Technology (IFST) (Seminar Room)
G	Environment, Governance, Pollution and Toxicology	Central Analytical and Research Facilities (CARF) (Conference Room)
H	Environmental Science and Toxicology	Institute of Glass and Ceramic Research and Testing (IGCRT) (Seminar Room)
	Environment, Governance and Pollution	
	Robotics	
	Machine Learning	
I	Glass, Ceramics and Building Materials	Institute of Glass and Ceramic Research and Testing (IGCRT) (Conference Room)
	Leather Engineering and Technology	
	Nuclear Science and Engineering	
	Mining and Mineralogy	
J	Energy and Storage Technology	Institute of Energy Research and Development (IERD) (Auditorium)
K	Drug Discovery and Development	Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-202)
L	Drug Discovery and Development	Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-202)
	Pharmaceutical Technology and Engineering	
	Public Health and Preventive Medicine	
M	Nanotechnology	Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-302)
N	Big Data	Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-303)
	Blue Economy and Aquaculture	
	Biosafety and Biosecurity	
	Climate Change, Adaptation and Mitigation	
	Artificial Intelligence	
O	Material Science and Metallurgy	Pilot Plant and Process Development Centre (PP & PDC) (Seminar Room)



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Schedule for Theme and Plenary Session

Theme Lecture					
Venue: Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh Chairs: Professor Dr. Syed Modasser Ali and Professor Dr. A K Azad Chowdhury Day 1, 08 March 2024 (Friday), Time: 10:25-11:10					
Theme Speaker	Affiliation	Title of Theme Lecture	Time	Page	
Nobel Laureate Professor Dr. Yoshinori Ohsumi	Head of the Cell Biology Research Unit, Institute of Innovative Research, Tokyo Institute of Technology, Japan	35 Years of My Research on Autophagy in Yeast	10:25-11:10	1	
Plenary Session: 1					
Venue: Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh Chairs: Professor Dr. Pran Gopal Datta, MP and Professor Dr. Haseena Khan Day 1, 08 March 2024 (Friday), Time: 11:30-13:00					
No.	Plenary Speaker	Affiliation	Title of Plenary Lecture	Time	Page
PL-1	Professor Dr. Nobuo N. Noda	Institute for Genetic Medicine, Hokkaido University, Japan	Molecular mechanisms of autophagy	11:30-12:00	3
PL-2	Emeritus Professor Dr. Makoto Ubukata	Graduate School of Agriculture, Hokkaido University, Japan	Discovery of biologically active small molecules and philosopher's stone	12:00-12:30	4
PL-3	Professor Dr. Calum J. Drummond AO	School of Science, STEM College, RMIT University, Australia	Research and innovation ecosystem to provide an environment	12:30-13:00	6
Plenary Session: 2					
Venue: Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh Chairs: Professor Dr. S. M. Nazrul Islam and Professor Calum J. Drummond AO Day 1, 08 March 2024 (Friday), Time: 14:00-16:00					
No.	Plenary Speaker	Affiliation	Title of Plenary Lecture	Time	Page
PL-4	Professor Dr. Dilip Kumar Maiti	Vice-Chancellor, Biswa Bangla Biswabidyalay, India and Professor, Department of Chemistry, University of Calcutta, India	Design, synthesis and fabrication of innovative organic nanomaterials for sensors and devices	14:00-14:30	7
PL-5	Emeritus Professor Dr. Keiichi N. Ishihara	Open Innovation Institute, Kyoto University, Japan	Challenges for achieving carbon neutrality in Japan	14:30-15:00	9
PL-6	Professor Dr. Faisal Ibney Hai	School of Civil, Mining, Environmental and Architectural Engineering, University of Wollongong, Australia	Evaluating the generation of microplastics from an unlikely source: The unintentional consequence of plastic recycling	15:00-15:30	10
PL-7	Professor Dr. Jian Ping Gong	Faculty of Advanced Life Science, Institute for Chemical Reaction Design and Discovery Hokkaido University, Japan	Bio-inspired metabolic-like soft material design	15:30-16:00	11
Plenary Session: 3					
Venue: Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh Chairs: Emeritus Professor Dr. Keiichi N. Ishihara and Professor Dr. Md. Sharfuddin Ahmed Day 2, 09 March 2024 (Saturday), Time: 09:00-10:30					
No.	Plenary Lecture	Affiliation	Title of Plenary Lecture	Time	Page
PL-8	Professor Dr. Abul Hussam	Department of Chemistry and Biochemistry, George Mason University, USA	Teaching chemistry in the age of computers: New paradigm in laboratory experiments	09:00-09:30	12



PL-9	Mr. Warren J. Bruckard	Process Engineering & Chemistry, CSIRO Mineral Resources, Australia	The journey from concept to commercialisation for a new metal production technology - Magsonic™	09:30-10:00	13
PL-10	Professor Dr. Kazuhisa Sekimizu	Faculty of Pharmaceutical Sciences, Teikyo University, Tokyo, Japan	Evaluation of the efficacy of foods and medicines using silkworms as experimental animals	10:00-10:30	14

Plenary Session: 4
Venue: Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh
Chairs: Emeritus Professor Dr. Makoto Ubukata and Professor Dr. Emdadul Haque Chowdhury
Day 2, 09 March 2024 (Saturday), Time: 14:00-16:00

No.	Plenary Lecture	Affiliation	Title of Plenary Lecture	Time	Page
PL-11	Professor Dr. Tatsuya Tsukuda	Department of Chemistry, Graduate School of Science, The University of Tokyo, Japan.	Atomically precise gold clusters as model catalysts	14:00-14:30	15
PL-12	Dr. Ashraful Islam	National Institute for Materials Science (NIMS), Japan	Sn and Sn-Pb based perovskite solar cells: Suppressing Sn ²⁺ oxidation and enhancing stability via additive and device engineering	14:30-15:00	16
PL-13	Dr. Shaikh Mohammad Bokhtair	Bangladesh Agricultural Research Council (BARC), Bangladesh	Agriculture and food security in Bangladesh	15:00-15:30	17
PL-14	Sir Dr. Walter F. Bodmer, Emeritus Professor	Department of Oncology, Oxford University, UK	T cell attracting bispecific monoclonal antibodies for cancer immunotherapy	15:30-16:00	19

Plenary Session: 5
Venue: Golden Jubilee Center, BCSIR Premises, Dhanmondi, Dhaka, Bangladesh
Chairs: Professor Dr. A. S. M. Maksud Kamal and Professor Dr. Dilip Kumar Maiti
Day 3, 10 March 2024 (Sunday), Time: 14:15-16:15

No.	Plenary Lecture	Affiliation	Title of Plenary Lecture	Time	Page
PL-15	Professor Dr. Patrick R Unwin	Department of Chemistry, University of Warwick, UK	The new era of high throughput electrochemical multimicroscopy	14:15-14:45	20
PL-16	Mr. Md. Abul Kalam Azad	Member of Parliament, Government of People's Republic of Bangladesh	Achievement of SDGs in Bangladesh	14:45-15:15	21
PL-17	Rear Admiral (Retd.) Md Khurshed Alam, ndc	Secretary (Maritime Affairs Unit) at the Ministry of Foreign Affairs, Government of People's Republic of Bangladesh	Inputs on Maritime issues related to Bangladesh	15:15-15:45	23
PL-18	Professor Dr. Bidyut Baran Saha	International Institute for Carbon-Neutral Energy Research (WPI-I2CNER) and Mechanical Engineering Department, Kyushu University, Japan	Advanced adsorbent materials for energy conversion and CO ₂ capture applications	15:45-16:15	26



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Schedule for Technical Session
08-10 March 2024

Day 1: 08 March 2024 (Friday)

Technical Session: TS-A1 (Food Security)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-611)
Chair: Professor Dr. Md. Abdul Malek
Co-Chair: Mr. Monzur Morshed Ahmed
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-A1	Mohammad Shoeb	Bangladesh Food Safety Authority (BFSA), Bangladesh	Food security and safety, the key to building a Smart Bangladesh	16:15-16:40	28
IL-A1	Mohammad Saiful Islam	Faculty of Animal Science and Veterinary Medicine, SAU, Dhaka, Bangladesh	Antidiabetic effect of <i>Moringa oleifera</i> in alloxan-induced diabetic rat model	16:40-17:00	28
OP-A1	Rokeya Begum	Department of Food Technology and Nutritional Science, MBSTU	Effect of degree of milling (DOM) on physicochemical and nutritional quality of the selected rice variety (BRRI dhan78)	17:00-17:10	29
OP-A2	Md Abu Sayem Jiku	Bangladesh Jute Research Institute (BJRI)	Soil ridge cultivation minimizes grain As and Cd at low levels and inhibits Arsenic methylation in paddy soils	17:10-17:20	29
OP-A3	Shariful Islam	Institute of Food Science and Technology (IFST), BCSIR	Effects of natural and solid-state fermentation on physicochemical, functional, structural and antioxidant properties of wheat (<i>Triticum aestivum</i>)	17:20-17:30	30
OP-A4	Showti Raheel Naser	BCSIR Dhaka Laboratories, BCSIR, Bangladesh	Investigation on the nutritional and health benefits of cooked rice through traditional soaking process	17:30-17:40	30
OP-A5	Md. Tariqul Islam	BCSIR Chittagong Laboratories, Chattogram	Silica production from rice husk and its foliar application	17:40-17:50	31
OP-A6	Umme Kulsum	Department of Applied Chemistry and Chemical Engineering, RU	Risk assessment of heavy metals contamination in poultry feeds and broiler chicken from Rajshahi, Bangladesh	17:50-18:00	31

Technical Session: TS-B1 (Cyber Security and ICT; Smart Bangladesh & SDG)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-612)
Chairs: Professor Dr. Md. Kamrul Hasan
Professor Dr. Kazi Muheymin-U-Sakib
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-B1	Md. Shariful Islam	IIT, University of Dhaka, Bangladesh	Strengthening cyber security in the digital Age: Understanding fundamentals of network and software security	16:15-16:40	32
IL-B1	B M Mainul Hossain	IIT, University of Dhaka, Bangladesh	Navigating cyber attack landscapes and securing Smart Bangladesh	16:40-17:00	32



OP-B1	Md Rabiul Alam	Electrical & Electronic Engineering, NITER	Transformative innovations for a Smart Bangladesh: Rocket technology, satellite manufacturing, and plasma-generated mems robotics	17:00-17:10	33
OP-B2	Abu Zafor Md. Touhidul Islam	Department of Electrical & Electronic Engineering, RU	Design and performance analysis of a flexible and stretchable PDMS wearable antenna for 5G applications	17:10-17:20	33
OP-B3	Abu Kowsar	Institute of Energy Research and Development (IERD), BCSIR	Current status, challenges, and prospects of patent ecosystem in Bangladesh	17:20-17:30	34
OP-B4	Anika Ferdous	Bangladesh Chemical Industries Corporation (BCIC)	Bangladesh Chemical Industries Corporation (BCIC) and SDG: Envisioning a sustainable and green industry for the future	17:30-17:40	34
OP-B5	Muhammad Ali Zinnah	Pilot Plant and Process Development Centre (PP & PDC), BCSIR	Hybrid nano-cutting fluid-assisted CNC machining and performance evaluation to achieve sustainability in production	17:40-17:50	35
OP-B6	Abdul Kader Fakir	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	IoT based smart monitoring system for measuring human heartbeat and body temperature	17:50-18:00	35

Technical Session: TS-C1 (Polymer and Bio-refinery)
Venue: BCSIR Dhaka Laboratories (Conference Room)
Chair: Professor Dr. Choudhury Md. Zakaria
Co-Chair: Mr. Swapan Kumer Ray
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-C1	Mahmood Hossain	Forestry and Wood Technology Discipline, Khulna University	Mangrove restoration in Bangladesh	16:15-16:40	36
IL-C1	Sharif Ahmed Mukul	Department of Environment and Development Studies, UIU Dhaka, Bangladesh	The current state of the global voluntary carbon market and the potential for Bangladesh	16:40-17:00	36
OP-C1	Mohammad Mahbubur Rahman	BCSIR Dhaka Laboratories, BCSIR	Functionalization of jute-based cellulose in double salts ionic liquids	17:00-17:10	37
OP-C2	Taslina Ferdous	Department of Applied Chemistry and Chemical Engineering, DU	Potassium hydroxide pulping of rice straw	17:10-17:20	37
OP-C3	Md. Ibrahim H. Mondal	Department of Applied Chemistry and Chemical Engineering, RU	The study of the biodegradation of polylactic acid with kinetics by microorganisms	17:20-17:30	38
OP-C4	M Nur Alam Likhon	BCSIR Dhaka Laboratories, BCSIR, Dhaka	Effect of fiber quality parameters on pulp properties by using multiple linear regression and artificial neural network	17:30-17:40	38
OP-C5	Umme Magreba Takebira	Department of Applied Chemistry and Chemical Engineering, RU	A reducing process through grafting with silver nanoparticles on the rate of spun polyester microfiber shedding in to the environment	17:40-17:50	39
OP-C6	Sharmin Islam	BCSIR Dhaka Laboratories, BCSIR	Organic acid fractionation of hardwoods planted in social forestry	17:50-18:00	39



Technical Session: TS-D1 (Analytical and Electrochemistry)
Venue: Institute of National Analytical Research and Services (INARS) (Conference Room)
Chair: Professor Dr. Mohammad Yousuf Ali Mollah
Co-Chair: Professor Dr. Md. Abdul Jabbar
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-D1	Md. Abu Bin Hasan Susan	Department of Chemistry, University of Dhaka, Bangladesh	Ionic liquid based microemulsions as a bath for electrodeposition of AlNiCo with tunable morphology and magnetic properties	16:15-16:40	40
IL-D1	Md. Mominul Islam	Department of Chemistry, University of Dhaka, Bangladesh	Electrochemical energy storage using biomass-derived carbons	16:40-17:00	40
OP-D1	Md. Atikul Islam	Hajee Mohammad Danesh Science and Technology University, Dinajpur, Bangladesh	Utilizing ATR-FTIR spectroscopy and chemometric techniques: A sustainable approach for quantitative routine analysis in analytical chemistry	17:00-17:10	41
OP-D2	Fahima Ferdaus	Department of Chemistry, JnU	Synthesis and characterization of cobalt(II)-based metallo-supramolecular polymer with electrochemical detection of nitrite ion	17:10-17:20	41
OP-D3	Md. Atikur Rahman	Institute of National Analytical Research and Service (INARS), BCSIR	Graphene oxide-supported manganese-zinc oxide nanocomposites synthesized from spent zinc-carbon batteries for supercapacitors application	17:20-17:30	42
OP-D4	Md Yeasin Pabel	Institute of National Analytical Research and Service (INARS), BCSIR	Reduced graphene oxide supported silver nanoparticles derived from electronic waste for electrochemical sensing of trace level arsenic in aqueous media	17:30-17:40	42
OP-D5	Mohsina Tayeba	Department of Chemistry, DU	Metal-free electrocatalyst for the production of hydrogen peroxide through reduction of molecular oxygen	17:40-17:50	43
OP-D6	Nazmul Islam Nayem	Department of Chemistry, MBSTU, Tangail, Bangladesh	An electrochemical approach for the detection and kinetic investigation of glucose electro-oxidation over Pt nanoparticles/ SWCNTs/NiO ternary nanocomposite	17:50-18:00	43

Technical Session: TS-E1 (Biochemistry)
Venue: BCSIR Dhaka Laboratories (Genomic Research Laboratory)
Chair: Professor Dr. Md. Anwarul Azim Akhand
Co-Chair: Dr. ADA Shahinuzzaman
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-E1	Jesmin	Department of Genetic Engineering & Biotechnology, University of Dhaka, Bangladesh	The correlation between hypoxia, inflammatory biomarkers and susceptibility to various human diseases including cancer	16:15-16:40	44
IL-E1	Syed Rashel Kabir	Department of Biochemistry and Molecular Biology, University of Rajshahi	Antipsychotic drug flupentixol shows strong anticancer effects against human lung and hepatocellular carcinoma cell lines <i>in vitro</i> and mice Ehrlich ascites carcinoma cell <i>in vitro</i> and <i>in vivo</i>	16:40-17:00	45



OP-E1	Sadia Islam Mou	Department of Biochemistry and Molecular Biology, DU	Identification and validation of prognostic gene expression signatures of bladder cancer through integrated bioinformatics and laboratory-based analysis	17:00-17:10	45
OP-E2	Shahina Akter	BCSIR Dhaka Laboratories, BCSIR	Reverse vaccinology: Pioneering immunoinformatics for epitope-based vaccine design	17:10-17:20	46
OP-E3	Barna Goswami	Biomedical and Toxicological Research Institute, BCSIR	A rare ALX4 mutation in a Bangladeshi girl with frontonasal dysplasia type-2 (FND2)	17:20-17:30	47
OP-E4	Tamanna Sultana	Department of Biochemistry and Molecular Biology, DU	Molecular landscape of somatic mutations and gene expression profiles of selected oncogenes in bladder cancer patients from Bangladesh	17:30-17:40	47
OP-E5	Tanjina Akhtar Banu	BCSIR Dhaka Laboratories, BCSIR	Assessment of biological activities and poly-phenolic compound detection from <i>in vitro</i> and <i>in vivo</i> plant parts of <i>Gynura procumbens</i> (Lour.) Merr.	17:40-17:50	48
OP-E6	Mousona Islam	BCSIR Dhaka Laboratories, BCSIR	Role of EIN2 orthologs in ABA and abiotic stress responses in the moss <i>Physcomitrium patens</i>	17:50-18:00	49

Technical Session: TS-F1 (Nutrition and Food Science)
Venue: Institute of Food Science and Technology (IFST) (Seminar Room)
Chair: Professor Dr. Afzalun Nessa
Co-Chair: Dr. Barun Kanti Saha
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-F1	Mohammad Rafiqul Islam	Livestock Division, Bangladesh Agricultural Research Council	Contribution of livestock to build Smart Bangladesh	16:15-16:40	49
IL-F1	Biplob Kumar Saha	Agricultural Chemistry, BAU, Mymensingh	Agriculture and nutritional security in Bangladesh: Past, present and future	16:40-17:00	50
OP-F1	Minnatallah Wahid	Department of Food Engineering and Tea Technology, SUST	Effects of drying condition on physicochemical properties and antioxidant activities of tea	17:00-17:10	50
OP-F2	Safaet Alam	BCSIR Rajshahi Laboratories, BCSIR	Chemical and pharmacological evaluation of different kupchan fractions of <i>Colocasia gigantea</i> hook.f. provide new insights as antioxidant, antimicrobial, cytotoxic and antidiarrheal agent	17:10-17:20	51
OP-F3	Md. Faridul Islam	Institute of Food Science and Technology (IFST), BCSIR	Green synthesis of zinc oxide nano particles using <i>Allium cepa</i> L. waste peel extracts and its antioxidant and antibacterial activities	17:20-17:30	51
OP-F4	Anjumanara Khatun	Institute of Food Science and Technology (IFST), BCSIR	A study on the development of shelf stable tomato bar	17:30-17:40	52
OP-F5	Anjum Zerine Rupa	BCSIR Dhaka Laboratories, BCSIR	Nutritional, phytochemical and antioxidant aspects of minor cereals in Bangladesh	17:40-17:50	53
OP-F6	Md. Hasib Pathan	Institute of Food Science and Technology (IFST), BCSIR	Enhancing nutritional quality and antioxidant potential of chickpea (<i>Cicer arietinum</i>) through germination and roasting: A comprehensive analysis	17:50-18:00	53



Technical Session: TS-G1 (Environment, Governance, Pollution and Toxicology)

Venue: Central Analytical and Research Facilities (CARF) (Conference Room)

Chair: Professor Dr. A. Q. M. Mahbub

Co-Chair: Dr. Md. Faruk Hossain

Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-G1	Mohammad Abdul Baki	Department of Zoology, Jagannath University, Dhaka 1100, Bangladesh	Investigation of sources and distribution of heavy metals in water, mangrove plant roots & leaves, core sediments from the Kholpetua and Chuna river in mangrove forest, Satkhira and microplastic pollution in seawater, beach sediment, marine organisms from Saint Martin island and Cox's Bazar beach, Bangladesh	16:15-16:40	54
IL-G1	Md. Mizanur Rahman	Department of Zoology, University of Dhaka, Bangladesh	DNA metabarcoding for biodiversity and ecological studies: Lessons from the assessment macroinvertebrate diversity and anthropogenic disturbances in river ecosystems of Bangladesh	16:40-17:00	55
OP-G1	Md. Samrat Mohay Menul Islam	BCSIR Chittagong Laboratories, BCSIR	Polycyclic aromatic hydrocarbons in ship breaking area and associated ecological risk assessment: Evidence from the sitakund ship breaking area in Bangladesh	17:00-17:10	55
OP-G2	Rumana Tasmin	Department of Zoology, Jagannath University	Occurrence of microplastic in the gastrointestinal tract of fresh water lal chawa, <i>Odontamblypus rubicundus</i> from Feni river, Chattogram and sucker mouth fish, <i>Pterygoplichthys paradilis</i> from Buriganga river, Dhaka	17:10-17:20	56
OP-G3	Sabrina Mostofa	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Preparation of silver clay composites to prevent the growth of pathogenic microorganisms	17:20-17:30	57
OP-G4	Afroza Parvin	BCSIR Dhaka Laboratories, BCSIR	Fine particle bound metal exposure in roadside schools of megacity Dhaka: Impact on children health	17:30-17:40	57
OP-G5	Sharmin Sultana	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	A comprehensive assessment of paper mill wastewater on rice production in Bangladesh	17:40-17:50	58
OP-G6	Badhan Saha	BCSIR Dhaka Laboratories, BCSIR	Comprehensive index analysis approach for ecological and human health risk assessment of a tributary river in Bangladesh	17:50-18:00	58



Technical Session: TS-H1 (Environmental Science and Toxicology)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Seminar Room)
Chair: Professor Dr. Md. Ahsan Habib
Co-Chair: Dr. Md. Kamal Hossain
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-H1	Abdus Salam	Department of Chemistry, University of Dhaka, Bangladesh	Black carbon and brown carbon emission and their optical properties over Bangladesh	16:15-16:40	59
IL-H1	Mohammad Zahangeer Alam	Faculty of Agriculture, BSMRAU, Gazipur, Bangladesh	Reduction of abiotic stress in food crops through climate-smart mycorrhiza-enriched biofertilizer	16:40-17:00	59
OP-H1	Tahseen Afroz	Department of Mathematics and Natural Sciences, BRACU	Study on the presence of microplastics on tap water, bottled water and beverages	17:00-17:10	60
OP-H2	Md. Aminul Islam	Applied Research Center for Environment and Marine Studies, King Fahd University of Petroleum and Minerals	Recent advances in the adsorptive removal of tetracycline from aqueous solution	17:10-17:20	60
OP-H3	Swapnil Karmaker	Chemical Engineering and Polymer Science, SUST	Comprehensive hazard analysis of LPG storage tanks in energy infrastructure: A case study of Rashidpur gas field and natural gas reservoirs in Bangladesh using ALOHA	17:20-17:30	61
OP-H4	Md Fakrul Islam	Department of Chemistry, University of Dhaka	Determination of oxygenated compounds by customized plasma-based chemical ionization mass spectrometry	17:30-17:40	61
OP-H5	Nishat Tasnim	Department of Electrical and Electronic Engineering, University of Dhaka	A microwave based biosensor for point-of-contamination monitoring of water pollution	17:40-17:50	62
OP-H6	H. M. Zakir Hossain	Department of Petroleum and Mining Engineering, JUST	Spatial variations and ecological risk assessment of metallic and non-metallic elements in sediments from the Meghna River basin, Bangladesh	17:50-18:00	62

Technical Session: TS-II (Glass, Ceramics and Building Materials)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Conference Room)
Chair: Professor Dr. Altaf Hussain
Co-Chair: Ms. Suravi Islam
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-II	Atiar Rahaman Molla	CSIR-Central Glass and Ceramic Research Institute, Kolkata, India	Glass-ceramics: Versatile and multi-functional material for advanced technological applications	16:15-16:40	63
IL-II	Umme Sarmeen Akhtar	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Hydration reaction mechanism study by spectroscopic technique for concrete by using early high strength chemical admixture	16:40-17:00	63
OP-II	Sonjida Mustafi	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Utilization of waste iron to produce self-coloring ceramic floor and wall tiles	17:00-17:10	64



OP-I2	Md. Lutfur Rahman	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	The X-ray peak profiling, optical and dielectric properties of Ag@ZnFe ₂ O ₄ /rGO ternary nanocomposites: LED assisted photocatalysis and humidity sensing	17:10-17:20	64
OP-I3	Md. Sahadat Hossain	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Synthesis of bio ceramic in organic medium for efficient drug delivery: Exploration of cytotoxicity, hemolysis, and antimicrobial properties	17:20-17:30	65
OP-I4	Tanvir Ahmed	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	An XPS valence band study for exploring the mechanistic pathway of ZnO-Cu ₂ O composite as a photocatalyst	17:30-17:40	65
OP-I5	Md. Kawsar	Department of Applied Chemistry and Chemical Engineering, NSTU	Enhancement of photocatalytic activity by modification of hydroxyapatite for the degradation of textile effluent	17:40-17:50	66
OP-I6	Hayatullah	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Removal of iron from red clay soil by leaching with oxalic acid and its application in ceramic industries	17:50-18:00	66

Technical Session: TS-J1 (Energy and Storage Technology)
Venue: Institute of Energy Research and Development (IERD) (Auditorium)
Chair: Professor Dr. Aminul I. Talukder
Co-Chair: Dr. Muhammad Shahriar Bashar
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-J1	Md. Abdul Aziz	IRC-HTCM, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia	Jute stick: Unleashing the power of sustainable solutions for a brighter future	16:15-16:40	67
IL-J1	Mujib L. Palash	Department of Electrical and Electronic Engineering, DU, Bangladesh	Thermodynamic formulation to establish the relationship between adsorption interaction energy and adsorbent-morphological property	16:40-17:00	67
OP-J1	Sujit Kumar Banik	Institute of Energy Research and Development (IERD) BCSIR	Development of technology for the production of lube oil from heavy condensate of Bianibazar gas field, Sylhet, Bangladesh	17:00-17:10	68
OP-J2	Md Sadequul Azam	Institute of Energy Research and Development (IERD), BCSIR	Development and performance analysis of a semi-continuous single axis sun tracker	17:10-17:20	68
OP-J3	Md. Saidul Islam	BCSIR Dhaka Laboratories, BCSIR	A homebuilt LED-based multifunctional light source for photophysical and photochemical studies	17:20-17:30	69
OP-J4	Munira Sultana	Institute of Energy Research and Development (IERD), BCSIR	Influence of deposition pressure on structural, morphological, and optical properties of co-sputtered copper zinc tin sulfide thin film	17:30-17:40	69
OP-J5	Nusrat Tazeen Tonu	Department of Chemistry, KUET	Diced shaped 3D-Manganese dioxide: An ultrasonic-based reverse micelle method for aqueous rechargeable zinc ion batteries	17:40-17:50	70
OP-J6	S M Mehedi Hasan	BCSIR Dhaka Laboratories, BCSIR	Facile synthesis and characterization of 2D graphitic carbon nitride (g-C ₃ N ₄) from pure melamine for electrodes of super capacitors	17:50-18:00	70



Technical Session: TS-K1 (Drug Discovery and Development)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-202)
Chair: Professor Dr. Md. Rabiul Islam
Co-Chair: Professor Dr. Md. Aminul Haque
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-K1	Mohammad A. Rashid	Department of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Dhaka, Bangladesh	Antimicrobial resistance (AMR) and its management by natural products	16:15-16:40	71
IL-K1	Mohammad Taufiq Alam	Department of Applied Chemistry and Chemical Engineering, RU, Rajshahi, Bangladesh	Eltrombopag olamine induces apoptosis in human breast and hepatocellular carcinoma cells by the modulation of MAPK, WNT and caspase-dependent signaling pathways	16:40-17:00	71
OP-K1	Dipankar Chakraborty	BCSIR Chittagong Laboratories	Pharmacological evaluation of <i>Mesua ferrea</i> L (Nagkesar) seed extract	17:00-17:10	72
OP-K2	Muhammad Abdullah Al-Mansur	Institute of National Analytical Research and Service (INARS), BCSIR	Two compounds isolated from the seed of <i>Anethum sowa</i> Linn. using NMR approach	17:10-17:20	73
OP-K3	Md. Sakhawat Hossain	BCSIR Dhaka Laboratories, BCSIR	Evaluation of <i>in-vitro</i> thrombolytic, antioxidant and antimicrobial activities of <i>Heptapleurum hypoleucum</i> Kurz leaves	17:20-17:30	73
OP-K4	Rabeya Akter	BCSIR Dhaka Laboratories, BCSIR	Cyclization of chalcone derivatives to heterocyclic ring and study their molecular docking	17:30-17:40	74
OP-K5	Shammi Akhter	BCSIR Dhaka Laboratories, BCSIR	A comparative study of drying methods on nutritional and functional properties of Broccoli powder & bioassay of several Broccoli extracts	17:40-17:50	74
OP-K6	Jobaier Ibne Deen	Department of Biochemistry and Molecular Biology, University of Chittagong	The nontoxic organic extract of <i>Capsicum chinense</i> Jacq. fruit reflect a vibrant immunomodulatory action through modulating the inflammatory markers, protecting DNA damage	17:50-18:00	75

Technical Session: TS-L1 (Public Health and Preventive Medicine)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-202)
Chair: Professor Dr. Mohammad Liaquat Ali
Co-Chair: Mr. Md. Habibur Rahman Bhuiyan
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-L1	Md. Jahangir Alam	Department of Biotechnology and Genetic Engineering, Islamic University Kushtia, Bangladesh	Reconstitution of autophagy processes	16:15-16:40	76
IL-L1	Gopen Kumar Kundu	Department of Paediatric Neurology, BSMMU	Gene panel testing in syndromic children with autism spectrum disorder trait in Bangladesh- A cross sectional study	16:40-17:00	76



OP-L1	Hurey Jahan Kadri	Department of Applied Chemistry and Chemical Engineering, University of Rajshahi, Bangladesh	Development and characterization of aloe vera incorporated biocompatible bio-composite hydrogel for wound healing applications	17:00-17:10	77
OP-L2	Mamtaz Sultana	BCSIR Dhaka Laboratories, BCSIR	Detection of natural anti-dengue antibodies using epitope-grafted ED3s possessing DENV3-DENV4 bi-serospecificity	17:10-17:20	78
OP-L3	Dipa Islam	Biomedical and Toxicological Research Institute (BTRI), BCSIR	Cardioprotective potential of <i>Momordica charantia</i> fruit extract through the expression of cardiac apoptotic CASP3 gene in isoproterenol-induced myocardial infarction in a rat model	17:20-17:30	78
OP-L4	MH Mahbub	Department of Public Health and Preventive Medicine, Yamaguchi University Graduate School of Medicine, Yamaguchi, Japan	Modulation of gut microbiota and circulating amino acids for health and healthy ageing	17:30-17:40	79
OP-L5	Paroma Arefin	Institute of Food Science and Technology (IFST), BCSIR	Uncovering hidden dangers: Analysis of adulterated compounds in weight loss products available in Bangladeshi market	17:40-17:50	79
OP-L6	Md Rezaul Karim	Department of Biotechnology and Genetic Engineering, Jahangirnagar University	Oral squamous cell carcinoma (OSCC) occurrence in Bangladesh is strongly correlated with dietary practices but not with HPV infection or TERT promoter mutations	17:50-18:00	80

Technical Session: TS-M1 (Nanotechnology)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-302)
Chair: Professor Dr. Al-Nakib Chowdhury
Co-Chair: Dr. Md. Khorshed Alam
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-M1	Mohammed Nazrul Islam Khan	Materials Science Division, Bangladesh Atomic Energy Commission, Dhaka	Nanotechnology: Perspective and research scope	16:15-16:40	81
IL-M1	Kazi Haniem Maria	Department of Physics, University of Dhaka, Bangladesh	Untangling the role of synthesis conditions on the structure of nanoparticles towards electronics and therapeutic approaches	16:40-17:00	81
OP-M1	Mohammad Sayed Alam	Department of Chemistry, Jagannath University, Dhaka	Microwave-assisted green synthesis of silver nanoparticles using <i>Leucas aspera</i> leaf extracts as capping agent and its biological evaluation	17:00-17:10	82
OP-M2	Muhammad Zamir Hossain	Department of Chemistry, Jagannath University, Dhaka	Hydrothermal synthesis of cerium oxide nanocatalysts for biofuel production from paddy straw	17:10-17:20	82
OP-M3	A. R. M. Tareq	Atomic Energy Centre, Bangladesh Atomic Energy Commission, Dhaka	Phytosynthesis of silver nanoparticles (AgNPs) using <i>Ziziphus mauritiana</i> leaf extracts: Optimization of extraction and synthesis	17:20-17:30	83



OP-M4	Md Atiar Rahman	Department of Biochemistry and Molecular Biology, University of Chittagong	Unraveling the potential of green-synthesized nanoparticles (MgONPs) in cardioprotection: A comprehensive model of biochemical, gene expression and multitarget computational analyses	17:30-17:40	83
OP-M5	A. K. M. Fazle Kibria	Nanoscience and Technology Research Laboratory, AEC, BAEC, Dhaka, Bangladesh	Structural, optical and room temperature dilute magnetic semiconductor behavior of Co-doped ZnO nanomaterials for future spintronics applications	17:40-17:50	84
OP-M6	Fatema Tuz Zohora Toma	Experimental Physics Division, Bangladesh Atomic Energy Commission	Optimizing the structural and elemental properties of chemically precipitated CdS nanoparticles through controlled annealing for advanced applications	17:50-18:00	85

Technical Session: TS-N1 (Big Data)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-303)
Chair: Professor Dr. Chowdhury Farhan Ahmed
Co-Chair: Mr. Md. Forhad Hossain
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-N1	Mohammed Eunos Ali	Department of Computer science and engineering (CSE), BUET	Leveraging big data for Smart nation development	16:15-16:40	86
IL-N1	Hasinur Rahaman Khan	Institute of Statistical Research and Training, University of Dhaka, Bangladesh	Unlocking sustainable development goals: The role of AI and data science	16:40-17:00	86
OP-N1	Md. Nazim Uddin	Institute of Food Science and Technology (IFST), BCSIR	Identifying key transcription factors and miRNAs co-regulatory networks associated with immune infiltrations and drug interactions in idiopathic pulmonary arterial hypertension	17:00-17:10	87
OP-N2	Mohan Kumar Das	NOAMI, Bangladesh	Numerical model and artificial intelligence (NAIOR) for earth and ocean science research	17:10-17:20	87
OP-N3	Atul Chandra Singha	Department of Statistics, BRUR	Machine learning tool to predict reliable cell types in single-cell transcriptome (scRNAseq) data	17:20-17:30	88
OP-N4	Saif Mukramoon Arosh	Department of Biochemistry and Molecular Biology, University of Dhaka	Deciphering diabetes pathogenesis: A meta-analytic exploration of the gut microbiome	17:30-17:40	88
OP-N5	Tayaba Khondoker Tinny	Department of Mathematics, BUET	Breast cancer diagnosis: Statistical inference on feature importance	17:40-17:50	89
OP-N6	Tapan Biswas	Department of Mathematics, University of Dhaka	Matrix optimization for sensor network localization using iterative majorization	17:50-18:00	89

Technical Session: TS-O1 (Material Science and Metallurgy)
Venue: Pilot Plant and Process Development Centre (PP & PDC) (Seminar Room)
Chair: Professor Dr. Mohammed Enamullah
Co-Chair: Dr. Md. Anamul Haque
Day 1: 08 March 2024 (Friday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-O1	Md. Abdul Gafur	Pilot Plant & Process Development Centre (PP & PDC), BCSIR	Metallurgical research activities and facilities at PP&PDC, BCSIR, Bangladesh	16:15-16:40	90



IL-O1	Aninda Nafis Ahmed	Pilot Plant and Process Development Centre, (PP & PDC), BCSIR	Ionic liquid: Unlocking technologies for the future	16:40-17:00	90
OP-O1	Amjad Hossen	Department of Applied Chemistry and Chemical Engineering, RU	Surface modification of cotton fabric for multifunctional aspect using TiO ₂ /Fe nanocomposite	17:00-17:10	91
OP-O2	Nur Uddin Ahamad	Department of Chemistry, SUST, Sylhet	A simple approach to optimize the shell thickness of Ag@TiO ₂ to create plasmonic effect and its application in photocatalysis	17:10-17:20	91
OP-O3	Ajoy Kanti Mondal	Institute of National Analytical Research and Service (INARS), BCSIR	Development of Fe ³⁺ rich mussel-inspired collagen-based composite hydrogel for antibacterial, electricity harvesting and sensing applications	17:20-17:30	92
OP-O4	Faridul Islam	BCSIR Rajshahi Laboratories, BCSIR	Microwave-assisted synthesis of coal-derived few-layer graphene	17:30-17:40	92
OP-O5	Abu Yousuf	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Facile synthesis of carbon black nanoparticles from acid leaching followed by incomplete combustion of scrap tires	17:40-17:50	93
OP-O6	Sadia Afrin	Institute of Energy Research and Development (IERD), BCSIR	Surface modification of glass and fabric for improving hydrophobic self-cleaning property	17:50-18:00	94

Day 2: 09 March 2024 (Saturday)

Technical Session: TS-A2 (Agriculture)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-611)
Chair: Professor Dr. Md. Shahidur Rashid Bhuiyan
Co-Chair: Dr. Muhammed Alamgir Zaman Chowdhury
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-A2	A. K. M. Zakir Hossain	Kurigram Agricultural University, Bangladesh	Climate Smart agriculture: A potential solution for climate change	10:45-11:10	95
IL-A2	Md. Abul Kalam Azad	Institute of Environmental Science, University of Rajshahi, Rajshahi, Bangladesh	Efficacy of three botanicals for the control of aphid in experimental cabbage field and GC-MS analysis of the potent bio-active extract	11:10-11:30	96
OP-A7	Mst. Ferdowsi Mahal	Department of Botany, University of Rajshahi	Efficacy of <i>Azadirachta indica</i> leaf extract on seed germination and reduction of seed associated fungi in rice seeds	11:30-11:40	96
OP-A8	Salma Ahmed	Institute of Food Science and Technology (IFST), BCSIR	Comparison of nutritional quality and storage stability of β -carotene fortified soybean oil and olive oil	11:40-11:50	97
OP-A9	Mst. Nadira Begum	BCSIR Dhaka Laboratories	Isolation and identification of mycroflora associated with aromatic rice grains (Chinigura, Basmati and BR-38)	11:50-12:00	97
OP-A10	Amit Kumar Dey	BCSIR Rajshahi Laboratories	Improve of soil fertility and yield of wheat using press mud compost and eco-friendly fungus	12:00-12:10	98
OP-A11	Md. Mahbub Alam	Institute of Food Science and Technology (IFST), BCSIR	Assessment of naturally occurring trans-fatty acids in indigenous seed oil	12:10-12:20	98



OP-A12	Nazmul Haque Mitun	Department of Applied Chemistry and Chemical Engineering University of Rajshahi	Synthesis and characterization of PVA-gelatin-based hydrogel incorporation with urea for agricultural application	12:20-12:30	99
Technical Session: TS-B2 (Achievements of SDG's in Bangladesh and A Vision to Smart Bangladesh) Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-612) Chair: Professor Dr. Abul Barkat Co-Chair: Dr. Mohammed Helal Uddin Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30					
SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-B2	M Abu Eusuf	Department of Development Studies, University of Dhaka	Bangladesh and SDGs: Achievements, challenges and way forward	10:45-11:10	99
IL-B2	Dipankar Das	Information & Communication Engineering, RU	Enhancement of digital security to prevent spoofing attack using liveness of multimodal biometric features	11:10-11:30	100
OP-B7	Md Abdus Salam	BCSIR Chittagong Laboratories, BCSIR	On-site hydrogen refueling station (HRS) performances and prospects for hydrogen fuel cell vehicles as an ultimate technology of a Smart Bangladesh	11:30-11:40	100
OP-B8	Md Omar Al Fahad	Department of Civil Engineering, CUET	Performance evaluation and analysis of traffic and pedestrian flow at Chittagong export processing zone intersection in Bangladesh	11:40-11:50	101
OP-B9	Md. Rahat Uddin	Department of Naval Architecture and Marine Engineering, BUET	Development of a marine traffic simulator on google maps: Vision towards Smart and safe navigation of ships in Bangladesh	11:50-12:00	101
OP-B10	Mir Akmam Noor Rashid	Dyeing and Printing Division, BJRI	Studies on the effect of pigment dye on printed jute and jute blended dyed fabrics	12:00-12:10	102
OP-B11	Sumaya Naznin	Department of Information and Communication Engineering, RU	Feature tracking-based camera motion compensation using ransac-like algorithm	12:10-12:20	102
OP-B12	Md. Ahesan Kabir	Department of Mechanical Engineering, CUET	Analysis of multi-stage tesla valve integration in the natural circulation loop of the heat exchanger system	12:20-12:30	102
Technical Session: TS-C2 (Forestry, Biodiversity, Polymer and Bio-refinery) Venue: BCSIR Dhaka Laboratories (Conference Room) Chair: Professor Dr. Yongcan Jin Co-Chair: Dr. Md. Mostafizur Rahman Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30					
SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-C2	M. Sarwar Jahan	BCSIR Dhaka Laboratories , BCSIR, Dhaka-1205, Bangladesh	Wood fiber in the circular bio-economy: Packaging and textile sector	10:45-11:10	103
IL-C2	Romel Ahmed	Department of Forestry and Environmental Science, SUST, Sylhet	Allelopathy is a potential driving force in altering the biodiversity of forest ecosystems-some experimental evidences	11:10-11:30	103
OP-C7	Swapan K Ray	BCSIR Dhaka Laboratories, BCSIR	Lignin valorization: Flow synthesis of acetobrominated alkali-lignin, reaction mechanism and potential applications	11:30-11:40	104
OP-C8	Siddhartha Sankar Saha	Department of Applied Chemistry and Chemical Engineering, RU	Kinetics study of the biodegradation of polyethylene terephthalate with mechanism by microorganisms	11:40-11:50	105



OP-C9	Md. Elius Hosen Pk	BCSIR Dhaka Laboratories, BCSIR	Carboxymethyl chitosan-based biodegradable film for food preservative	11:50-12:00	105
OP-C10	Allah Rakha Aidid	Department of Applied Chemistry and Chemical Engineering, Islamic University, Kushtia	Silk sericin-AgNPs/poly (vinyl alcohol) biodegradable composite films and their antibacterial properties	12:00-12:10	106
OP-C11	Fajilatun Nesa	BCSIR Dhaka Laboratories, BCSIR	Synthesis of water-soluble chitosan oligomer from shrimp processing waste	12:10-12:20	106
OP-C12	Md. Monirul Islam	Department of Applied Chemistry and Chemical Engineering, University of Rajshahi	Enhancement of wound healing with hydroxyethyl cellulose/polyvinyl alcohol hydrogel impregnated with clove bud extract	12:20-12:30	107

Technical Session: TS-D2 (Analytical and Electrochemistry)
Venue: Institute of National Analytical Research and Services (INARS) (Conference Room)
Chair: Professor Dr. Benu Kumar Dey
Co-Chair: Engr. Sarker Kamruzzaman
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-D2	Tapashi Ghosh Roy	Department of Chemistry, University of Chittagong, Chittagong	An isomeric macrocyclic chelator with carbamoyl ethyl branches and its copper(II), zinc(II) and cadmium(II) complexes: Synthesis, characterization and biological evaluation	10:45-11:10	108
IL-D2	Md. Ahsan Habib	Department of Chemistry, University of Dhaka, Dhaka-1000, Bangladesh	Direct analysis of pharmaceutical tablets using dielectric barrier discharge ionization-mass spectrometry	11:10-11:30	108
OP-D7	Md. Hafizur Rahman	Advanced Nanomaterials and Sensor Chemistry Laboratory (ANSC), Department of Chemistry, MBSTU	A novel Au nanoparticles/reduced graphene oxide/chitosan nanocomposite as a sensitive, selective electrochemical sensor for paracetamol detection	11:30-11:40	109
OP-D8	Md. Abdul Khaleque	Department of Chemical Engineering, JUST	Highly sensitive electrochemical detection of ciprofloxacin using newly synthesized MXene/poly (rutin) composite as an electrode material	11:40-11:50	110
OP-D9	Akash Pandit	Department of Chemistry, DU	Electrocatalytic water oxidation at mixed metal counter cation-based polyoxotungstates in acidic medium	11:50-12:00	110
OP-D10	Atikur Rahman	Laboratory of Nano-bio and Advanced Materials Engineering, JUST	An electrochemical sensor modified with MnO ₂ /Au-rGO for potassium detection in soil sample	12:00-12:10	111
OP-D11	Sabina Yasmin	Institute of National Analytical Research and Service (INARS), BCSIR	Synthesis of graphene-based zinc oxide nanocomposite using waste zinc-carbon batteries for sensitive detection of bisphenol A in water	12:10-12:20	111
OP-D12	Md Abu Rashed	Department of Chemistry, MBSTU	Naturally extracted hematite ore based electrochemical sensor for imidacloprid pesticide detection	12:20-12:30	112



Technical Session: TS-E2 (Biotechnology)
Venue: BCSIR Dhaka Laboratories (Genomic Research Laboratory)
Chair: Professor Dr. Emran Kabir Chowdhury
Co-Chair: Dr. Sharmin Jahan
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-E2	Rakha Hari Sarker	Department of Botany, University of Dhaka, Bangladesh	Prospects and challenges of plant biotechnology in Bangladesh	10:45-11:10	113
IL-E2	Md Salimullah	Molecular Biotechnology Division, NIB, Savar, Dhaka	Next generation biotechnology approaches at National Institute of Biotechnology	11:10-11:30	113
OP-E7	Md. Zamilur Rahman	BCSIR Dhaka Laboratories, BCSIR	Larvicidal efficacy of ethanolic extracts of <i>Annona squamosa</i> (L.) seeds over the dengue vector, <i>Aedes aegyptii</i>	11:30-11:40	114
OP-E8	Hosneara Akter	Department of Biochemistry and Molecular Biology, University of Dhaka	Genomic landscape from an ethnically underrepresented Bangladeshi neurodevelopmental disorder cohort	11:40-11:50	114
OP-E9	Md Sohel Hasan	Department of Biochemistry & Molecular Biology, RU	Yogurt supplementation can ameliorate fatty liver diseases and metabolic syndrome induced by high fat diet in obese mice	11:50-12:00	115
OP-E10	Amina Akter Sathi	Department of Microbiology, RU	Heavy metal (cadmium) stress associated proteins in rice: Genome wide identification, localization and expression profiles analysis in <i>Oryza sativa</i> L	12:00-12:10	115
OP-E11	Md. Nazmul Hasan	Department of Genetic Engineering and Biotechnology, SUST	Genetic engineering: To improve abiotic stress (salt and submerge) tolerance in rice for attaining food security in Bangladesh	12:10-12:20	116
OP-E12	Abida Anjum	Department of Botany, University of Dhaka	Alteration of fatty acid biosynthesis pathway to reduce erucic acid in mustard (<i>Brassica rapa</i> L.) by genome editing approach	12:20-12:30	116

Technical Session: TS-F2 (Nutrition and Food Science)
Venue: Institute of Food Science and Technology (IFST) (Seminar Room)
Chair: Professor Dr. Begum Rokeya
Co-Chair: Dr. Md. Nur Hossain
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-F2	Sharmin Rumi Alim	Institute of Nutrition and Food Science, University of Dhaka	Detection and quantification of residual antibiotics by HPLC along with identification of multi-drug resistant pathogens in milk supply chain	10:45-11:10	117
IL-F2	Anowar Khasru Parvez	Department of Microbiology, Jahangirnagar University, Dhaka	Probiotic potential of lactic acid bacteria isolated from commercial yogurts in Bangladesh	11:10-11:30	118
OP-F7	Maisha Majid Mukta	Institute of Nutrition and Food Science (INFS), University of Dhaka	Cardioprotection of water spinach (<i>Ipomoea aquatica</i>), wood apple (<i>Limonia acidissima</i>) and linseed (<i>Linum usitatissimum</i> L.) on doxorubicin-induced cardiotoxicity and oxidative stress in rat model	11:30-11:40	118



OP-F8	Subarna Sandhani Dey	Central Analytical and Research Facilities (CARF), BCSIR	In vitro regulation of biofilm formation in pathogenic <i>Klebsiella pneumoniae</i> using probiotic lactic acid bacteria (LAB)	11:40-11:50	119
OP-F9	Kanika Mitra	Institute of Food Science and Technology (IFST), BCSIR	Preparation and characterization of the physio-chemical properties of newly developed gluten free bar	11:50-12:00	120
OP-F10	Barun Kanti Saha	BCSIR Chittagong Laboratories	Effect of ripening hormone ethephon in nutritive value of selected pineapple, banana and tomato	12:00-12:10	120
OP-F11	Monika Akhter	Department of Environmental Sciences, Jahangirnagar University	Effect of LED light color on the performance, blood components, carcass qualities, heavy metals, antibiotic residues, and microbial properties of broiler chicken	12:10-12:20	121
OP-F12	Nazia Hassan	Health Physics Division, Bangladesh Atomic Energy Commission	Confirmation of ¹³⁷ Cs radionuclides in imported and exportable foodstuffs samples of Bangladesh using of gamma spectrometry system	12:20-12:30	121

Technical Session: TS-G2 (Environment, Governance, Pollution and Toxicology)

Venue: Central Analytical and Research Facilities (CARF) (Conference Room)

Chair: Professor Dr. Mohammad Zabed Hossain

Co-Chair: Dr. Sayma Khanom

Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-G2	M. Khabir Uddin	Department of Environmental Sciences, JU, Dhaka, Bangladesh	Prioritizing waste to energy model in sustainable Smart agro-industry practices	10:45-11:10	122
IL-G2	Mohammad Moniruzzaman	BCSIR Dhaka Laboratories, BCSIR	Multivariate analysis of fine particle-bound metals and polycyclic aromatic hydrocarbons in Dhaka's roadside traffic areas	11:10-11:30	123
OP-G7	Md Kamal Hossain	BCSIR Dhaka Laboratories, BCSIR	Sediment-bound hazardous trace metals in the south-eastern drainage system of Bangladesh: A key indicator of Bangladesh delta plan	11:30-11:40	123
OP-G8	Hajara Akhter	Biomedical and Toxicological research Institute (BTRI), BCSIR	Ameliorative effects of vitamin C on chromium induced toxicity in wistar albino rats: Targeting Nrf2 pathway	11:40-11:50	124
OP-G9	Afsana Parvin	BCSIR Dhaka Laboratories, BCSIR	A probabilistic ecotoxicological risk assessment of Hatirjheel lake in Bangladesh	11:50-12:00	124
OP-G10	Md. Nuruzzaman	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Extraction of silica from rice straw residue and its application in adsorption of lead(II) from aqueous solution	12:00-12:10	125
OP-G11	Priyanka Dey Suchi	BCSIR Dhaka Laboratories, BCSIR	Vertical distribution and ecological risk assessment of microplastics in soil and water adjacent to urban landfill	12:10-12:20	125
OP-G12	Mahmuda Begum	BCSIR Dhaka Laboratories, BCSIR	Biochemical, hematological changes of chromium toxicity and its effect on metallothionein gene expression in Koi fish (<i>Anabas testudineus</i>)	12:20-12:30	126



Technical Session: TS-H2 (Environment, Governance and Pollution)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Seminar Room)
Chair: Professor Dr. Nishat Ahmed Pasha
Co-Chair: Professor Dr. Md. Zahangeer Alam
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-H2	M. Safiur Rahman	Chemistry Division, Atomic Energy Center Dhaka, Bangladesh	Environmental pollution in our daily life and its governance, management and mitigation	10:45-11:10	127
IL-H2	Mohammad Enayet Hossain	Department of Soil, Water and Environment, University of Dhaka, Bangladesh	Microplastics pollution in aquatic and terrestrial environments in Bangladesh	11:10-11:30	128
OP-H7	Md Abdur Razzak	BCSIR Secretariat, BCSIR, Dhaka	War without exception worsen essential ecosystem and sustainable development: A case study of Ukraine war	11:30-11:40	128
OP-H8	Nasrin Akter	Department of Chemistry, NSTU	Visible light responsive ZnO-Cu ₂ O composite for photocatalytic Acid Red114 dye degradation	11:40-11:50	129
OP-H9	Sreebash Chandra Bhattacharjee	Chemical Research Division, BCSIR Chittagong Laboratories	Green synthesis of silver nanoparticle using leaf extract of <i>Adhatoda vasica</i> L. (Vasak) and its application on the removal of chromium, Cr from waste water	11:50-12:00	129
OP-H10	Nigar Sultana Pinky	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	In-depth analysis of biochar properties with varied biomass sources and pyrolysis temperatures	12:00-12:10	130
OP-H11	Md Sha Alam	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Pollution and associated health risks of heavy metals in street dust of the Chattogram city in Bangladesh	12:10-12:20	130
OP-H12	Md. Kamrul Hassan	Department of Chemistry, CUET, Chattogram, Bangladesh	Evaluation of the capability of wastewater treatment in steel galvanizing industries in Chattogram, Bangladesh	12:20-12:30	131

Technical Session: TS-I2 (Leather Engineering and Technology)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Conference Room)
Chair: Professor Dr. Sayed Md. Shamsuddin
Co-Chair: Dr. Sahana Parveen
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-I2	Amal Kanti Deb	ILET, University of Dhaka, Bangladesh	Halloysite templated nano functional materials: Multifunctional and biocompatible nanohybrids for sustainable environmental applications	10:45-11:10	132
IL-I2	Md Golam Shahnewaz	DTIEWTPCL, BSCIC	Tannery solid waste management in the leather sector of Bangladesh: Challenges and opportunities	11:10-11:30	132
OP-I7	Md. Abul Kashem Azad	Leather Research Institute, BCSIR, Savar, Dhaka	An eco-friendly leather dyeing with indigenous <i>Acacia catechu</i> wood extract	11:30-11:40	133
OP-I8	Sangida Iqbal	Department of Leather Engineering, KUET	Extraction of tannin from waste <i>Solanum lycopersicum</i> and comparison with conventional vegetable tannin	11:40-11:50	133



OP-I9	Kanish Fatama	Leather Research Institute, BCSIR, Savar, Dhaka	Manufacture of fashionable leather and leather goods from skin of broiler chicken leg	11:50-12:00	134
OP-I10	Yead Mahmud	Leather Research Institute, BCSIR, Savar, Dhaka	Low salt skin preservation with <i>Gossypiumhirstum</i> seed- A cleaner approach	12:00-12:10	135
OP-I11	Abu Kowser	BCSIR Rajshahi Laboratories, BCSIR	Mycofabrication of mycelium-based leather production from polyporales fungi in Bangladesh	12:10-12:20	135
OP-I12	Md. Mostoba Rafid	Department of Leather Engineering, KUET	Preparation of medicated self-healing finish coating for diabetic foot infection	12:20-12:30	136

Technical Session: TS-J2 (Energy and Storage Technology)
Venue: Institute of Energy Research and Development (IERD) (Auditorium)
Chair: Professor Dr. Ishtiaque M. Syed
Co-Chair: Professor Dr. Saeed Mahmud Ullah
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-J2	A. J. Saleh Ahammad	Department of Chemistry, JnU, Dhaka Bangladesh	Fabrication of nanostructured electrode materials for sustainable energy applications	10:45-11:10	137
IL-J2	Syed Farid Uddin Farhad	Industrial Physics Division, BCSIR Dhaka Laboratories, BCSIR, Dhaka	Bandgap engineering of $CuBi_2O_4$ photocathode materials for efficient solar hydrogen production	11:10-11:30	137
OP-J7	Md. Ismail Hossain	BCSIR Rajshahi Laboratories, Rajshahi	A new route of production of environmentally friendly zinc ion battery from cellulose skeleton induced manganese dioxide: Physicochemical, thermomechanical, morphological as well as electrochemical performance study	11:30-11:40	138
OP-J8	Sampad Ghosh	Department of Electrical and Electronic Engineering, CUET	Thermoelectric cement composites for energy harvesting in Smart buildings	11:40-11:50	138
OP-J9	M. Shahinuzzaman	Institute of Energy Research and Development (IERD), BCSIR	Tungsten-doped zinc oxide nanoparticle synthesis using aloe vera extracts for perovskite solar cells	11:50-12:00	139
OP-J10	Dilip Kumar Sarkar	Department of Applied Chemistry and Chemical Engineering, RU	Green synthesis of cobalt-based bimetallic oxides in application as oxygen evolution reaction (OER) catalyst for water splitting	12:00-12:10	139
OP-J11	Ayesha Siddika	Institute of Energy Research and Development (IERD), BCSIR	Single-step facile synthesis of 1D nanorods/3D nanorods networks for dye-sensitized solar cell	12:10-12:20	140
OP-J12	Sumon Chandra Debnath	Institute of Energy Research and Development (IERD), BCSIR	Techno-enviro-economic evaluation of photovoltaic integrated metrorail power system	12:20-12:30	140



Technical Session: TS-K2 (Drug Discovery and Development)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-202)
Chair: Professor Dr. Mohammed Abdul Aziz
Co-Chair: Dr. Md. Raihan Sarkar
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-K2	S. M. Abdur Rahman	Department of Clinical Pharmacy and Pharmacology, University of Dhaka	Benzimidazole, nitazoxanide, niclosamide and nucleoside analogs as potential candidates for new drug discovery	10:45-11:10	141
IL-K2	Md. Shah Amran	Department of Pharmaceutical Chemistry, Faculty of Pharmacy, DU	Evaluation of anti-hypertensive activity of garlic extract-based nanoparticles	11:10-11:30	142
OP-K7	Satyajit Roy Rony	BCSIR Dhaka Laboratories, BCSIR	<i>In-silico</i> inhibition analysis on Multidrug resistance proteins like ABCB1 and MRP1 along with evaluation of bioactivity study of potential lead compounds isolated from endophytic fungi	11:30-11:40	142
OP-K8	Shekh Md Newaj	Department of Pharmaceutical Sciences, North South University, Dhaka, Bangladesh	Synthesis of theragnostic liposomes for monitoring the chemotherapy delivery under NIR- light in tumor-containing mice	11:40-11:50	143
OP-K9	Marjan Alam	Department of Zoology, University of Dhaka, Dhaka	Isolation and characterization of secondary metabolites isolated from endophytic fungi of <i>Eclipta alba</i> (L.) Hassk	11:50-12:00	143
OP-K10	Md. Farhad Sarker	BCSIR Chittagong Laboratories, BCSIR	Efficacy and resistance of clopidogrel on patients with Type 1 Diabetes Mellitus: Pharmacokinetic correlation model and metabolic profiling	12:00-12:10	144
OP-K11	Tabassum Binte Kashem	Department of Pharmaceutical Sciences, North South University, Dhaka, Bangladesh	Doxorubicin-loaded gelatin nanoparticles and NIR-laser for subcutaneous chemotherapy delivery in tumor bearing mice	12:10-12:20	144
OP-K12	Alima Khanam	Department of Biochemistry and Molecular Biology, University of Rajshahi, Rajshahi	Unveiling latent molecular markers of colon cancer as promising early diagnostic signatures through bioinformatics screening	12:20-12:30	145

Technical Session: TS-L2 (Drug Discovery and Development)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-202)
Chair: Professor Dr. Firoj Ahmed
Co-Chair: Dr. Nasrin Akter Sarna
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-L2	Mamun Al Mahtab	Interventional Hepatology Division, Bangabandhu Sheikh Mujib Medical University, Dhaka	Drug discovery in Bangladesh from own experience- How does the future look?	10:45-11:10	146
IL-L2	ASM Monjur Al Hossain	Department of Pharmaceutical Technology, University of Dhaka, Bangladesh	<i>In vivo</i> topical delivery of terbinafine	11:10-11:30	146



OP-L7	Md. Zakir Sultan	Centre for Advanced Research in Science, DU	Synthesis of some drug-metal complexes and evaluation their bioactivities	11:30-11:40	147
OP-L8	Md. Tariquzzaman	Department of Genetic Engineering and Biotechnology, JUST	Exploring antiproliferative activity of <i>Ludwigia peploides</i> root extract through apoptosis of EAC cells in Swiss albino and in silico approaches	11:40-11:50	148
OP-L9	Md. Mahmudul Islam	Department of Pharmacy, NSTU	Hepatoprotective effect of <i>Allium sativum</i> silver nanoparticles extract on mice model: <i>In-vivo</i> analysis	11:50-12:00	148
OP-L10	Asish K. Bhattacharya	Division of Organic Chemistry, CSIR-National Chemical Laboratory (CSIR-NCL), Pune, India	Innovation in antimalarial drug discovery: Artemisinin-peptidyl vinyl phosphonate hybrid molecules as new antimalarials; combating multi-drug resistant malaria parasite by inhibiting falcipain-2 and heme-polymerization	12:00-12:10	149
OP-L11	Khalilur Rahman	Department of Statistics, University of Rajshahi	Exploring phytochemicals as potential drugs for <i>Vibrio cholerae</i> infections: Leveraging subtractive genomics and molecular docking techniques	12:10-12:20	149
OP-L12	Md Abul Hasnat	Department of Applied Chemistry and Chemical Engineering, DU	Chitosan based pH responsive IPN nanocarrier for targeted delivery of 5-fluorouracil	12:20-12:30	150

Technical Session: TS-M2 (Nanotechnology)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-302)
Chair: Professor Dr. Md. Shajahan
Co-Chair: Dr. Mosharof Hossain
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-M2	A. S. M. A. Haseeb	Department of Nanomaterials and Ceramic Engineering, BUET, Dhaka	Converting research outputs into societal impact	10:45-11:10	151
IL-M2	Muhammed Shah Miran	Department of Chemistry, University of Dhaka, Bangladesh	Photocatalytic degradation of organic dyes using semiconductor oxides and their composites with functional support materials	11:10-11:30	151
OP-M7	Md Asaduzzaman	Horticultural Research Center, Bangladesh Agricultural Research Institute	Application of iron nanoparticles on the growth, yield and fruit qualities of tomato grown in coco-dust based soilless culture	11:30-11:40	152
OP-M8	Sumon Ganguli	Department of Applied Chemistry and Chemical Engineering, CU	Bio-synthesis of size controlled silver nanoparticles and their applications	11:40-11:50	152
OP-M9	Md. Faruk Hasan	Department of Microbiology, University of Rajshahi	Assessments of antibacterial and anticancer activities of green synthesized silver nanoparticles from <i>Azadirachta indica</i> (L.) leave extract	11:50-12:00	153
OP-M10	Md Habibullah Dalal	University of Wollongong, Wollongong, New South Wales 2500, Australia	Electrochemical cathodic exfoliations of different graphite source materials in potassium chloride electrolyte	12:00-12:10	153
OP-M11	Anan Hashemi Jainul	Institute of Forestry and Environmental Sciences, University of Chittagong	Bio-nanofiber coating for the extension of the shelf-life of local fruits and vegetables	12:10-12:20	154
OP-M12	Trisha Paul	Biomedical and Toxicological Research Institute (BTRI), BCSIR	Biogenic synthesis of ZnO nanoparticles using <i>Aegle marmelos</i> leaf extract for the investigation of antibacterial and anti-diarrheal potentials	12:20-12:30	154



Technical Session: TS-N2 (Blue Economy and Aquaculture)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-303)
Chair: Professor Dr. Abdul Wahab
Co-Chair: Engr. Md. Rezaul Karim
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-N2	T. A. Capuano	Department of Oceanography & International Centre for Ocean Governance (ICOG), University of Dhaka	Capability of a regional, nested model to reproduce the hydro- and thermodynamics of the northern Bay of Bengal: Towards the implementation of an operational forecasting system in Bangladesh	10:45-11:10	155
IL-N2	Md. Monirul Islam	Department of Fisheries, University of Dhaka	Opportunities, barriers and risks of whiteleg Shrimp <i>Litopenaeus vannamei</i> cultivation in Bangladesh	11:10-11:30	156
OP-N7	Helena Khatoon	Chattogram Veterinary and Animal Sciences University, Chattogram, Bangladesh	Evaluation of growth performance, nutrition and hemato-biochemical index of common carp through partial replacement of fish meal by microalgae powder	11:30-11:40	156
OP-N8	Md. Habibur Rahman Habib	Department of Oceanography, University of Dhaka, Bangladesh	Application of AHP and geospatial technologies to assess ecotourism suitability: A case study of Saint Martin's Island in Bangladesh	11:40-11:50	157
OP-N9	Dabashes Adhiker	BTRI, BCSIR	Development of agar extraction from the <i>Hypnea musaformis</i> red seaweed algae of the Bay of Bengal	11:50-12:00	157
OP-N10	Mohammad Azmal Hossain Bhuiyan	Department of Botany, University of Dhaka	Taxonomy and molecular phylogeny of the genus <i>Pyramimonas</i> from the Ryukyu islands, Japan (Pyramimonadales, Chlorophyta)	12:00-12:10	158
OP-N11	Md. Sazedul Hoque	Department of Fisheries Technology, PSTU	Ghost fishing gears in the Bay of Bengal: A challenge for sustainable marine resources and blue economy development in Bangladesh	12:10-12:20	158
OP-N12	Shilpi Saha	Department of Zoology, Jagannath University	Comparative analyses of complete mitochondrial genomes among four sillaginids (<i>Perciformes</i> , <i>Sillaginidae</i>) and phylogenetic implications	12:20-12:30	159

Technical Session: TS-O2 (Material Science and Metallurgy)
Venue: Pilot Plant and Process Development Centre (PP & PDC) (Seminar Room)
Chair: Professor Dr. Md. Sazzad Hossain
Co-Chair: Dr. Md. A. Gafur
Day 2: 09 March 2024 (Saturday), Time: 10:45-12:30

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-O2	S. Manjura Hoque	Materials Science Division, Atomic Energy Centre Dhaka	Exceedingly small polymer-oxide nanohybrid as TOF 3D magnetic resonance angiography contrast agent	10:45-11:10	160
IL-O2	M. S. Jamal	Institute of Energy Research & Development (IERD), BCSIR	Utilization of indigenous resources for graphene synthesis: Application in energy harvesting	11:10-11:30	160



OP-O7	Shad Inquiad Mim	PP & PDC, BCSIR	Recycling of aluminum for processing piston alloy from waste engine heads	11:30-11:40	161
OP-O8	Istiaq Ahmed	Physical Instrumentation Division, BCSIR Dhaka Laboratories, BCSIR	Structural, mechanical, vibrational, electronic, optical and thermophysical properties of predicted nitride V2PN phase versus existing carbide V2PC phase at ambient and elevated pressure: An ab initio study	11:40-11:50	161
OP-O9	Tasnuva Zahan Liza	PP & PDC, BCSIR	Recovery of gold from ram and microprocessor by hydrometallurgical process	11:50-12:00	162
OP-O10	Anish Bajla	PP & PDC, BCSIR	Recycling waste car radiators: Synthesis of high-strength aluminum 7075 alloy	12:00-12:10	162
OP-O11	Akib Jabed	PP & PDC, BCSIR	Effect of Ag, Cu, Zn, Sb on Sn-57Bi solder alloy	12:10-12:20	163
OP-O12	Md. Jaynal Abedin	PP & PDC, BCSIR	Hydrometallurgical recovery of Cu, Sn and Pb from discarded printed circuit board (PCB)	12:20-12:30	163

Technical Session: TS-A3 (Agriculture)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-611)
Chair: Professor Dr. Mihir Lal Saha
Co-Chair: Dr. Mousona Islam
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-A3	Mohammad Zabed Hossain	Department of Botany, University of Dhaka, Dhaka, Bangladesh	Pesticide-use in the potato cultivation of Bangladesh: Farmers' knowledge, attitude and practices and its determinant factors	16:15-16:40	164
IL-A3	Mohammad Riazul Islam	Department of Biochemistry and Molecular Biology, University of Dhaka, Dhaka, Bangladesh	Jute endophytes: A cluster of microbial symbionts with huge agriculture and medicinal potentials	16:40-17:00	164
OP-A13	Bikash Chandra Sarker	Department of Agricultural Chemistry, HSTU	Impact of exogenous application of mepiquat chloride and abscisic acid on lodging resistance and grain yield of aromatic fine rice cv. kataribhog	17:00-17:10	165
OP-A14	Meher Nahid	Department of Food Processing and Engineering, Chattogram Veterinary and Animal Sciences University	Optimizing nitrogen and potassium nutrient management to minimize acrylamide precursors in potato cultivars: Implications for processed potato product quality	17:10-17:20	166
OP-A15	Md. Tanzil Ahamed Shawon	Institute of National Analytical Research and Services (INARS), BCSIR	Multi residue analysis of eleven pesticides and health risk assessment in pointed guard collected from Dhaka, Bangladesh	17:20-17:30	167
OP-A16	Md. Aminul Islam	Centre for Advanced Research in Sciences (CARS), University of Dhaka	Molecular detection and characterization of bovine and goat meat adulteration using multiplex-PCR targeting mitochondrial cytochrome b gene	17:30-17:40	167



OP-A17	Md. Mazharul Islam	Department of Applied Chemistry and Chemical Engineering, University of Rajshahi	Preparation of corn zein based anti-bacterial edible coatings to increase the shelf life of postharvest fruits	17:40-17:50	168
OP-A18	Md. Asif Alam	Department of Chemistry, University of Rajshahi	Investigation of phosphorus release kinetics of a soil amended with vermicompost and molasses	17:50-18:00	168

Technical Session: TS-B3 (Microbiology and Virology)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-612)
Chair: Professor Dr. Sabita Rezwana Rahman
Co-Chair: Dr. Md. Mizanur Rahaman
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-B3	Saif Ullah Munshi	BSMMU, Dhaka, Bangladesh	Unveiling viral infections: The power of loop-mediated isothermal amplification (LAMP) in resource-limited settings	16:15-16:40	169
IL-B3	Md Nabiul Islam	Department of Neuroscience, Yamaguchi University Graduate School of Medicine, Japan	Sex steroid hormone affects the adolescent brain to modulate emotional memory	16:40-17:00	169
OP-B13	Jannatul Ferdous	BCSIR Chittagong Laboratories, Dhaka	An overview of emerging colistin resistance in south asia: A consequence of plasmid-mediated mcr genes and chromosomal point mutations	17:00-17:10	170
OP-B14	Saiful Islam	BCSIR Chittagong Laboratories, Dhaka	Antibiotic resistance profile of <i>Pseudomonas aeruginosa</i> isolated from wastewater of Chattogram city, Bangladesh by whole genome sequencing	17:10-17:20	171
OP-B15	Sadia Afrin	Institute of Food Science and Technology (IFST), BCSIR, Dhaka	Exploration of biosurfactant-producing bacteria from oil-contaminated areas and their possible applications in bioremediation	17:20-17:30	171
OP-B16	Shahariar Siddique	Institute of Food Science and Technology (IFST), BCSIR, Dhaka	Revealing probiotic potential and whole genome analysis of isolated <i>Enterococcus</i> spp. from the human intestine	17:30-17:40	172
OP-B17	Md Rayhan Ali	Mawlana Bhashani Science and Technology University	Investigation of the vaccine potential of an <i>in silico</i> designed FepA peptide vaccine against <i>Shigella flexneri</i> in mice model	17:40-17:50	172
OP-B18	Rima Akter	Biotechnology and Genetic Engineering, Khulna University	Development of a de-novo plasmid construct for efficient recombinant chitinase expression in <i>S. cerevisiae</i>	17:50-18:00	173



Technical Session: TS-C3 (Forestry and Biodiversity)
Venue: BCSIR Dhaka Laboratories (Conference Room)
Chair: Dr. Md. Sarwar Jahan
Co-Chair: Dr. Romel Ahmed
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-C3	Yongcan Jin	Jiangsu Co-Innovation Center of Efficient Processing and Utilization of Forest Resources, College of Light Industry and Food Engineering, Nanjing Forestry University, Nanjing, China	Constructing an efficient enzymatic hydrolysis system based on understanding the interaction between lignin and cellulase	16:15-16:40	174
IL-C3	Magdi E. Gibril	Key Laboratory of Pulp & Paper Science and Technology of Shandong Province, Qilu University of Technology, Shandong Academy of Sciences, Jinan, China	Flexible PVDF-HFP based hybrid composite solid electrolyte membrane co-filled with hydroxypropyl methyl cellulose and $Li_{6.4}La_3Zr_{1.4}Ta_{0.6}O_{12}$ for high-performance solid-state lithium batteries	16:40-17:00	174
OP-C13	Sumaiya Naznin	Department of Zoology, JU	Ecology of an endangered species Bengal fox (<i>Vulpes bengalensis</i>) in Rajshahi division of Bangladesh	17:00-17:10	175
OP-C14	MMA Quader	BUET, Dhaka	Forestation: Miyawaki and Daisugi technique-solution of fiber crisis in paper sector	17:10-17:20	175
OP-C15	Md. Abdullah Al Mahmud	Department of Botany, University of Dhaka	Effects of the exotic species <i>Lantana camara</i> L. on vegetation structure and litter decomposition of the native plant species in Bangladesh	17:20-17:30	176
OP-C16	Avijit Dutta Borshon	Department of Zoology, University of Dhaka	Predicting climate change impact on lesser whistling duck distribution in Bangladesh: Habitat suitability, range shift and protected area coverage	17:30-17:40	177
OP-C17	Arpita Pal	Department of Fisheries, University of Rajshahi	Fish diversity in Channiar, Bonpurer and Kaktengorer haor of Itna upazila under Kishoreganj district	17:40-17:50	177
OP-C18	M. Mostafizur Rahman	BCSIR Dhaka Laboratories, BCSIR	Preparation of chitosan derivative and its application in papermaking	17:50-18:00	178

Technical Session: TS-D3 (Clean Water and Sanitation)
Venue: Institute of National Analytical Research and Services (INARS) (Conference Room)
Chair: Professor Dr. Md. Didar-ul-Alam
Co-Chair: Dr. Md. Ahedul Akbor
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-D3	K M U Ahmed	Department of Geology, University of Dhaka, Bangladesh	Challenges of providing safely managed water and sanitation services in Bangladesh and scopes for Smart water management	16:15-16:40	178



IL-D3	Tasrina Rabia Choudhury	Chemistry Division, Atomic Energy Centre Dhaka, Bangladesh Atomic Energy Commission, Dhaka, Bangladesh	Microplastics unveiled: Recent perspectives on occurrence, characteristics, risk assessment, and sustainable management	16:40-17:00	179
OP-D13	Md. Wahidul Islam Murad	Dhaka WASA	Ponds and canal eutrophication can be reduced by using a water hyacinth-based phytoremediation process	17:00-17:10	180
OP-D14	A. H. M. Shofiul Islam Molla Jamal	Institute of National Analytical Research and Services (INARS), BCSIR	Rooftop runoff as a source of contamination: Rainwater harvesting systems	17:10-17:20	180
OP-D15	M. Safiur Rahman	Chemistry Division, Bangladesh Atomic Energy Commission, Dhaka Bangladesh	Management and mitigation of carcinogenic disinfection byproducts (DBPs) formation in drinking water distribution systems using nanoparticles	17:20-17:30	181
OP-D16	Md. Ripaj Uddin	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	A comprehensive guideline towards the restoration of the present Buriganga river by holistic approach of the natural based solution	17:30-17:40	181
OP-D17	Md Mashud Parvez	BCSIR Rajshahi Laboratories, BCSIR	Development of cost-effective de-ionized water system	17:40-17:50	182
OP-D18	Nigomananda Biswas	Department of Oceanography and Hydrography, BSMRMU, Bangladesh	Hydro-geochemical characterization and water quality assessment of groundwater of Hatiya island	17:50-18:00	182

Technical Session: TS-E3 (Genomics)
Venue: BCSIR Dhaka Laboratories (Genomic Research Laboratory)
Chair: Professor Dr. A.K.M. Mahbub Hasan
Co-Chair: Dr. Mohammad Robel Hossen Patwary
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-E3	AMAM Zonaed Siddiki	Department of Pathology and Parasitology, CVASU, Chattogram, Bangladesh	Evolving role of genomic big data and biotechnology in fourth industrial revolution (4IR)	16:15-16:40	183
IL-E3	Md. Murshed Hasan Sarkar	BCSIR Dhaka Laboratories, BCSIR	Internal control for qRT-PCR based on human endogenous retrovirus K113 for RNA virus diagnosis	16:40-17:00	184
OP-E13	Md. Arif Sakil	Graduate School of Science and Engineering, Saitama University, Saitama, Japan	Autophagy derived amino acids are catabolized in chloroplasts coupled with mitochondria resulting in elevation of intracellular H ₂ O ₂ level during autophagic cell death in physcomitrium patens	17:00-17:10	184
OP-E14	Mohammad Omar Faruque	Department of Botany, University of Chittagong	Molecular identification of ethnomedicinal plants used by the indigenous communities of Bangladesh through the partial genome sequencing of three plastid markers	17:10-17:20	185
OP-E15	Tamima Sultana	Department of Botany, University of Dhaka	Genome editing approach to develop climate resilient potato variety in Bangladesh	17:20-17:30	185



OP-E16	Afia Anjum	Department of Biochemistry and Microbiology, NSU	Insights from whole genome sequencing of multidrug resistant clinical strains of <i>Staphylococcus aureus</i> from Dhaka, Bangladesh	17:30-17:40	186
OP-E17	Md. Jisan Ahmad	Department of Biotechnology and Genetic Engineering, Khulna University	Characterization and antibacterial activity of biosynthesized silver nanoparticles from <i>Azadirachta indica</i> and <i>Cynodon dactylon</i> extracts	17:40-17:50	186
OP-E18	Bidhan Sarkar	Department of Biochemistry and Molecular Biology, University of Dhaka	Enhanced salt tolerance by CRISPR/Cas9 mediated downregulation of ABC transporter (OsABCB7) in rice cultivar IR29	17:50-18:00	187

Technical Session: TS-F3 (Nutrition and Food Science)
Venue: Institute of Food Science and Technology (IFST) (Seminar Room)
Chair: Professor Dr. Khaleda Islam
Co-Chair: Dr. Tasnim Farzana
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-F3	Kazi Muhammad Rezaul Karim	Institute of Nutrition and Food Science, University of Dhaka, Dhaka, Bangladesh	Assessment of quality of life and nutrient intake of patients with chronic kidney disease from selected hospital in Bangladesh	16:15-16:40	188
IL-F3	Sumaiya Mamun	Institute of Nutrition and Food Science, University of Dhaka, Bangladesh	Effect of <i>Nigella sativa</i> oil on blood glucose level of diabetic rats	16:40-17:00	188
OP-F13	Syeda Farhana Najnin	Institute of Nutrition and Food Science (INFS), DU	Identification and quantification of allergens in different varieties of lens culinaris in Bangladesh	17:00-17:10	189
OP-F14	Md. Monirul Islam	Department of Pharmacy, NSTU	Lactic acid bacteria mediated fermented products reduce the obesity and associated metabolic disorders in high fat diet induced obese mice	17:10-17:20	189
OP-F15	Zohora Khatun Akhie	Biotechnology and Genetic Engineering Discipline, KU	Evaluation of keora fruit extract incorporated with chitosan for bio-preservative application	17:20-17:30	190
OP-F16	Md. Arafat Al Mamun	Centre for Advanced Research in Sciences (CARS), DU	Start-up research incubation with the developed starter culture of fermented yogurt	17:30-17:40	190
OP-F17	Rahul Sharma	Department of Biochemistry and Molecular Biology, University of Chittagong	The impact of post-harvest processing on specific nutritionally important chemical components in <i>Ulva</i> sp. originating from Bangladesh	17:40-17:50	191
OP-F18	Mst. Umme Habiba	Department of Dairy and Poultry Science, BSMRAU	Production of exopolysaccharide from food grade <i>Leuconostoc</i> strains	17:50-18:00	192



Technical Session: TS-G3 (Environment, Governance, Pollution and Toxicology)
Venue: Central Analytical and Research Facilities (CARF) (Conference Room)
Chair: Professor Dr. Md. Khabir Uddin
Co-Chair: Dr. Mahmuda Begum
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-G3	Muhammad Munir Chowdhury	National Museum of Science & Technology	Combating plastic pollution: Need scientific solution	16:15-16:40	193
IL-G3	Gawsia Wahidunnessa Chowdhury	Department of Zoology, University of Dhaka, Bangladesh	Plastic paradox: Navigating towards sustainable solutions	16:40-17:00	193
OP-G13	Nushrat Jahan Chowdhury	Institute of National Analytical Research and Services (INARS), BCSIR	Studies of method validation techniques for quantification of organochlorine pesticides residues in water by gas chromatography	17:00-17:10	194
OP-G14	Mahmuda Hakim	Biomedical and Toxicological research Institute (BTRI), BCSIR	Synthesis and characterization of highly porous activated carbon for the removal of chromium(VI)	17:10-17:20	195
OP-G15	Md Rayhanul Islam Rayhan	Department of Environmental Sciences, Jahangirnagar University	Exposure of polychlorinated biphenyls via indoor dust particles and associated human health risks in Dhaka city, Bangladesh	17:20-17:30	195
OP-G16	Md. Rashedul Islam	Department of Genetics and Animal Breeding, HSTU	Influence of gender on transgenerational effects of inorganic arsenic in post-natal body growth, organ development, hematological and biochemical parameters of mice	17:30-17:40	196
OP-G17	M. Abbas Alam	Bangladesh Accreditation Board, Ministry of Industries	Differential patterns of heavy metal contamination and nutrient levels: A comparative study among Sandwip island, Patenga on the southeastern coast, and the Karnaphuli river	17:40-17:50	196
OP-G18	Md. Masiur Rahaman	Department of Chemistry, JU	Adsorption characteristics of antibiotics onto chitosan in aqueous solution	17:50-18:00	197

Technical Session: TS-H3 (Robotics)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Seminar Room)
Chair: Professor Dr. Subrata Kumar Aditya
Co-Chair: Dr. Sejuti Rahman
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-H3	Hafiz Md. Hasan Babu	Department of Computer Science & Engineering, University of Dhaka, Bangladesh	Quantum computing: The future of big data	16:15-16:40	198
IL-H3	Lafifa Jamal	Department of Robotics and Mechatronics Engineering, University of Dhaka, Bangladesh	Intelligent robotics systems for early childhood education	16:40-17:00	199
OP-H13	Atish Bhattacharjee	IERD, BCSIR	Development of low-cost thermostat system for viscosity measurement	17:00-17:10	199



OP-H14	Mahedi Hassan	IERD, BCSIR	Development of a surveillance system using face and object detection interfacing with android application	17:10-17:20	200
OP-H15	Md. Forhad Hossain	PP & PDC, BCSIR	PLC-SCADA based monitoring and control of anaerobic digester performance	17:20-17:30	200
OP-H16	Md. Robiul Alam	PP & PDC, BCSIR	Design and development of Smart tool condition monitoring system to identify manufacturing tradeoffs and optimal machining conditions	17:30-17:40	201
OP-H17	Md Hasibul Hasan Sifat	Dept. of ME, RUET	Design and development of a novel magnetic suspension system	17:40-17:50	201
OP-H18	Abdullah All Mamun Anik	Dept. of IPE, MIST	An expanded invisible power exchange system for the E-vehicle (EV) charging infrastructure installing real-time RFID access, solar powered system, and IoT technology	17:50-18:00	202

Technical Session: TS-I3 (Nuclear Science and Engineering)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Conference Room)
Chair: Engr. Md. Muzammel Haque
Co-Chair: Dr. Md. Shahidur Rahman
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-I3	Md. Khairul Islam	Plasma Physics Division, Atomic Energy Center, Dhaka, Bangladesh	Towards the achievement of fusion reactor	16:15-16:40	202
IL-I3	Tania Sultana	Institute of Nuclear Medicine & Allied Sciences (INMAS), Dhaka, Bangladesh	Role of ^{99m} Tc-MDP bone scan for evaluating skeletal metastasis in patients with carcinoma prostate: 1 year experience	16:40-17:00	203
OP-I13	Afroza Naznin	Institute of Nuclear Medicine & Allied Sciences (INMAS), Mitford, Dhaka	Successful application of radio-iodine ablation therapy in a rare case of dual thyroid malignancy	17:00-17:10	203
OP-I14	Mahbuba Begum	Health Physics Division, BAEC, Bangladesh	Assessment of radioactivity concentration of gas reservoir well core samples of Shahbazpur and Saldanadi gas field, Bangladesh	17:10-17:20	204
OP-I15	Afroza Akhter	Institute of Nuclear Medicine and Allied Sciences (INMAS), Dhaka, BAEC, Bangladesh	Myocardial perfusion imaging and cardiac PET in coronary artery disease: Pioneering advanced fusion imaging in the field of nuclear cardiology, Bangladesh	17:20-17:30	204
OP-I16	Rawnak Afrin	Institute of Nuclear Medicine and Allied Sciences, BAEC, Bangladesh	Role of ¹⁸ F-FDG PET/CT in newly diagnosed cytology proven lung adenocarcinoma cases and association with serum carcinoembryonic antigen	17:30-17:40	205
OP-I17	Shankar Kumar Biswas	Institute of Nuclear Medicine & Allied Sciences, Dhaka, BAEC, Bangladesh	PET-CT scan for treatment planning in thyroid cancer patients: Three clinical scenarios	17:40-17:50	205
OP-I18	Anisur Rahman	Center for Research Reactor, BAEC, Bangladesh	Multiphysics coupling scheme for transient analysis with the MOC Code STREAM	17:50-18:00	206



Technical Session: TS-J3 (Energy and Storage Technology)
Venue: Institute of Energy Research and Development (IERD) (Auditorium)
Chair: Professor Dr. Jiban Podder
Co-Chair: Dr. M. L. Palash
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-J3	Md. Akhtaruzzaman	Department of Chemistry, Faculty of Science, The Islamic University of Madinah, Saudi Arabia	Prospects and challenges of solar photovoltaics in Bangladesh	16:15-16:40	207
IL-J3	Kaiser Ahmed Rocky	Department of Physics, University of Dhaka, Bangladesh	Zeolite-graphene composite adsorbents for next generation adsorption heat pumps	16:40-17:00	207
OP-J13	Md. Aminul Islam	Department of Materials Science & Engineering, RUET	Fabrication and characterization of MXene-Based triboelectric nanogenerator	17:00-17:10	208
OP-J14	Md. Zillur Rahman	Department of Applied Chemistry and Chemical Engineering, DU	Synthesis and evaluation of geo-polymer for carbon capture via fixed bed reactor in power plants	17:10-17:20	208
OP-J15	Md. Rashed Alam	Institute of Energy Research and Development (IERD), BCSIR	Effect of formic acid on the growth of titania for the application in dye-sensitized solar cells and gas sensors	17:20-17:30	209
OP-J16	Afrina Sharmin	Institute of Energy Research and Development (IERD), BCSIR	Eco-friendly zinc telluride thin films fabricated via sputtering for enhanced CdTe solar cell performance and CZTS solar device application	17:30-17:40	209
OP-J17	Suraia Akter Rakhi	Department of Chemistry, KUET	Peanut shell derived porous carbon/sulfur composite as cathode component for aqueous rechargeable zinc-sulfur batteries	17:40-17:50	210
OP-J18	Md. Sanwar Hossain	Institute of National Analytical Research and Services (INARS), BCSIR	Polyaniline modified titanium foil electrode with high performance for supercapacitor	17:50-18:00	210

Technical Session: TS-K3 (Drug Discovery and Development)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-202)
Chair: Professor Dr. Sitesh Chandra Bachar
Co-Chair: Dr. Uttom Kumar
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-K3	Firoj Ahmed	Department of Pharmaceutical Chemistry, University of Dhaka, Bangladesh	Search for bio-active compounds with TRAIL-resistance overcoming activity from medicinal plants of Bangladesh	16:15-16:40	211
IL-K3	Shimul Halder	Department of Pharmaceutical Technology, University of Dhaka, Bangladesh	Bioactive plant extract loaded novel lipid-based nanocarriers for targeted drug delivery and improved nutraceutical potential	16:40-17:00	211
OP-K13	A D A Shahinuzzaman	BCSIR Dhaka Laboratories, BCSIR	Isolation, characterization and exploration of bioactivities of new molecules from endophytic fungi <i>Aspergillus welwitschia</i>	17:00-17:10	212
OP-K14	Saima Mollick	BCSIR Dhaka Laboratories, BCSIR	Prevalance of endophytic fungi and evaluation of bioactive potential within the plant <i>Pandanus tectorius</i> of Saint Martin island	17:10-17:20	212



OP-K15	Nripendra Nath Biswas	Pharmacy Discipline, Khulna University, Khulna	Bacterial biofilm and quorum sensing inhibitory potentials of aerial parts of mangrove plant <i>Sarcolobus globosus</i>	17:20-17:30	213
OP-K16	Al Akramullazi	Department of Pharmacy, Rajshahi University, Bangladesh	Synthesis, structural analysis, antibacterial and cytotoxicity studies on novel transition metal complexes of thiosemicarbazone derived Schiff base ligands	17:30-17:40	213
OP-K17	Proshanta Shil	Department of Chemistry, CUET, Bangladesh	Bioactive phytoconstituents from the fruits of <i>Cassia fistula</i>	17:40-17:50	214
OP-K18	Md Sakhaoyat Hossain	Department of Chemistry, CUET, Bangladesh	Bioactive steroidal glycoside from the seeds of <i>Mucuna pruriens</i>	17:50-18:00	214

Technical Session: TS-L3 (Drug Discovery and Development)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-202)
Chair: Professor Dr. Abdul Quader
Co-Chair: Dr. Md. Hossain Sohrab
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-L3	Md. Selim Reza	Department of Pharmaceutical Technology, University of Dhaka, Bangladesh	Application of molecular dynamics simulation in the field of pharmacy	16:15-16:40	215
IL-L3	Nahid Sharmin	Department of Pharmaceutical Technology, University of Dhaka, Bangladesh	Formulation and characterization of levofloxacin containing gastroretentive bioadhesive floating microspheres for the treatment of <i>Helicobacter pylori</i> infection	16:40-17:00	215
OP-L13	Farhana Islam	Department of Pharmacy, JUST, Jashore, Bangladesh	Phytochemical profiling, anti-inflammatory, antinociceptive potentials of <i>Boeica filiformis</i> and molecular docking study against cyclooxygenase-2 (COX-II) enzyme	17:00-17:10	216
OP-L14	Md. Forhad Alom	Department of Biotechnology and Genetic Engineering, Islamic University, Kushtia, Bangladesh.	Liquid-liquid phase separation of natural products	17:10-17:20	216
OP-L15	Bikash Dev Nath	Department of Chemistry, DUET, Gazipur	Binaphthyl-based organic compounds containing nitrogen (N) and hydroxyl (-OH) groups and their metal complexes for potent biological applications	17:20-17:30	217
OP-L16	Shorav Paul	Department of Chemistry, University of Rajshahi	Treatment of deep screen infection by PCL-SPIIONS-erythromycin, enhancing antibiotic efficacy: An <i>in vitro</i> and <i>in vivo</i> study	17:30-17:40	217
OP-L17	Md. Mohaimenul Islam Tareq	Department of Genetic Engineering and Biotechnology, Jashore University of Science and Technology	RNA-sequenced based analysis to identify novel drug target and development of effective therapeutics for early treatment of Alzheimer disease	17:40-17:50	218
OP-L18	Gazi Md. Monjur Murshid	Pharmacy Discipline, Khulna University, Khulna, Bangladesh	GC-MS analysis and antibacterial activity assessment of the endophytic fungus isolated from the bark of <i>Abroma augusta</i>	17:50-18:00	219



Technical Session: TS-M3 (Nanotechnology)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-302)
Chair: Professor Dr. Ashaduzzaman
Co-Chair: Dr. Mohammad Shah Jamal
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-M3	Md. Nizam Uddin	Department of Chemistry, SUST, Sylhet, Bangladesh	Nanofilms from CVD, PVD, and sol-gel methods and their potential applications	16:15-16:40	220
IL-M3	Abul K. Mallik	Department of Applied Chemistry and Chemical Engineering, DU	Development of unique stationary phases for the separation of various kinds of analytes with very high selectivity	16:40-17:00	221
OP-M13	Sharmin Binte Shaheed	Department of Chemistry, BUET	Microwave assisted synthesis of alumina supported copper(I) oxide as heterogeneous catalyst for the direct amidation of carboxylic acids with amines	17:00-17:10	221
OP-M14	Md. Suruj Ahammed	Department of Chemistry, BUET	Exploring the incorporation of antifungal agents within nanocellulose moiety through <i>In silico</i> and experimental approach	17:10-17:20	222
OP-M15	Kh. Nurul Islam	BCSIR Chittagong Laboratories, BCSIR	The synthesis of calcium carbonate nanoparticles from sea shells	17:20-17:30	222
OP-M16	Samiya Fariha	Department of Chemistry, University of Chittagong	Nickel ferrite nanoparticles: Chemical synthesis and photocatalytic efficiency for degradation of organic pollutants	17:30-17:40	223
OP-M17	Md. Johurul Islam	BCSIR Dhaka Laboratories, BCSIR	Fabricating flexible and wearable piezoresistive devices based on AgNPs coated hybrid composite for biomedical applications	17:40-17:50	223
OP-M18	Mohammad Amirul Hoque	BCSIR Dhaka Laboratories, BCSIR	Oxidation and reduction phenomena of graphite to graphene oxides and reduced graphene oxides based on conditions	17:50-18:00	224

Technical Session: TS-N3 (Biosafety, Biosecurity and Climate Change)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-303)
Chair: Professor Dr. Ishtiaq Mahmud
Co-Chair: Professor Dr. Towhida Rashid
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-N3	Saiful M. Chowdhury	Department of Chemistry and Biochemistry, University of Texas at Arlington, Arlington, TX, USA	Mapping host defense networks with chemical proteomics techniques	16:15-16:40	225
IL-N3	Mohammed Shah Nawaz Chowdhury	Institute of Marine Sciences, University of Chittagong, Chattogram, Bangladesh	Eco-engineered oyster breakwater: A nature-based solution to prevent coastal erosion in changing climate	16:40-17:00	226
OP-N13	Israt Jahan	Department of Biochemistry and Molecular Biology, DU	Neo-domestication of a wild perennial halophytic grass, <i>Oryza coarctata</i> by multiplex CRISPR-cas9 mediated downregulation of domestication traits related genes	17:00-17:10	227



OP-N14	Md. Imam Sohel Hossain	IMMM, BCSIR, Dhaka	Revolutionizing flood monitoring: A web-based application for near-real-time observation using satellite imagery	17:10-17:20	227
OP-N15	Khan Mohammad Ibtehal	Institute of Remote Sensing and GIS, Jahangirnagar University	Quantifying the effects of blue carbon storage considering land use and land cover change in Hatiya and Manpura islands: A remote sensing study	17:20-17:30	228
OP-N16	M. Nur E Alam	Atomic Energy Center Dhaka, Bangladesh Atomic Energy Commission, Dhaka	Assessment of isotopic signature ($\delta^{13}\text{C}$ & $\delta^{15}\text{N}$) in the most undisturbed sediment cores at Sundarbans mangrove area of Bangladesh in studies of sea level rise as well as heavy metal association with the isotopic ratio ($\delta^{13}\text{C}/\delta^{15}\text{N}$)	17:30-17:40	228
OP-N17	Md Atikul Islam	Environmental Science Discipline, Khulna University	Concurrent impacts of COVID-19 and natural disasters on shrimp enterprises in the southwest coastal region of Bangladesh	17:40-17:50	229
OP-N18	Mohammad Robel Hossen Patwary	BCSIR Dhaka Laboratories; School of Biosciences, University of Sheffield, UK	Rice selection breeding: A potential option towards sustainable agriculture in mitigating greenhouse gas (N_2O) emissions	17:50-18:00	229

Technical Session: TS-O3 (Material Science and Metallurgy)
Venue: Pilot Plant and Process Development Centre (PP & PDC) (Seminar Room)
Chair: Professor Dr. Md. Zahangir Alam
Co-Chair: Dr. Umme Sarmeen Akhtar
Day 2: 09 March 2024 (Saturday), Time: 16:15-18:00

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-O3	Fahmida Gulshan	Department of Materials and Metallurgical Engineering, BUET	Applications of steel slag in construction sector of Bangladesh	16:15-16:40	230
IL-O3	Md Anamul Haque	Department of Chemistry, University of Dhaka, Bangladesh	Surfactant triggered self-assembled nano-bilayer structure in lamellar hydrogel for multiscale stress sensing	16:40-17:00	231
OP-O13	Nazia Khatun	BCSIR Dhaka Laboratories, BCSIR	Solid-state synthesis of magnesium substituted zinc ferrite nanoparticles for high-performance humidity sensors	17:00-17:10	231
OP-O14	Md. Al-Amin	BCSIR Rajshahi Laboratories, BCSIR	Bagasse derived hemicellulose-based hydrogel for biomedical applications	17:10-17:20	232
OP-O15	Suravi Islam	BCSIR Dhaka Laboratories, BCSIR	Exploring the marvels of yttrium-doped barium zirconium titanate ceramics: Structural, morphological, optical, and electrical properties for energy storage device applications	17:20-17:30	232
OP-O16	Mohammad Sajjad Hossain	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Influence of La^{3+} substitution on structural, morphology, dielectric and magnetic properties of cobalt ferrite	17:30-17:40	233
OP-O17	Shinthia Binte Eskender	PP & PDC, BCSIR	Development and characterization of friction brake pad	17:40-17:50	233
OP-O18	Md. Hasibuzzaman Rabby	PP & PDC, BCSIR	Extraction of Li and Co from Li-ion Battery	17:50-18:00	234



Day 3: 10 March 2024 (Sunday)

Technical Session: TS-A4 (Agriculture)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-611)
Chair: Professor Dr. Alok Kumar Paul
Co-Chair: Dr. Md. Salim Khan
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-A4	Hasneen Jahan	Department of Agricultural Economics, BAU, Mymensingh	Agriculture and food security in Bangladesh	09:00-09:25	234
IL-A4	Muhammed Alamgir Zaman Chowdhury	Institute of Food and Radiation Biology, Atomic Energy Research Establishment, Savar, Dhaka	Heavy metals in water, soil, vegetables and fish at the tobacco industrial sites in Rangpur city, Bangladesh: A health risk study	09:25-09:45	235
OP-A19	Mst. Sarmina Yeasmin	BCSIR Rajshahi Laboratories, BCSIR	Comparative analysis on physicochemical and frying characteristics of vegetable oils and their blend	09:45-09:55	236
OP-A20	Md Humayun Kabir	Institute of National Analytical Research and Services (INARS), BCSIR	Method development of multiclass pesticide residue analysis to monitor five pesticide residues in country beans collected from the local market in Dhaka, Bangladesh, and their dietary risk assessment	09:55-10:05	236
OP-A21	G. M. Masud Rana	BCSIR Rajshahi Laboratories, BCSIR	Assessments of essential oils extracted from two available citrus leaves by solvent-free microwave extraction	10:05-10:15	237
OP-A22	Mst. Meherunnahar	Food Engineering and Tea Technology, SUST	Development and evaluation of nutri-rich biscuit from mushroom based composite flour	10:15-10:25	237
OP-A23	Zerin Tasnim	Department of Agroforestry, BSMRAU	Identification and molecular characterization of banana (<i>Musa spp.</i>) disease associated fungi in Bangladesh	10:25-10:35	238
OP-A24	Md. Rezaul Karim Rana	Department of Biochemistry, University of Dhaka	Next-generation jute fiber processing: Customized microbial retting and chemical retting approach	10:35-10:45	238

Technical Session: TS-B4 (Microbiology and Virology)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-612)
Chair: Dr. Chowdhury Rafiqul Ahsan
Co-Chair: Dr. Saiful Islam
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-B4	Muhammad Manjurul Karim	Department of Microbiology, University of Dhaka, Bangladesh	Knowledge of microbiology and virology towards building a smarter bangladesh	09:00-09:25	239
IL-B4	Shamsun Nahar Khan	Department of Pharmacy, East West University, Dhaka, Bangladesh	Insight into corona virus infection and the pattern of post COVID-19 sequelae	09:25-09:45	240
OP-B19	Sanjana Fatema Chowdhury	BCSIR Dhaka Laboratories, BCSIR	An Insight into the genome-wide analysis of bacterial defense of <i>Morganella morganii</i> isolated in Bangladesh	09:45-09:55	241



OP-B20	Mohammad Robel Hossen Patwary	BCSIR Dhaka Laboratories; School of Biosciences, University of Sheffield, UK	Dissecting soil microbial N-cycle dynamics (Nitrification, denitrification, DNRA and anammox) in fertilised paddy soil through application of stable isotope	09:55-10:05	241
OP-B21	Rajib Sarkar	BCSIR Chittagong Laboratories, BCSIR	<i>In vitro</i> antifungal activities of <i>Cymbopogon citratus</i> , <i>Cymbopogon martini</i> , <i>Pogestemon cablin</i> , and <i>Curcuma longa</i> essential oils against spoilage fungi isolated from tomatoes	10:05-10:15	242
OP-B22	Nayeema Talukder Ema	BCSIR Rajshahi Laboratories, BCSIR	A comprehensive insight into the microbiome community of Bangladeshi highly polluted Buriganga river sediment by metagenomic approach	10:15-10:25	243
OP-B23	Md. Ahashan Habib	BCSIR Dhaka Laboratories, BCSIR	The importance of miRNA identification during SARS-CoV-2 and dengue viral infections	10:25-10:35	243
OP-B24	Farjana Showline Chaity	BCSIR Chittagong Laboratories, BCSIR	Genetic diversity and prevalence of multidrug resistant <i>Escherichia coli</i> isolated from street vended food and hand rinse water of vendors around Chattogram city, Bangladesh	10:35-10:45	244

Technical Session: TS-C4 (Waste Management)
Venue: BCSIR Dhaka Laboratories (Conference Room)
Chair: Professor Dr. Hafiza Khatun
Co-Chair: Dr. Mohammad Mostafa
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-C4	Syeda Sultana Razia	Department of Chemical Engineering, BUET	Sound management of chemicals and waste: An assessment of the national policy and way forward	09:00-09:25	245
IL-C4	Md. Mostafizur Rahman	Department of Environmental Sciences, JU, Dhaka, Bangladesh	Waste management: Environmental safeguard and energy nexus	09:25-09:45	245
OP-C19	Md. Badrul Islam	BCSIR Rajshahi Laboratories, BCSIR	Novel molecular salt of terephthalic acid obtained from chemical recycling process of waste PET bottle	09:45-09:55	246
OP-C20	Shamima Akther Eti	BCSIR Dhaka Laboratories, BCSIR	Efficiency of scrap aluminum-derived polyaluminum chloride for the reduction of chemical oxygen demand of textile wastewater	09:55-10:05	246
OP-C21	Chapol Kumar Roy	BCSIR Dhaka Laboratories, BCSIR	Effect of sodium selenite on anaerobic digestion of food waste	10:05-10:15	247
OP-C22	S. M. Asaduzzaman Sujan	BCSIR Dhaka Laboratories, BCSIR	Recycling of chrome-tanned leather waste to prepare of polymer-based composites: An approach of waste minimization	10:15-10:25	247
OP-C23	Nourin Tarannum	Leather Research Institute (LRI), BCSIR	Isolation and optimization of alkaline protease producing bacteria from tannery waste for possible application on leather	10:25-10:35	248
OP-C24	Firoz Ahmed	BCSIR Rajshahi Laboratories, BCSIR	Prawn shell waste derived quaternary chitosan-based hybrid composite finished cotton fabrics- self-sanitizing and self-cleaning approach	10:35-10:45	248



Technical Session: TS-D4 (Waste Management)
Venue: Institute of National Analytical Research and Services (INARS) (Conference Room)
Chair: Professor Dr. Sirajul Hoque
Co-Chair: Dr. Md. Tushar Uddin
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-D4	A. N. M. Hamidul Kabir	Department of Applied Chemistry & Chemical Engineering, University of Dhaka	Navigating wastewater management challenges in Bangladesh's industrial sector: A path to sustainable solutions	09:00-09:25	249
IL-D4	Easir A Khan	Department of Chemical Engineering, BUET	Chemical safety and waste management in Bangladesh: Challenges and opportunities	09:25-09:45	249
OP-D19	Sharuk Alam Aumi	Department of Chemistry, University of Dhaka	Synthesis of waste toner derived and reduced graphene oxide based iron oxide nanocomposite for sensing of dopamine	09:45-09:55	250
OP-D20	Md. Nur Alom	Department of Chemistry, KUET	Electrochemical study of MXene-metal oxide composites for the degradation of PVC-based micro plastics	09:55-10:05	251
OP-D21	Foni Bushon Biswas	Department of Chemistry, CU	Rhodium recovery from acetic acid industrial effluent using bio-sorbent	10:05-10:15	251
OP-D22	A. K. M. Tajkir-Uz-Zaman	Department of Advanced Management, IBA, Kwansai Gakuin University, Japan	Assessment of solid waste management practices in rural Bangladesh: A case study of citizen participation	10:15-10:25	252
OP-D23	Md. Matiar Rahman	Department of Chemistry, University of Rajshahi	Synthesis of Ag-Polymethylmethacrylate-b-poly (2-dimethylamino) ethyl methacrylate (PMMA-b-PDMAEMA) Copolymers composites and study of its dye removal and antibacterial activities	10:25-10:35	252
OP-D24	Md Ashikul Islam	Department of Chemical Engineering, BUET	Synthesis and characteristics of bio-diesel from tannery solid waste	10:35-10:45	253

Technical Session: TS-E4 (Genomics)
Venue: BCSIR Dhaka Laboratories (Genomic Research Laboratory)
Chair: Professor Dr. Zeba Islam Seraj
Co-Chair: Professor Dr. S M Mahbubur Rashid
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-E4	M. Aftab Uddin	Department of Genetic Engineering and Biotechnology, University of Dhaka, Bangladesh	Genome mining: Unraveling the hidden treasures of genomic riches	09:00-09:25	254
IL-E4	Mustak Ibn Ayub	CGDRG, Department of Genetic Engineering and Biotechnology, University of Dhaka	Affordable molecular tests for the targeted therapy of cancers in Bangladesh	09:25-09:45	254



OP-E19	Mijbah Uddin	Department of Biochemistry and Molecular Biology, University of Chittagong	Organic extracts of <i>Causonis trifolia</i> attenuate isoproterenol-induced cardiotoxicity in Wistar albino rats by regulating biochemical indexes and linked genes	09:45-09:55	255
OP-E20	Fariha Ferdaus	Department of Biochemistry and Molecular Biology, University of Dhaka	Epigenomic analysis to identify biomarkers for unexplained intrauterine fetal death	09:55-10:05	255
OP-E21	Md. Siddiquil Islam	Department of Pharmacy, Southeast University, Dhaka	Effects of GSTP1 gene polymorphism on COVID-19 induced cardiovascular diseases in Bangladesh	10:05-10:15	256
OP-E22	Md. Amzad Hossain	Department of Biochemistry and Molecular Biology, University of Dhaka	Cloning and heterologous expression of homiocorcin gene cluster from <i>Staphylococcus hominis</i> MBL_AB63 into <i>Lactococcus lactis</i> NZ9000 to increase the production	10:15-10:25	256
OP-E23	Mithu Rani Tarafdar	Department of Microbiology, University of Dhaka	Molecular cloning, expression, and toxicity evaluation of a mosquitocidal toxin protein from indigenous <i>Bacillus thuringiensis</i> BD59S	10:25-10:35	257
OP-E24	Md. Siddiquil Islam	Department of Pharmacy, Southeast University	Effects of ALDH1A1 and NOQ1 gene on the response and toxicities of chemotherapy in Bangladeshi breast cancer patients	10:35-10:45	258

Technical Session: TS-F4 (Nutrition and Food Science)
Venue: Institute of Food Science and Technology (IFST) (Seminar Room)
Chair: Professor Dr. Md. Akhtaruzzaman
Co-Chair: Dr. Md. Abdus Satter Miah
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-F4	Nazma Shaheen	Institute of Nutrition and Food Science (INFS), University of Dhaka, Bangladesh	The trans-fatty acid content in commercially available soybean and palm oils and its probable intake in Bangladesh	09:00-09:25	259
IL-F4	Md. Abdul Muhit	Department of Clinical Pharmacy and Pharmacology, University of Dhaka, Bangladesh	Comparative phytochemical and biological analyses of commercial green tea products marketed in Dhaka, Bangladesh	09:25-09:45	259
OP-F19	Md Nurul Huda Bhuiyan	BCSIR Rajshahi Laboratories, BCSIR	Dietary exposure of phthalates and bisphenol A and cumulative risk on diabetic people	09:45-09:55	260
OP-F20	Abdullah Md. Sifat	Department of Pharmaceutical Sciences, NSU	Extract of <i>Syzygium cumini</i> seeds can prevent high-fat diet-induced hyperglycemia by controlling GLUT4-gene expression	09:55-10:05	260
OP-F21	Nadia Begum	Community Medicine & Public Health, University of Dhaka	Effect of Vitamin D supplementation on glucose homeostasis among Type 2 Diabetic patients: A randomized clinical trial	10:05-10:15	261
OP-F22	Md Shahjahan Kabir	Department of Food Processing and Preservation, HSTU	A comparison of the hydrothermal metabolic profile of free and insoluble-bound phenolics between parboiled and non-parboiled rice	10:15-10:25	261



OP-F23	Srabonti Saha	Department of Biochemistry and Molecular Biology, University of Chittagong	<i>Capsicum chinense</i> Jacq., an inevitable spicy food source, potentiates antidiabetic action through an array of biochemical and chemicobiological changes	10:25-10:35	262
OP-F24	Tasnim Farzana	Institute of Food Science and Technology (IFST), BCSIR	Impact of incorporating foxtail millet flour into bread formulation	10:35-10:45	263

Technical Session: TS-G4 (Environment, Governance, Pollution and Toxicology)
Venue: Central Analytical and Research Facilities (CARF) (Conference Room)
Chair: Professor Dr. S. M. Imamul Huq
Co-Chair: Dr. Mohammad Moniruzzaman
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-G4	M. Jamaluddin Ahmed	Feni University, Feni-3900, Bangladesh	The most dangerous pollutant on the planet-plastic pollution in Bangladesh: Causes effects & solutions	09:00-09:25	264
IL-G4	M Maksudur Rahman	Department of Geography and Environment, University of Dhaka	Geospatial modeling of blue-green infrastructure (BGI) network for a water-sensitive urban planning approach in Dhaka city: A case study of Bashundhara residential area	09:25-09:45	265
OP-G19	Ms. Nuzhat Tabassum	Department of Chemistry, JU	Kinetics and equilibrium of iron doped graphene oxide for photocatalytic oxidative degradation of dye in aqueous solution	09:45-09:55	265
OP-G20	Anila Anwar	Department of Chemistry, BUET	Facile development of functional porous carbon adsorbent from agricultural waste for removal of hazardous mb dye from water	09:55-10:05	266
OP-G21	Md. Sabbir Ahmed	Department of Chemistry, KUET	A pH sensitive dual cross-linked amphoteric IPN hydrogels based on jute stick derived cellulose for the removal of cationic and anionic dyes	10:05-10:15	266
OP-G22	Md. Sabbir Ahmed	Department of Chemistry, KUET	Sodium-carboxymethyl cellulose-based double networking anionic IPN hydrogels for the removal of methylene blue from wastewater	10:15-10:25	267
OP-G23	Tasrina Rabia Choudhury	Analytical Chemistry Laboratory, Chemistry Division, AEC, Dhaka	Revolutionizing water purification: synthesis and characterization of an innovative metal-phenolic nanocomposite sorbent for arsenic-free drinking water	10:25-10:35	267
OP-G24	Md. Sidratul Montaha Hossain	Department of Glass & Ceramic Engineering, RUET	Comparative analysis of environmental impacts caused by the natural fiber reinforced composites: A life cycle assessment (LCA) approach	10:35-10:45	268



Technical Session: TS-H4 (Machine Learning)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Seminar Room)
Chairs: Professor Dr. Md. Mustafizur Rahman
Professor Dr. Mosaddek Hossain Kamal
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-H4	Md. Shohrab Hossain	Department of Computer Science and Engineering, BUET	Machine learning and its security concerns	09:00-09:25	269
IL-H4	Rudra Pratap Deb Nath	Department of Computer Science and Engineering, CU, Bangladesh	Towards a sustainable data infrastructure for inter-sectors BD data to shape the Smart Bangladesh vision	09:25-09:45	269
OP-H19	Md. Anwarul Islam Bhuiyan	Dept. of Mathematics, University of Dhaka	Supervised machine learning algorithm for classifying interval valued inventory data	09:45-09:55	270
OP-H20	Md Awlad Hossain	NOAMI, Bangladesh	Building a hybrid WRF and deep learning based model lightning prediction over the hotspots of Bangladesh	09:55-10:05	270
OP-H21	Lutfun Nahar	Department of Biomedical Physics & Technology, University of Dhaka	A machine learning approach in estimating calorie burned through physical activities to reduce obesity	10:05-10:15	271
OP-H22	Mohammad Islam Miah	Department of PME, CUET	Model development for predicting the uniaxial compressive strength of rocks using machine learning	10:15-10:25	271
OP-H23	Jannatul Mauya	Department of Statistics, Pabna University of Science and Technology	A novel statistical approach for predicting missing risk factors of cardiovascular disease using machine learning	10:25-10:35	272
OP-H24	Sidratul Muntaha	Department of Mathematics, DU	Outlier detection based on autoencoder ensemble in neural network	10:35-10:45	272

Technical Session: TS-I4 (Ceramics, Building Materials, Mining and Mineralogy)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Conference Room)
Chair: Professor Dr. Badrul Imam
Co-Chair: Dr. Pradip Kumar Biswas
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-I4	Md. Zillur Rahman	Faculty of Earth and Environmental Sciences, University of Dhaka	Minerals and Mines in Bangladesh	09:00-09:25	273
IL-I4	Ismail Hossain	Department of Geology and Mining, University of Rajshahi, Bangladesh	Petrochemistry of gravelly metamorphic rocks in Panchagarh district, Bangladesh: Implications for petrogenesis and the tectonic setting	09:25-09:45	273
OP-I19	Sagirul Islam	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Development of lightweight structural concrete with artificial coarse aggregate manufactured from solid waste	09:45-09:55	274
OP-I20	Juliya Khanam	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Effect of low temperature calcination on micro structure, size and morphology of hematite nanoparticles synthesized from waste iron source	09:55-10:05	274



OP-I21	Md. Farid Ahmed	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Effect of calcination temperature on the structural, magnetic, dielectric and optical properties of nano cobalt ferrite synthesized by sol-gel method	10:05-10:15	275
OP-I22	Bristy Biswas	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Role of sintering temperature on the structural, morphological and optical properties of cobalt aluminate nano particles	10:15-10:25	276
OP-I23	Mashrafi Bin Mobarak	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Calcined chicken eggshell derived biomimetic nano-hydroxyapatite as a local drug delivery aid for doxycycline hyclate: Characterization, bio-activity, cytotoxicity, antibacterial activity and <i>in vitro</i> release study	10:25-10:35	276
OP-I24	Gorungo Ray	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Synthesis and characterization of zeolite from rice husk ash (RHA) and their catalytic activity	10:35-10:45	277

Technical Session: TS-J4 (Energy and Storage Technology)
Venue: Institute of Energy Research and Development (IERD) (Auditorium)
Chair: Professor Dr. Md. Kamrul Hasan
Co-Chair: Dr. Syed Farid Uddin Farhad
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-J4	Ruhul Amin	Electrification & Energy Infrastructure Division, Oak Ridge National Laboratory, Oak Ridge Tennessee, USA	Energy storage systems: Basic understanding and Bangladesh prospectives	09:00-09:25	278
IL-J4	Md. Mahbubur Rahman	Department of Applied Chemistry, Konkuk University, Chungju, South Korea	Innovation at the nanoscale: Opportunities and challenges in dielectric supercapacitors	09:25-09:45	278
OP-J19	Md Anwar Hossain	Institute of Energy Research and Development (IERD), BCSIR	Synthesis of ionic liquids containing ether-functionalized anion as electrolytes for Li ion batteries	09:45-09:55	279
OP-J20	A. J. Saleh Ahammad	Department of Chemistry, JnU	Fabrication of electrode materials for sustainable energy applications	09:55-10:05	279
OP-J21	Abu Kowsar	Institute of Energy Research and Development (IERD), BCSIR	Unveiling the effective satellite-based solar irradiance database for power plant designing in Bangladesh context	10:05-10:15	280
OP-J22	Taposhi Rabeya	Department of Applied Chemistry and Chemical Engineering, DU	Hydrothermal pretreatment of corn stalk for bioethanol production	10:15-10:25	280
OP-J23	Mosharof Hossain	Institute of Energy Research and Development (IERD), BCSIR	Unveiling the electrical properties of biomass derived activated carbon	10:25-10:35	281



OP-J24	Ariful Islam Shishir	Chemical Engineering and Polymer Science, SUST	Green power from earth's palette: Investigation on the characteristics of natural sensitizers for dye-sensitized solar cell	10:35-10:45	281
Technical Session: TS-K4 (Drug Discovery and Development) Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-202) Chair: Professor Dr. Md. Habibul Bahar Co-Chair: Dr. A S M Monjur Al Hossain Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45					
SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-K4	Meser Ali	Department of Neurosurgery, Henry Ford Hospital, Detroit, USA	Nanoparticle-based drug delivery to brain tumor	09:00-09:25	282
IL-K4	Uttom Kumar	Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Dhaka	Quality by design (QbD) based development of a sustained-release oral tablet of tyrosine kinase inhibitor imatinib together with validated stability indicating RP-UHPLC assay and equivalent UV methods, and stress degradation studies of the drug	09:25-09:45	282
OP-K19	Md Mahedi Hassan Tusher	Department of Pharmacology, Bangladesh University of Health Sciences (BUHS)	Elucidation of the antioxidant and antidiabetic activities of <i>Rhus</i> <i>chinensis</i> and <i>Cinnamomum tamala</i> on GLUT4 gene expression in nSTZ- induced diabetic rats	09:45-09:55	283
OP-K20	Md. Rezaul Haque Ansary	Department of Chemistry, University of Rajshahi, Bangladesh	Synthesis, characterization and protein binding studies of Ni (II) complexes bearing alkyl substituted (4-benzyloxy) benzoyl hydrazine derived ligands	09:55-10:05	283
OP-K21	Md. Abdur Rahman	Department of Pharmacy, Noakhali Science and Technology University	Evaluation of cardioprotective effect of <i>Allium sativum</i> (garlic) through self micro-emulsifying drug delivery system in sodium fluoride treated mice	10:05-10:15	284
OP-K22	Shamima Akther	Department of Chemistry, University of Dhaka, Dhaka, Bangladesh	Synthesis, characterization, antimicrobial, antioxidant, cytotoxicity and analgesic activities of alkaline earth metal complexes with tolfenamic acid	10:15-10:25	284
OP-K23	Rajib Das	Department of Pharmacy, University of Dhaka, Dhaka, Bangladesh	Evaluation of <i>in vitro</i> antioxidant, cytotoxic, thrombolytic, antibacterial and <i>in vivo</i> analgesic properties of methanol extract of <i>Dracaena spicata</i> and <i>Hemionitis belangeri</i>	10:25-10:35	285
OP-K24	Sayema Khanum	Department of Pharmacy, Jagannath University, Dhaka, Bangladesh	Polyphenolic profiling through HPLC- DAD and antioxidant activities of different extracts of <i>Dalbergia</i> <i>candenatensis</i> leaves	10:35-10:45	286



Technical Session: TS-L4 (Pharmaceutical Technology and Engineering)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-202)
Chair: Professor Dr. Md. Selim Reza
Co-Chair: Mr. Satyajit Roy Rony
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-L4	Md Ashad Alam	Ochsner Center for Outcomes Research, Ochsner Clinic Foundation, New Orleans, LA, USA	Generating integrated multi-omics data to prediction of Alzheimer's disease pathology: A deep learning approach	09:00-09:25	287
IL-L4	Md. Hossain Sohrab	BCSIR Dhaka Laboratories, BCSIR	Search for bioactive metabolites from medicinal plants of Bangladesh and their associated endophytic fungi	09:25-09:45	287
OP-L19	Md. Rafiqul Islam	Department of Biochemistry and Molecular Biology, Jagannath University, Dhaka, Bangladesh	Annexin A2-S100A10 represents the regulatory component of the ATP-releasing Maxi-Cl channel dependent on protein tyrosine dephosphorylation and intracellular Ca ²⁺	09:45-09:55	288
OP-L20	Md. Hasan Turabee	Forest Chemistry Division, Bangladesh Forest Research Institute, Sholashahar, Chattogram, Bangladesh	Stimuli responsive injectable polypeptide hydrogels efficiently improve the stability and pharmacokinetics of proteins <i>in vivo</i>	09:55-10:05	289
OP-L21	Md. Jahid Hossain	Department of Pharmaceutical Technology, University of Dhaka, Dhaka, Bangladesh	Development of tofacitinib sustained release dosage form and RP-UHPLC method through QbD approach and water-based UV method for analyzing tofacitinib	10:05-10:15	289
OP-L22	Mohammad Salim Hossain	Department of Pharmacy, Noakhali Science and Technology University	XXL is the size of problems: DPP-4 inhibitors stimulate the browning of white adipose tissue to fight the complications	10:15-10:25	290
OP-L23	Madhabi Lata Shuma	Department of Pharmacy, Independent University, Bangladesh (IUB)	Development and characterization of albendazole-loaded mucoadhesive nanoparticles for improved biopharmaceutical and strategic intestinal delivery	10:25-10:35	290
OP-L24	Al Amin	Department of Pharmacy, University of Dhaka, Bangladesh	Optimization of crosslinking of sodium carboxy methyl cellulose to synthesize croscarmellose sodium, a super disintegrating agent	10:35-10:45	291

Technical Session: TS-M4 (Nanotechnology)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (B-302)
Chair: Dr. Dipali Rani Gupta
Co-Chair: Dr. Mohammad Jakir Hossain
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-M4	Jamal Uddin	Center for Nanotechnology, Department of Natural Sciences, Coppin State University Baltimore, USA	Indocyanine green (ICG) fluorescence is dependent on monomer with planar and twisted structures	09:00-09:25	292



IL-M4	M Nuruzzaman Khan	Department of Applied Chemistry and Chemical Engineering, University of Dhaka, Bangladesh	Electrospinning of biopolymer for biomedical applications and water purification	09:25-09:45	293
OP-M19	Md. Hafiz Al Asad	Department of Chemistry, Jagannath University, Dhaka	Comparison of the synthesis of cupric oxide nanoparticles by <i>Spondias mombin</i> peel extract in saline buffer versus basic water and evaluation of its peroxidase activity	09:45-09:55	293
OP-M20	Rutaba Jania	Department of Physics, University of Dhaka	A quest to analyze the dispersibility of TMDs	09:55-10:05	294
OP-M21	Md. Rabiul Islam	Atomic Energy Research Establishment, Bangladesh Atomic Energy Commission, Dhaka	Effect of gamma (γ) irradiation on opto-structural and morphological properties of CuO nanoparticles green synthesized using <i>Mussaenda frondosa</i> leaves	10:05-10:15	294
OP-M22	Nishat Tasnim	Department of Electrical and Electronic Engineering, University of Dhaka	Colorimetric detection of cadmium ions as water pollutants using silver nanoparticles synthesized from <i>Azadirachta indica</i> extract	10:15-10:25	295
OP-M23	Aparna Paul	Department of Physics, University of Dhaka	Controlled crystal phase and morphology: Improving the magnetic, electrical, optical, and photocatalytic activities of Cr-doped tin disulfide nanoparticles synthesized via the hydrothermal method	10:25-10:35	295
OP-M24	M. A. G. Osman	Department of Physics, University of Dhaka	Iron-doped tin disulfide synthesis via hydrothermal method: Multifaceted investigation of optical, morphological, and structural properties	10:35-10:45	296

Technical Session: TS-N4 (Climate Change, Adaptation and Mitigation)
Venue: Institute of Bioequivalence Studies and Pharmaceutical Sciences (L-303)
Chair: Emeritus Professor Dr. Ainun Nishat
Co-Chair: Professor Dr. Md. Monirul Islam
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-N4	A. K. M. Saiful Islam	Institute of Water and Flood management, BUET	Changes in extreme climate events in Bangladesh under changing climate	09:00-09:25	297
IL-N4	Goutam Kumar Kundu	Department of Fisheries, University of Dhaka, Bangladesh	Food web structure in a warm current influenced continental shelf of the southern sea of Korea: Implications for climate change impacts on marine ecosystems	09:25-09:45	297
OP-N19	Muhammad Manjurul Karim	Department of Microbiology, DU	Potentiality of using salt-tolerant plant-growth-promoting rhizobacteria as biofertilizer for climate-smart agriculture in the coastal areas	09:45-09:55	298
OP-N20	Nousheen Parvin	Department of Zoology, DU	Effects of high temperature stress on aphid growth and reproduction: Responses of clones with diverse genetic backgrounds and aphid symbionts to heat stress	09:55-10:05	298



OP-N21	Mohammad Motahar Hossain	Institute of Marine Science, CU	Mapping the total organic carbon of coastal wetlands (mangroves & salt marshes) and their sediments in the northern Bay of Bengal, Bangladesh	10:05-10:15	299
OP-N22	Sanjida Hossain Setu	Department of Emergency Management, PSTU	Exploring disaster vegetation damage index of agricultural lands due to cyclone sitrang in the coastal region of Bangladesh delta using satellite remote sensing	10:15-10:25	299
OP-N23	Kazi Faiz Alam	Bangladesh Petroleum Exploration and Production Company Limited, Petrobangla, Dhaka	Climate-adaptive prospective crops selection in vulnerable agricultural lands adjacent to the Jamuna River basin of Bangladesh using remote sensing and a fuzzy expert system	10:25-10:35	300
OP-N24	Shajuyan Ahmed	Applied Chemistry and Chemical Engineering, RU	Alkaline metals incorporated biochar as a promising adsorbent in CO ₂ capturing at ambient condition	10:35-10:45	301

Technical Session: TS-O4 (Material Science and Metallurgy)
Venue: Pilot Plant and Process Development Centre (PP & PDC) (Seminar Room)
Chair: Professor Dr. Shariff Enamul Kabir
Co-Chair: Dr. Aninda Nafis Ahmed
Day 3: 10 March 2024 (Sunday), Time: 09:00-10:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-O4	Abu Bakar Md. Ismail	Department of Electrical and Electronic Engineering, RU	Tailoring inexpensive metal oxides for affordable photoelectrochemical solar energy utilization	09:00-09:25	301
IL-O4	Samia Tabassum	Institute of Energy Research and Development (IERD), BCSIR	TiO ₂ -based nanomaterials for energy and environment applications	09:25-09:45	302
OP-O19	Parvaj Rana	Department of Electrical & Electronic Engineering, RU	Unraveling the temperature-dependent changes in various properties of electrodeposited PbO _x on copper with acetate-electrolyte	09:45-09:55	302
OP-O20	Md. Saddam Sheikh	Department of Physics, BUET	Investigations of the optical properties in the plasma polymerized methacrylate-vinyl acetate composite thin films	09:55-10:05	303
OP-O21	Md Sakib Ahmed	Department of Electrical & Electronic Engineering, RU	Acetate electrolyte-mediated electrodeposition for nanostructuring ZnO and CuO on FTO substrate	10:05-10:15	303
OP-O22	S.M. Zahurul Islam	Department of Architecture, RUET	Exploring CFRP and adhesive material use for retrofitting and strengthening of civil construction for sustainable development	10:15-10:25	304
OP-O23	Farzana Yasmin	Department of Physics, BUET	Synergistic integration of zinc selenide and plasma polymerized ortho-methoxyaniline hybrid thin films	10:25-10:35	304
OP-O24	Ahamed Abdul Aziz	Department of Chemistry, University of Chittagong	Study of intermolecular interactions in binary mixtures of benzyl alcohol with 2-aliphatic ketones at various temperatures	10:35-10:45	305



Technical Session: TS-A5 (Agriculture)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-611)
Chair: Professor Dr. K. B. M. Saiful Islam
Co-Chair: Dr. Tanjina Akhtar Banu
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-A5	Imanun Nabi Khan	ACCESS, Food and Agriculture Organization (FAO) of the UN, Bangladesh	Pursuing agricultural transformation: Smart agriculture for Smart Bangladesh	11:00-11:25	306
IL-A5	Md. Morshedur Rahman	Department of Dairy and Poultry Science, BSMRAU, Gazipur, Bangladesh	Mobile milk testing laboratory: A Smart way to ensure dairy food safety	11:25-11:45	306
OP-A25	Most. Ferdousi Begum	Department of Botany, University of Rajshahi	Detection of pathogenic bacteria from RTE food and their control through natural preservatives	11:45-11:55	307
OP-A26	Md. Imran Hossain	Department of Animal Nutrition, Genetics and Breeding, Sher-e-Bangla Agricultural University	Effects of probiotics (<i>Bacillus subtilis</i> and <i>Bacillus licheniformis</i>) on the performance and antimicrobial activity of broiler chicken	11:55-12:05	307
OP-A27	Omar Hamza Bin Manjur	Institute of Technology Transfer and Innovation (ITTI), BCSIR	Occurrences of diazinon, dichlorvos, malathion, profenofos residues in dry fish collected from major Bangladeshi outlets to depict the pesticide adulteration scenario in modified QuEChERS-based LC-MS/MS method	12:05-12:15	308
OP-A28	Md Shamsudduha	Department of Zoology, University of Dhaka	Molecular identification and phylogenetic analysis of a mole cricket of the genus <i>Gryllotalpa</i> using mitochondrial 16S rRNA and CO1 gene sequence from Bangladesh	12:15-12:25	308
OP-A29	Fabiha Rahman	Department of Microbiology, Faculty of Life and Earth Science, JnU	Genomic characterization of plant growth-promoting rhizobacteria (PGPR) in paddy associated metal tolerance	12:25-12:35	309
OP-A30	Md. Azmain Faike	Department of Chemistry, Jahangirnagar University	Comparative <i>in vitro</i> analysis of phytochemical, antioxidant and antibacterial activity of methanolic extracts of different Bangladeshi cultivars of <i>Capsicum frutescens</i> and <i>Capsicum chinense</i>	12:35-12:45	309

Technical Session: TS-B5 (Microbiology and Virology)
Venue: Institute of Technology Transfer and Innovation (ITTI, Room No-612)
Chair: Professor Dr. Md. Majibur Rahman
Co-Chair: Dr. Sunjukta Ahsan
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-B5	Munirul Alam	Infectious Diseases Division, icddr,b, Dhaka	Next-generation research to prevent cholera, bacteriophage and antibacterial herbal alternatives to fight widespread resistance, gut and vaginal microbiota to avert death, malnutrition, and pre-term birth	11:00-11:25	310



IL-B5	Mohammad Shafiul Alam	Infectious Diseases Division, icddr,b, Mahakhali, Dhaka	Dengue: Time for action effective vaccines and innovative strategies for a disease-free future	11:25-11:45	311
OP-B25	Nazifa Zabeen	Department of Genetic Engineering and Biotechnology, SUST	An open-channeled microfluidic approach for cheaper, quicker and colorimetric antimicrobial sensitivity testing with polypharmacy	11:45-11:55	311
OP-B26	K M Salim Andalib	Biotechnology and Genetic Engineering Discipline, KU	Human gut bacteria - The next generation therapeutics	11:55-12:05	312
OP-B27	Jayoti Mandal	Department of Biochemistry and Molecular Biology, University of Dhaka	<i>Bacillus subtilis</i> MBL_J17: A potential candidate for antimicrobial peptide and lignocellulolytic enzyme isolated from jute-retting water	12:05-12:15	312
OP-B28	Tasfia Imam Oishi	Biotechnology and Genetic Engineering Discipline, Khulna University	Strain improvement of <i>Aspergillus</i> spp. for increased glucoamylase production	12:15-12:25	313
OP-B29	Mohammad Nazrul Islam Bhuiyan	Institute of Food Science and Technology (IFST), BCSIR	Marine bacteria as a source of potential pigment	12:25-12:35	314
OP-B30	Md Hasibul Hassan	Department of Microbiology, University of Dhaka	Isolation and characterization of lytic bacteriophage of pathogenic <i>Salmonella typhi</i> and evaluation of its potential therapeutic application	12:35-12:45	314

Technical Session: TS-C5 (Waste Management)
Venue: BCSIR Dhaka Laboratories (Conference Room)
Chair: Professor Dr. A. N. M. Hamidul Kabir
Co-Chair: Dr. Chapol Kumar Roy
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-C5	S. M. Shamsul Huda	Institute of Forestry and Environmental Sciences, CU, Bangladesh	How can we move towards a plastic free planet?	11:00-11:25	315
IL-C5	Md Khairul Islam	Bangladesh Council of Scientific and Industrial Research (BCSIR)	From trash to treasure: Unlocking value in global E-Waste through pyrometallurgical innovations	11:25-11:45	315
OP-C25	Md. Saiful Quddus	Institute of Glass and Ceramic Research and Testing (IGCRT), BCSIR	Conversion of Barapukuria thermal power plant coal fly ash into high quality microcrystalline hydroxy sodalite zeolite	11:45-11:55	316
OP-C26	Fariha Chowdhury	Biomedical and Toxicological research Institute (BTRI), BCSIR	Green synthesis of copper oxide nanoparticles utilizing waste fish scale and their antibacterial activity	11:55-12:05	317
OP-C27	Nahid Jahan	PP&PDC, BCSIR	Extraction and characterization of okra (Ladys Finger/ Dharosh) fiber for the use as reinforcement of composite material	12:05-12:15	317
OP-C28	Md Sabbir Hosen	Department of Leather Engineering, KUET	Fabrication and performance analysis of novel composite material from tannery solid waste and sugarcane fibre: An approach for toxic dye removal	12:15-12:25	318
OP-C29	Sarna Khanam	Department of Applied Chemistry and Chemical Engineering, BSMRSTU, Gopalganj	Design and performance of multilayer packed column: Lead removal from waste water	12:25-12:35	319



OP-C30	Lokman Hosen	Department of Chemistry, BUET, Dhaka	Development of cost-effective PVC based adsorbent from waste products for the removal of toxic dyes from wastewater (Conversion of waste into wealth)	12:35-12:45	319
Technical Session: TS-D5 (Clean Water and Sanitation) Venue: Institute of National Analytical Research and Services (INARS) (Conference Room) Chair: Professor Dr. Sujit Kumar Bala Co-Chair: Dr. M Safiur Rahman Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45					
SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-D5	Tarekul Islam	IWFM, BUET, Dhaka	Riverbank erosion management in Bangladesh	11:00-11:25	321
IL-D5	Abu Asaduzzaman	Pennsylvania State University, Harrisburg, Middletown, PA 17036, USA	Origin of water in the earth and inner solar system objects	11:25-11:45	321
OP-D25	Md. Saidul Islam	Institute of Energy Research and Development (IERD), BCSIR	Development of an active device to produce drinking water from the air based on metal-organic framework (MOF)	11:45-11:55	322
OP-D26	Sobur Ahmed	Institute of Leather Engineering and Technology, University of Dhaka	Acrylic acid-grafted sawdust through gamma irradiation (SD-g-AAc): synthesis, characterization, and application in removing chromium from aqueous solution	11:55-12:05	322
OP-D27	Chironjit Kumar Shaha	Department of Chemistry, Jahangirnagar University	Sulfonated graphene oxide: A study on its synthesis, characterization, and application in adsorptive moxifloxacin removal from aqueous solution	12:05-12:15	323
OP-D28	Mohy Menul Islam	Department of Chemistry, University of Dhaka	Development of efficient capacitive deionization electrode using leather-derived porous N,S codoped carbon and polyaniline nanocomposite	12:15-12:25	323
OP-D29	Md Sohag Hossain	Institute of National Analytical Research and Services (INARS), BCSIR	Fast and efficient adsorptive removal of tetracyclines from aqueous media using waste-product-derived graphene oxide/Co-Fe magnetic nanocomposite	12:25-12:35	324
OP-D30	Shabnur Chowdhury	Department of Environmental Science, State University of Bangladesh	Removal of methylene blue dye from aqueous solution by teak (<i>Tectona grandis</i>) wood sawdust: Kinetic, isotherm and thermodynamic studies	12:35-12:45	325



Technical Session: TS-E5 (Biotechnology)
Venue: BCSIR Dhaka Laboratories (Genomic Research Laboratory)
Chair: Professor Dr. Sharif Akhteruzzaman
Co-Chair: Dr. Murshed Hasan Sarkar
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-E5	Zeba I. Seraj	Department of Biochemistry and Molecular Biology, University of Dhaka	Gene editing for rapid production of salt tolerant and high yielding rice	11:00-11:25	326
IL-E5	A.H.M. Nurun Nabi	Department of Biochemistry and Molecular Biology, University of Dhaka, Bangladesh	Investigating the gene polymorphisms in candidate loci in Bangladeshi population with prediabetes and Type 2 Diabetes	11:25-11:45	326
OP-E25	Asif Rahman	Department of Fisheries, University of Dhaka	Effects of probiotics and antibiotics on innate immune response in black tiger shrimp <i>Penaeus monodon</i>	11:45-11:55	327
OP-E26	Amit Chowdhury	Department of Biochemistry and Molecular Biology, University of Dhaka	A sustainable solution to improve rice growth and yield under salinity stress using a salt-tolerant endophytic fungus-based biofertilizer	11:55-12:05	327
OP-E27	Md Abdul Berek	Department of Pharmacy, NSTU	Assessment of the association of CYP1A1 gene polymorphisms with the susceptibility of cervical cancer: A case-control study and meta-analysis	12:05-12:15	328
OP-E28	Govinda Rao Dabburu	Department of Biophysics, University of Delhi South Campus, New Delhi	Designing dual inhibitors against potential drug targets of Plasmodium falciparum -M17 Leucyl Aminopeptidase and Plasmepsins	12:15-12:25	329
OP-E29	Aakriti Jain	Department of Biophysics, University of Delhi South Campus, New Delhi	Enhancing data carpentry for fungal drug resistance with fundamental machine learning	12:25-12:35	329
OP-E30	Luthfa Akter Bushra	Department of Mathematics and Natural Sciences, BRAC University, Dhaka, Bangladesh	Association between PEMT, CHKA, MTHFR, F2, IL1RN, and NOS3 polymorphisms and unexplained intrauterine fetal death in the Bangladesh population	12:35-12:45	330

Technical Session: TS-F5 (Nutrition and Food Science)
Venue: Institute of Food Science and Technology (IFST), (Seminar Room)
Chair: Professor Dr. Nazma Shaheen
Co-Chair: Mr. Abu Tareq Mohammad Abdullah
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-F5	Abu Torab M A Rahim	Institute of Nutrition and Food science, University of Dhaka, Bangladesh	Chrononutrition behaviour of children during schooltime and its effect on weight gain	11:00-11:25	331
IL-F5	Maruf Ahmed	Department of Food Processing and Preservation, HSTU	Chemical substitute to hydrose ($\text{Na}_2\text{S}_2\text{O}_4$) on the quality and stability of ash gourd murabba	11:25-11:45	331
OP-F25	Md. Alamgir Kabir	Institute of Food Science and Technology (IFST), BCSIR	Trans fatty acid content in eight marine fish samples collected from Bay of Bengal	11:45-11:55	332



OP-F26	Md. Taslim Ahmad	Department of Fisheries, DU	Insights into the nutritional composition of the alien suckermouth catfish (<i>pterygoplichthys pardalis</i>) in the Buriganga river, Bangladesh	11:55-12:05	332
OP-F27	Nahid Sultana	BCSIR Dhaka Laboratories, BCSIR	Comparative nutritional analysis of some popular raw and canned marine fishes	12:05-12:15	333
OP-F28	Md. Abdur Rahim Miah	Department of Applied Chemistry and Chemical Engineering, Islamic University, Kushtia	Extraction and characterization study of high-quality extra virgin edible oil from mustard seeds, sunflower seeds, and peanut seeds: A new route	12:15-12:25	333
OP-F29	Md. Tariqul Islam	Department of Fisheries, RU	Shelf-life of ready-to-cook (RTC) fish sausages under modified atmosphere packaging at refrigerated storage condition	12:25-12:35	334
OP-F30	Umma Fatema Shahjadee	Institute of Food Science and Technology (IFST), BCSIR	Biochemical changes of immature and mature green pea (<i>Pisum sativum</i> L.) seeds during different germination period	12:35-12:45	334

Technical Session: TS-G5 (Environment, Governance, Pollution and Toxicology)

Venue: Central Analytical and Research Facilities (CARF) (Conference Room)

Chair: Professor Dr. Md. Harunor Rashid Khan

Co-Chair: Dr. Mohammad Enayet Hossain

Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-G5	Md Firoz Khan	Department of Environmental Science and Management, NSU, Dhaka, Bangladesh	Seasonal air quality and its association to health burden in Dhaka	11:00-11:25	335
IL-G5	Md. Faruk Hossain	Department of Geography & Environment, University of Dhaka, Bangladesh	Climate change governance in Bangladesh - Perspective of governmental and non-governmental organizations	11:25-11:45	336
OP-G25	Shajuyan Ahmed	Department of Applied Chemistry, RU	Adsorption isotherm and kinetics studies on adsorption of malachite green onto activated charcoal from aqueous solution	11:45-11:55	336
OP-G26	Md. Tariqul Islam	Applied Chemistry and Chemical Engineering, Islamic University, Kustia	Evaluation of hazard contamination in the dry street snacks in the Dhaka city corporation of Bangladesh	11:55-12:05	337
OP-G27	Md. Abdul Mottalib Sarkar	Air Particulate Research Laboratory, Atomic Energy Centre Dhaka, BAEC	Study on the change of PM _{2.5} and black carbon with the variance of climate in Dhaka	12:05-12:15	337
OP-G28	Md. Shoffikul Islam	Soil Science, CU	Mitigation of inorganic and organic pollutants in the soil-water-plant systems	12:15-12:25	338
OP-G29	Md. Rubel Al-Mamun	Department of Chemistry, KUET	Preparation, characterization and dye removal efficiency of hydrogel prepared from de-oiled rice bran cellulose derivative	12:25-12:35	338
OP-G30	Samiha Nahian	Department of Chemistry, University of Dhaka	Wintertime indoor PM _{2.5} exposure, source contribution and related health risks during haze and non-haze episodes in Dhaka, Bangladesh: A comparative study	12:35-12:45	339



Technical Session: TS-H5 (Environment, Governance and Pollution)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Seminar Room)
Chair: Professor Dr. Abdus Salam
Co-Chair: Mr. Md. Hemayet Hossain
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-H5	S. M. Imamul Huq	Soil, Water and Environment, University of Dhaka	Sustainable environment and Smart Bangladesh	11:00-11:25	340
IL-H5	Md. Ahedul Akbor	INARS, BCSIR	Importance of ISO/IEC 17025:2017 accreditation to become a Smart Bangladesh	11:25-11:45	340
OP-H25	Md. Kawcher Alam	Department of Applied Chemistry and Chemistry Engineering, NSTU	Green synthesis and crystallographic characterization of nano-MgO for photocatalytic degradation of Congo Red dye	11:45-11:55	341
OP-H26	Riva Akter	Department of Chemistry, JnU	Fabrication of metal coordinated nano-composite hydrogel as highly efficient adsorbent for remediation of methyl orange dye	11:55-12:05	341
OP-H27	Riaz Rahman	Department of Chemistry, JnU	Ecofriendly biohybrid hydrogels for effective encapsulation of toxic pollutants from water	12:05-12:15	342
OP-H28	Enayet Hossain	Department of Chemistry, University of Dhaka	Nano-TiO ₂ /cellulose composites for removal of methylene blue from aqueous solution	12:15-12:25	342
OP-H29	Istiaque Ahamed Nabed	Department of Disaster Science and Climate Resilience, University of Dhaka	Remote sensing and machine learning fusion for comprehensive air pollution monitoring in Bangladesh	12:25-12:35	343
OP-H30	Shatabdi Roy	Department of Chemistry, University of Dhaka	Spatial and temporal variations of PM _{2.5} concentrations across Dhaka using TSI BlueSky TM Sensors	12:35-12:45	343

Technical Session: TS-I5 (Mining and Mineralogy)
Venue: Institute of Glass and Ceramic Research and Testing (IGCRT) (Conference Room)
Chair: Professor Dr. Syed Humayun Akhter
Co-Chair: Dr. Md. Aminur Rahman
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

SL	Presenting Author	Affiliation	Title of Abstract	Time	Page
KN-I5	M. Mangir Murshed	University of Bremen, Institute of Inorganic Chemistry and Crystallography, Bremen, Germany	Ice to burn in the Bay of Bengal: Crystal chemistry of gas hydrates	11:00-11:25	344
IL-I5	Md. Anwar Hossain Bhuiyan	Department of Geology, University of Dhaka, Bangladesh	High resistivity anomaly in offshore and coastal region of Bangladesh detected by electromagnetic method	11:25-11:45	344
OP-I25	Pradip Kumar Biswas	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Potentialities of the valuable heavy minerals in the river sediments of Bangladesh	11:45-11:55	345
OP-I26	Md. Shohel Rana	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Feasibility studies on river sands for foundry applications in Bangladesh	11:55-12:05	345



OP-I27	Md. Aminur Rahman	Institute of Mining, Mineralogy and Metallurgy (IMMM), BCSIR	Recovery and process development of Monazite from Brahmaputra river sand, Bangladesh	12:05-12:15	346
OP-I28	Mohammad Islam Miah	Department of Petroleum and Mining Engineering, CUET	Experimental investigation on filtration properties of water-based drilling fluid with natural aloe vera additive	12:15-12:25	346
OP-I29	Abu Sadat Md. Sayem	Department of Geological Sciences, JU	Late cenozoic clay mineral record and climate change at the Sylhet trough, Bengal basin, Bangladesh	12:25-12:35	347
OP-I30	Md. Masud Karim	Beach Sand Minerals Exploitation Centre, Bangladesh Atomic Energy Commission	Management of NORM in mineral sand processing: conversion of waste to resource approach at BSMEC, Cox's Bazar	12:35-12:45	347

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Chair: Professor Dr. Abu Bakar Md. Ismail
Co-Chair: Professor Dr. Mohammad Junaebur Rashid
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

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OP-J26	M. Julkarnain	Department of Electrical and Electronic Engineering, RU	Enhancement in efficiency of solar cells by using intermediate band layer: A numerical approach	11:55-12:05	350
OP-J27	Shahran Ahmed	Institute of Energy Research and Development (IERD), BCSIR	Seasonal dynamics of dust impact on solar PV cell performance: A case study in Dhaka, Bangladesh	12:05-12:15	350
OP-J28	Md. Nur Amin Bitu	BCSIR Dhaka Laboratories, BCSIR	Zinc sulfide decorated vertically aligned ZnO nanorods for lead-free perovskite solar cells	12:15-12:25	351
OP-J29	Jasim Uddin	Institute of Energy Research and Development (IERD), BCSIR	Influence of nickel doping on Mn ₃ O ₄ nanoparticles for the application on solar cells and dye degradation	12:25-12:35	351
OP-J30	Md. Al-Amin	BCSIR Rajshahi Laboratories, Rajshahi	Electrochemical synthesis of PbO ₂ film on Cu substrate for light weight lead-acid battery positive electrode application	12:35-12:45	352



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Chair: Professor Dr. Md. Alauddin
Co-Chair: Professor Dr. Md. Abdul Muhit
Day 3: 10 March 2024 (Sunday), Time: 11:00-12:45

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OP-K26	Md. Wahidul Islam	Department of Chemistry, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj	Exploration of pyrimidine derivatives: Synthesis and spectroscopic analysis	11:55-12:05	355
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Co-Chair: Dr. Mustak Ibn Ayub
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OP-L26	Moslem Hossain	Department of Geography, Central University of Karnataka, India	Exploring the impact of women's healthcare autonomy on maternal health services: A comparative study of migrant and non-migrant communities	11:55-12:05	359
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Co-Chair: Professor Dr. A. J. Saleh Ahammad
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