

18th IBCAST 2021: Advanced Materials

Technical Program

ADVANCED MATERIALS

Day 1: January 12, 2021

10:00 – 11:30 Invited Talks Advanced Materials-I	Time 10:00-1110	Effects Of Fabric Architecture On Mechanical Properties Of Natural Fibre (Jute, Hemp And Flax) Reinforced Polypropylene Composites	Dr. Mohd Shukur Bin Zainol Abidin , Universiti Sains Malaysia
	11:10-11:30	21AM261: Analyzing the cementite particle size and distribution in heterogeneous microstructure of C45EC steel using crystal plasticity based DAMASK code	Muhammad Umar , Khwaja Fareed University of Engineering and Information Technology, Rahim Yar Khan.
11:30 – 11:50	T E A Break		
11:50 – 13:00 Advanced Materials-II	11:50-12:10	21AM52: The Effect of Physical Properties on Welding Induced Distortion in Dissimilar Steel Lap Joint	Hasan Aftab Saeed , NUST Islamabad
	12:10-12:30	21AM38: Numerical study of the effect of different fillers on the mechanical, electrical and thermal properties of Silicone rubber polymer composite	Maaz Khan , NUST Islamabad
	12:30-12:50	21AM253 : Computational analysis of high carbon steel for optimal design	Aneela Wakeel , UET Taxila
13:00 – 14:00	LUNCH		
14:00 – 15:00	1400-1500	Damage Investigation of Woven Carbon-Epoxy Multi-Layer Composites Under Tensile Loading	Prof. Dr. Mehmat karahan , University of Busra Uludag Turkey
15:00 – 16:00 Advanced Materials-III	1500-1520	21AM604: Candle soot based carbon counter electrode for cost-effective dye sensitized solar cells	Ramshah Toor , Comsats Wah
	1520-1540	21AM664: Development of TPU/CNPs flexible composite strain sensors using Additive Manufacturing (AM) for Structural Health Monitoring (SHM) of aerospace components	Sheraz Ahmad , IST Islamabad
	1540-1600	21AM89: Theoretical Analysis of Mechanical Behavior of Unidirectional Glass Fiber/Epoxy and Carbon Fiber/Epoxy Resin Composites	Hamza Rafique , NUST Islamabad

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Day 2: January 13, 2021

10:00 – 11:30 Invited Talks Advanced Materials-I	Time 10:00-11:10	Highly efficient heterojunction electrocatalyst for polysulfides redox reactions.	Prof. Jiantao ZAI , SJTU, China
	11:10-11:30	21AM399: The use of copper zinc tin sulfide compound thin film as an absorber layer in solar cell	Nisar Ali , Jahanzeb College swat
11:30 – 11:50	T E A Break		
11:50 – 13:00 Advanced Materials-II	11:50-12:10	21AM356: Purification of Water by Using Multijunction Photovoltaic Solar Cells and Alum	Uzma Rani , Preston University Islamabad
	12:10-12:30	21AM86: Process Optimization of Bending SS 304L Using Multi-Objective Genetic Algorithm and FEA	Hasan Aftab Saeed , NUST Islamabad
	12:30-12:50	21AM478: Printing of Low Cost Sensors by Additive Manufacturing	Salman Ahmad , GIKI Swabi
13:00 – 14:00	LUNCH		
14:00 – 15:00	1400-1500	Performance characterization of micro-fillers and fiber reinforced polymer composites	Dr. Yasir Nawab , NTU Faisalabad
15:00 – 16:00 Advanced Materials-III	1500-1520	21AM605: Polymer Silica Porous Framework: Design, Synthesis and Analysis	Ahsan Abdul Rauf , IST Islamabad
	1520-1540	21AM337 : Solar Cooling System using Hybrid Tandem Solar Cells and Concentrated Solar Thermal Heat Storage in Phase Change Material	Muhammad Shahram , Hamdard University
	1540-1600	21AM431: Effect of Dielectric Constant on Metal-Dielectric Nanoshell for Sensing Application	Mehboob Alam , University of Poonch Rawalakot

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Day 3: January 14, 2021

10:00 – 11:30 Invited Talks Advanced Materials-I	Time 10:00-1050	Graphene based Membranes for Water Purification and Desalination Applications	Dr. Khalid Hussain Thebo , CESAT Islamabad
	10:50-11:10	21AM406: In situ electrical properties of wide range humidity sensor based on PEDOT: PSS/Bi ₂ Te ₃	Tehseen Amin Khan Qasuria , GIKI Swabi
	11:10-11:30	21AM648: To Study the Low Temperature Diffusion Bonding of AISI 5130 Alloy Steely	Muhammad Rashid Subhani , CSEAT Islamabad
11:30 – 11:50	T E A Break		
11:50 – 13:00 Advanced Materials-II	11:50-12:10	21AM603: State of the Art Characterization of advanced Nano-Particles to enhance the Physical and Mechanical Properties of MDF	Waheed Gul , IST Islamabad
	12:10-12:30	21AM464: Synthesis and characterization of PVDF/clay/PZT nanocomposites with enhanced electroactive β -phase	Ammar Hassan , CESAT Islamabad
	12:30-12:50	21AM635: Enhanced Resistance to Ablation by Infusion and In-Situ Growth of SiC on Graphite Using Polymer Infiltration Pyrolysis	Muslim Al-Mahmood , IST Islamabad
13:00 – 14:00	LUNCH		
14:00 – 15:00	1400-1500	Mechanical Properties of CNT/CNF Grafted Woven Carbon-Epoxy Composites	Prof. Dr. Mehmat karahan , University of Busra Uludag Turkey
15:00 – 16:00 Advanced Materials-III	1500-1520	21AM643: To Study and Improve Metal - Composite Bonding Process Using Taguchi Method	Amjad Mehmood , CESAT Islamabad
	1520-1540	21AM649: Design and optimization of composite prismatic pressure vessel with different fiber types and orientations	Naeem Rahman , CESAT Islamabad
	1540-1600	21AM180: Radiation hardness comparison of Silicon and 4H-SiC power diodes – A simulation study	Amna Siddiqui , NCP Islamabad

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Day 4: January 15, 2021

10:00 – 11:30 Invited Talks Advanced Materials-I	Time 10:00-11:10	The multifaceted world of light-emitting diodes	Dr. Muhammad Usman, GIKI, Sawbi
	11:10-11:30	21AM650: Development of Lightweight Ceramic based Tile	Salman Ahmad, CESAT Islamabad
	Closing Remarks		