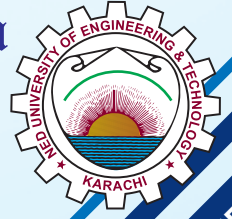




The Institution of Engineers Pakistan Karachi Centre & NED University of Engineering & Technology, Karachi



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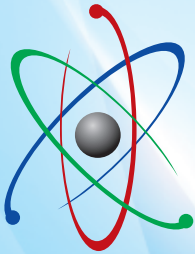
4th International Conference on Advanced Materials and Process Engineering

TECHNICAL SESSION PROGRAMME

18th & 19th December, 2024 - Karachi - Pakistan

THEME

**Innovations in Materials and Processes
for Sustainable Development**



A M P E
ADVANCED MATERIALS & PROCESSING ENGINEERING

in collaboration with



Federation of Engineering
Institutions of Islamic
Countries (FEIC)



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Pakistan



ASHRAE Pakistan
Chapter
The American Society
of Heating, Refrigerating and
Air-Conditioning Engineers



Dept. of Chemical Engineering
University of Karachi

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PROGRAMME

INAUGURAL SESSION at Syed Mahmood Alam Auditorium, Main Campus, NEDUET, Karachi (Wednesday 18th December, 2024)	
2:30 - 3:00 pm	Registration
3:00 - 3:05 pm	Recitation from the Holy Quran
3:05 - 3:10 pm	National Anthem
3:10 - 3:15 pm	Welcome Address by Engr. Prof. Dr. Syed Amir Iqbal Dean Faculty of Chemical and Process Engineering, NEDUET, Karachi & Co-Convenor 4th ICAMPE-2024
3:15 - 3:20 pm	Address by Engr. Sohail Bashir Chairman IEP, Karachi Centre
3:20 - 3:25 pm	Address by Engr. Prof. Dr. Muhammad Tufail Pro- Vice Chancellor, NEDUET & Convenor 4th ICAMPE-2024
3:25 - 3:40 pm	Industrial Speech by Mr. Mustafa Jaffar , CEO, Dynea Pakistan Ltd.
3:40 - 3:55 pm	Keynote Speech by Dr. Salman Raza Naqvi (T.I) Karistad University Sweden (Online)
3:55 - 4:10 pm	Keynote Speech by Dr. Yasemin Tabak Tubitak, UME National Metrology Institute, Turkey
4:10 - 4:15 pm	Address by Engr. Amir Zameer Ahmed Khan Secretary General The Institute of Engineers Pakistan
4:15 - 4:20 pm	Address by Engr. Farhat Adil President, The Institution of Engineers Pakistan
4:20 - 4:25 pm	Address by Engr. Prof. Dr. Sarosh H. Lodi Vice Chancellor, NEDUET & Patron 4th ICAMPE-2024
4:25 - 4:40 pm	Address by Guest of Honour Syed Nasir Hussain Shah Minister: Energy, Planning & Development, Government of Sindh
4:40 - 4:50 pm	Address by the Chief Guest Syed Nasir Hussain Shah Minister: Energy, Planning & Development, Government of Sindh
4:50 - 4:55 pm	Presentations of Conference Mementos/Certificates
4:55 - 5:00 pm	Vote of Thanks by Engr. Dr. Syed Ali Ammar Taqvi Secretary, 4th ICAMPE-2024
5:00 pm	Refreshments

TECHNICAL SESSIONS at NEDUET, Main Campus, University Road, Karachi (Thursday 19th December, 2024)	
09:00 - 09:30 am	Breakfast at Department of Civil Engineering, NEDUET, Karachi
09:30 - 11:30 am	Technical Session-1 Innovations in Material Science and Sustainable Engineering at Ashraf Habibullah A/V Hall, Department of Civil Engineering, NEDUET, Karachi
11:30 - 11:45 am	Tea Break at Department of Civil Engineering, NEDUET, Karachi
11:45 - 1:30 pm	Technical Session-2 Advancements in Chemical Engineering and Sustainability at Ashraf Habibullah A/V Hall, Department of Civil Engineering, NEDUET, Karachi
11:45 - 1:30 pm	Technical Session-2 (Parallel) Emerging Materials and Technologies for Sustainability and Health at Civil Lecture Hall, Deptt. of Civil Engineering, NEDUET, Karachi
1:30 - 2:00 pm	Zohar Prayer & Lunch break
2:00 - 4:00 pm	Technical Session-3 Innovative Approaches to Environmental; Remediation at Ashraf Habibullah A/V Hall, Department of Civil Engineering, NEDUET, Karachi
4:10 - 5:20 pm	Closing Session at Ashraf Habibullah A/V Hall, Department of Civil Engineering, NEDUET, Karachi

CLOSING SESSION At Ashraf Habibullah A/V Hall, Department of Civil Engineering, NEDUET, Karachi on Thursday 19th December, 2024	
4:00 - 4:05 pm	Recitation from the Holy Quran
4:05 - 4:10 pm	National Anthem
4:10 - 4:15 pm	Conference Highlights by Engr. Prof. Dr. Saud Hashmi Chairman, Department of Chemical Engineering, NEDUET, Karachi & Co-Convenor, 4th ICAMPE-2024
4:15 - 4:20 pm	Address by Engr. Sohail Bashir Chairman, IEP, Karachi Centre
4:20 - 4:25 pm	Address by Engr. Prof. Dr. Muhammad Tufail Pro- Vice Chancellor, NED University of Engineering & Technology, Karachi & Convenor 4th ICAMPE-2024
4:25 - 4:40 pm	International Keynote Speaker Prof. Dr. Antonio Feteira Sheffield Hallam University UK
4:40 - 4:45 pm	Address by Engr. Dr. Sarosh H. Lodi Vice-Chancellor, NEDUET, Karachi & Patron 4th ICAMPE-2024
4:45 - 4:50 pm	Address by the Guest of Honor Dr. Nazeer Hussain D.G & Regional Director, HEC, Karachi
4:50 - 5:00 pm	Address by Chief Guest Engr. Asim Murtaza Khan CEO, Sindh Petroleum Limited & President NEDIAN Association Pakistan
5:00 - 5:05 pm	Presentation of Chairman IEP Medal for Best Paper
5:05 - 5:10 pm	Presentations of Conference Mementos / Certificates
5:10 - 5:15 pm	Vote of Thanks by Engr. Farooq Arbi Secretary, IEP, Karachi Centre
5:15 - 5:20 pm	Group Photo
5:20 pm	Hi-Tea

TECHNICAL SESSIONS

Day 02: Thursday 19th December, 2024	
Technical Session – I “Innovations in Material Science and Sustainable Engineering” At Ashraf Habibullah A/V Hall, Department of Civil Engineering ,NEDUET, Karachi	
Session Chairs: Prof. Dr. Abdul Waheed Bhutto (DUET) Dr. Yasemin Tabak (NMI, Turkey) Engr. Dr. Shagufta Ishteyaque (IEP)	
08:30 – 09:00 am	Registrations
09:00 – 09:30 am	Breakfast At Department of Civil Engineering ,NEDUET, Karachi
09:30 – 09:45 am	International Keynote Speaker Prof. Dr Hakan ATEŞ, Ghazi University, Turkey, The Future of Thin Film Coatings: A Scientific Review of Applications in Defense, Medicine and Electronics
09:45 – 10:00 am	International Keynote Speaker Mr. Mohammad Faizul Yahya, Ph.D, Director University Transformation, Universti Tehnologi Mara, Malaysia
10:00 – 10:15 am	National Plenary Speaker CHEMICAL SECURITY AND SAFETY RISK ASSESSMENT: PAKISTAN PERSPECTIVE Prof. Dr. Ing. Naveed Ramzan, Dean of Faculty of Chemical, Metallurgical and Polymer Engineering of University of Engineering and Technology, UET, Lahore
10:15 – 10:30 am	National Plenary Speaker FUNCTIONAL NANOMATERIALS IN THIN FILM COMPOSITE MEMBRANES Engr. Prof. Dr. Muhammad Younas, Department of Chemical Engineering, UET, Peshawar
10:30-10:45 am	National Plenary Speaker POWERING THE FUTURE: INTEGERATED ENERGY PLANNING FOR THE SUSTAINABLE WORLD Prof. Dr. Aqeel Ahmed Bazmi, Department of Chemical Engineering, COMSATS University Islamabad Lahore Campus
10:45 – 11:00 am	AMPE-01 Production of Perfume Encapsulated-Microcapsules Through Phase Inversion Precipitation Authors: Areebah Siddiqui, Bilal Kazmi, Farnaz Salahuddin, Aqsa Asif
11:00- 11:15 am	AMPE-02 3D-Printing Performance of Strain Hardening Cementitious Composites Of Different Uhmwpe Fibers In Correlation With Rheology Authors: Maryam Mudasir, and Sun Yan
11:15 -11:30 am	AMPE-03 Design And Development of Efficient Aerated Windrow Composting Pilot Plant Authors: Sadaf Rani, Shagufta Ishtiaque, Haroon Khan and Usama Abid
11:15 – 11:30 am	AMPE-04 Synthesis And Investigation of Epoxy Resin/Carbon Fiber Composite For Structural Retrofitting Applications Authors: Fatima Jahangir, Saud Hashmi, Bilal Zahid, Dua Nisar, Asad Ur Rehman, Shamsoun Fareed, Aasia
11:30 am	Shield and Certificate Distributions to all Session Chairs & Speakers/Authors
11:30 - 11:45 am	Tea Break

Technical Session – II “Advancements in Chemical Engineering and Sustainability” At Ashraf Habibullah A/V Hall, Department of Civil Engineering ,NEDUET, Karachi	
Session Chairs: Prof. Dr. Naveed Ramzan (UET, Lahore) Dr. Fayyaz Hussain, (NEDUET) Engr. Ayaz Mirza (IEP)	
11:45 – 12:00 noon	National Plenary Speaker Dr. Muhammad Atiq ur Rehman, Institute of Space Technology, Islamabad
12:00 – 12:15 pm	Invited Talk by Industrial Speaker Mr. Hani Krimani , United Energy Pakistan
12:15 – 12:30 pm	AMPE-05 Arduino controlled study of different impellers on dispersion polymerization of methyl methacrylate to poly methyl methacrylate (PMMA) particle Authors: Saad Nadeem, Muhammad Umair Shaikh
12:30 – 12:45 pm	AMPE-06 Waste-to-Value: Sustainable Ammonia Production through Industrial and Municipal Waste Integration Authors: Syed Muhammad Mustafa Rizvi , Bilal Kazmi
12:45 – 13:00 pm	AMPE-07 PID-Based Control On VCM Process Authors: Tuba Siraj Ansari, Dr. Syed Ali Ammar Taqvi
1:00 – :1:15 pm	AMP-08 Treatment of Textile Wastewater Using a Vertical Constructed Wetland System Authors: Shahzad Shaikh, Dr. Syed Ali Ammar Taqvi, Dr. Atif Mustafa
1:15 – 1:30 pm	AMPE-09 A Design Project on Biomass Conversion into Energy Via Gasfication using Downdraft Gasifier Authors: Danish , Alina Sajid (Online)
11:30 pm	Shield and Certificate Distributions to all Session Chairs & Speakers/Authors

TECHNICAL SESSIONS

Technical Session - II (Parallel) "Emerging Materials and Technologies for Sustainability and Health" Civil Lecture Hall, Department of Civil Engineering NEDUET, Karachi	
Session Chairs: Prof. Dr. Zahoor ul Hussain Awan (NEDUET) Dr. Abdul Basit Saim (IST, Islamabad) Engr. M. Abbas Sajid (IEP)	
11:45 – 12:00 noon	National Plenary Speaker Advanced Nanostructured Catalysts for Sustainable Energy and Environment Prof. Dr. Murid Hussain, Department of Chemical Engineering, COMSATS University Islamabad, Lahore Campus,
12:00 – 12:15 pm	Invited Talk by Industrial Speaker Mr. Sohail Malik, ENAR Petroleum Refining Facility
12:15-12: 30 pm	AMPE-10 Process Simulation of Sustainable Edible Oil Refining with Life Cycle Assessment Authors: Zaha Naseem, Alia Ahrar and Fahim Uddin
12:30 – 12:45 pm	AMPE-11 Modeling Aerogels for CO ₂ Capture: Insights into Structure and Adsorption Dynamics Authors: Abdul Sami, Nurul Ekmi Rabat *, Khairiraihanna Johari, Noridah binti Osman, Siti Musliha Mat Ghani, Farman Ullah, Syed Muhammad Tariq (Online)
12:45 – 1:00 pm	AMPE-12 Development of Magnetic Nanoparticles Inferred With 3-Aminobenzoic Acid to Detect Antibiotics In Human Blood Authors: Erum Hasan, and Syed Nawazish Ali
1:00 - 1:10 pm	AMPE-13 Advances in the Optimization of Phenolic Compound Extraction from Moringa Leaves and Their Emerging Applications in Sustainable Packaging Authors: Arsalan Ahmed, Abeera Moin, Shagufta Ishteyaque
1:10 - 1:20 pm	AMPE-14 Synthesis of Radiative cooling material using Sustainable Polymeric Material Authors: Muhammad Ali Burney, Adeel ur Rehman, Shagufta Ishteyaque
1:20 - 1:30 pm	AMPE-21 Phragmite Karka Mediated Zinc Oxide Nanoparticles Application Alleviates Salinity Stress By Modulating Plant Growth, Parameters In Sunflower Plant. Kainat Amin, Saud Hashmi, Department of Chemical Engineering, NEDUET, Karachi
1:30 pm	Shield and Certificate Distributions to all Session Chairs & Speakers/Authors
1:30 – 2:00 hours	Prayer and Lunch Break
Technical Session – III "Innovative Approaches to Environmental; Remediation" At Ashraf Habibullah A/V Hall, Department of Civil Engineering, NEDUET, Karachi	
Session Chairs: Dr. Aqeel Ahmed Bazmi (COMSAT, Islamabad) Dr. Murid Hussain (CUI, Lahore) Engr. Dr. Ali Dad Chandio (IEP)	
1:20 - 1:30 pm	National Plenary Speaker Dr. Abdul Basit Saim Assistant Professor, Institute of Space Technology, Islamabad
	Invited Talk by Industrial Speaker Mr. Daniyal Zafar Plant Operations, Tapal Tea Pvt. Ltd.
	AMPE-15 Application of Bougainvillea Glabra mediated NiO/activated carbon nanocomposite to eliminate cationic dye from industrial effluents Authors: Shahida Ghazala, Muhammad Saad, Hajra Tahir
	AMPE-16 Computational And Experimental Investigation of Dispersion and Dissolution In Pharmaceutical Powders Authors: Khizra Abdul Wadood (Online)
	AMPE-17 Eco-Friendly Solution for Salinity Removal From Water Using Constructed Wetlands. Authors: Syed Muhammad Hasnain, and Prof. Dr. Saud Hashmi
	AMPE-18 Development Of Sustainable Cathode Material for Sodium-Ion Battery by Using Sodium Iron Phosphate Authors: Shaheer Yousuf Khan, Faaz Ahmed Butt, Zahoor Ul Hussain Awan
	AMPE-19 A2B3C2M5X15 Based Multifunctional Ceramics Through Cold Sintering Process Method Authors: Syeda Mahnoor Fatima, Dr. Fayaz Hussain
	AMPE-20 Enhanced Fault Diagnosis of Simultaneous Faults in Distillation Columns Using a Multiple Kernel SYM Approach Author: Dr. Syed Ali Ammar Taqvi, NEDUET, Karachi, Pakistan
	AMPE-22 Analyzing The Effect Of Recycled Soda-lime-glass And Additives (cr2o3, Nio2 And Fe2o3) On Properties Of Industrial Grade Alumina (al2o3). Author: Fayaz Hussain, M.Kamran , Anam Farooq, Mariyam Abdul Sami, Wania Tarique, NEDUET, Karachi
	AMPE-23 Advancing Lead-free Dielectric Ceramics: Optimisation Strategies For High-field Energy Storage Applications Author: Hareem Zubairi, PhD Scholar, Nancy Rothwell building, Department of Materials, The University of Manchester, Manchester, M13 9PL
4:00 pm	Shield and Certificate Distributions to all Session Chairs & Speakers/Authors
4:05 pm	Closing Session at At Ashraf Habibullah A/V Hall, Department of Civil Engineering ,NEDUET, Karachi