



نقابة المهندسين الأردنيين
Jordan Engineers Association

شعبة الهندسة الكيميائية
Chemical Engineering Division



Conference Program أجندة المؤتمر

Jordan International Chemical Engineering Conference JChEC10

Conference exhibition over three days

21 - 23 October
2024

Le Royal Hotel , Amman – Jordan

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**Jordan International Chemical Engineering
Conference JChEC 10**
21 - 23 October 2024, Le Royal Hotel , Amman – Jordan

Day 1

Time	
08:00 -09:30	Conference Registration
09:30 -10:30	Opening Ceremony إعلان نتائج جائزة أفضل منتج أردني
10:30 -11:00	Coffee Break
11:00 -11:50	Chairman : Prof. Ahmad Shawaqfeh Co-Chairman :Dr. Al-Anood Alsarayreh Keynote Speech (I) Prof. Dr. Guilherme Luiz Dotto, IMPROVEMENT OF ADSORBENT FEATURES FOR APPLICATION IN WASTEWATER TREATMENT
ISHTAR Hall	Nanotechnology: Application in chemical Engineering Chairman : Prof. Guilherme Dotto Co-Chairman : Dr. Nidal Hussein
12:20 -12:40	Nanocellulose Dissolution in Green Solvent by Enhancing Carrageenan Biocomposite for Hard Capsule Formation Chigozie Charity Okwuwa Malaysia
12:40 -13:00	Continuous Photocatalytic Reactor for the removal of Amoxicillin from Aqueous Environments using FeNi ₃ @SiO ₂ @TiO ₂ Nanocomposite Tariq Al-Musawi Jordan
13:00 -13:20	Effect of chitosan molecular weight on the morphological, structural, and mechanical properties of chitosan/PLA nanofibers fabricated by free surface wire electrospinning Nawzat Dieb Abdulghani AlJbour Jordan
13:20 -13:40	Nanotechnology and Applications of Magnetic Nanoparticles, A Review Sewar aljarah Jordan
13:40 -14:00	Coffee Break
ISHTAR Hall	Nanotechnology: Application in chemical Engineering (continued) Chairman : Prof. Reyad Shawabkeh Co-Chairman : Dr. Muhanad Al-Qudah
14:00 -14:15	Experimental Analysis of Mechanical Performance and Microstructural Evolution in Cement Enhanced with Nano-ZnO Ashraf Alsafasfeh Jordan
14:15 -14:30	Global Modeling and Predicting of Thermal Conductivity of Nanofluids Using an Ensemble of Different Tree-based Gradient Boosting Algorithms and Optimized Deep Neural Networks Bayan Ali Alyousef Jordan
14:30 -14:45	Functional Moiety Based Synergistic Scale Inhibition by Molecularly Designed Nano Photonic Antiscalants Nadhem Ismail USA
14:45-15:00	Study the effect of Embedding Modified TiO ₂ particles on the Performance of Polymeric Membranes in Wastewater Treatmen Assala Mohammed Oribe Iraq
15:00 -15:20	Electrocatalytic conversion of carbon dioxide to alcohols Balsam Al-Abbadi Jordan

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JERASIA Hall

Desalination, Water and waste water processing

Chairman : Prof. Khalid Aref Co-Chairman : Eng. Maha Asa'd

12:20 -12:40 Studying the kinetic behavior of high-loaded grey water (HLGW) treatment by batch electrocoagulation Khalid Bani-Melhem1 Qatar

12:40 -13:00 Green Remediation: Harnessing Date Palm Seeds Biomass for Efficient Uranium (IV) Ion Removal from Water: Kinetic and Thermodynamic Insights Mohammed Ahmed Al-Abner Jordan

13:00 -13:20 Removal Pollutants by a Combined Process of Electrostatic Precipitation and Catalytic Decomposition Karrar Ayad Deabl Iraq

13:20 -13:40 A New Heavy Metal Treatment Process Using a Bio-adsorbent Based on Modified Olive Leaves Bio-mass Mohammed Assaf Jordan

13:40 -14:00

Coffee Break

JERASIA Hall

Desalination, Water and waste water processing (continued)

Chairman : Prof. Chigozie Okwuwa Co-Chairman : Dr. Ashraf Alsafasfeh

14:00 -14:20 The performance of the photocatalysis technique to remove organics compounds from effluent wastewater from the Al-Najif petroleum refinery Husham Majeed Iraq

14:20 -14:35 Elimination of Ibuprofen Drug via Mesoporous Activated Carbon Date Pits Lubna Albanna Jordan

14:35 -14:50 Effect of Time and Hydrogen Peroxide Dose on the Advanced Oxidation of Oily Waste Water Abubakr Mustafa Elkhaleefa KSA / Online

14:50 -15:05 Techno-economic Analysis of the Greater Grand Forks Regional Water Treatment Plant and Performance Comparison Ali alshami USA

15:05 -15:20 Turbidity Removal by Novel Coagulants (Pumpkin Seeds, PVA, and Chitin) in comparison to Alum Amal hanaktah Jordan

HAMMURABI Hall

Biochemical engineering and biotechnology

Chairman : Prof. Ali AlShami Co-Chairman : Dr. Ibrahim A. Suleiman

12:20 -12:40 Antibacterial Polyvinyl Alcohol Films for Shrimp Packaging Real-Time Monitoring, Preservation, and Quality Assessment Midhun Dominic India

12:40 -13:00 Biosorption of lead and cadmium from aqueous solutions by proteins extracted from E. coli cells Shatha Badarneh Jordan

13:00 -13:20 Development of propolis incorporated films based on Bovine Gelatine-Chitosan designed as wound dressing materials: Physical properties and antibacterial activity ILKNUR KUCUK Jordan

13:20 -13:40 Development of a Selective Green Fungicide Using Fatty Acid and Terpene-Based Nanoemulsion for Effective Control of Anthracnose Fungus AHMAD ANAS GUNNY Malaysia / Online

13:40 -14:00

Coffee Break

HAMMURABI Hall

Oil and Gas Technologies

Chairman : Dr. Mohammad Megdady Co-Chairman : Eng. Yacoub Bani Taha

14:00 -14:20 Bioplastic Production Using Natural Waste Minerals NADEEN ALSMADI Jordan

14:20 -14:40 Advancing Drug Delivery: Scalable Production of Biocompatible Metal-Organic Frameworks Nanoparticle for Drug Encapsulation Nour Karakira Lebanon / Online

14:40 -15:00 Assessing the Stability and Release Rate of Donepezil HCl Transdermal Patches with Different Plasticizer Additives Emel AKYOL Turkey

15:00 -15:20 Optimize the separators at processing crude oil primary treatment Aqeel Nahar Jordan

15:20 -16:00

Lunch

Day 2

Time

09:30 -10:30

Chairman : Dr. Al-Anood Alsarayreh Co-Chairman : Dr. Ibrahim Suleiman
Keynote Speech (2) Prof. Professor Iqbal M. Mujtaba, UK
Water, Water Everywhere, Not Any Drop to Drink: what can
Chemical Engineers do about it?

10:30 -11:50

Chairman : Prof. Habis Al-Zoubi Co-Chairman : Prof. Ahmad Shawaqfeh
Keynote Speech (3) Prof. Tushar Kanti Sen, Australia, KSA
Renewable Biogas Production through Performance
Enhancement of Anaerobic Digestion Process and Sludge
Dewatering of a wastewater treatment plant (WWTP)

11:30 -12:00

Coffee Break

ISHTAR Hall

Separation Processes

Chairman : Dr. Emel Akyol Co-Chairman : Eng. Mohammad Abu Qwaider

12:00-12:20

Bench-Scale Fabrication of Porous Substrates at Varying Bath
Temperatures for High-Performance Reverse Osmosis Membranes

Mohd Muzammil Zubair
Qatar

12:20-12:40

Membrane-Based Technologies: A Comprehensive Review for
Efficient and Environmentally Friendly Treatment of Produced
Water in Oil and Gas Industries

Rami Harkouss
Lebanon

12:40-13:00

Determination of Surface Tension of Simple Fluids Using
Temperature Dependent Intermolecular Potential Parameters
(TDIP)

Nezar Mohammad Fadel
Jordan

13:00-13:20

Effect of alkali type and concentration on the CO₂
adsorption capacity of kaolin based geopolymer

Sabreen mheidat
Jordan

13:40-14:00

Coffee Break

ISHTAR Hall

Separation Processes

Chairman : Prof. Iqbal Mujtaba Co-Chairman : Eng. Rose Smadi

14:00-14:20

Preparation of palm date fronds activated carbon for the
removal of heavy metals from aqueous solutions

Jasim M. Salman
Iraq

14:20-14:40

Uranium recovery from alkaline leach solution of Central Jordan
uranium low-grade deposits utilizing LEWATIT® TP-107

Mohammad Alnaief
Jordan

14:40-15:00

Impact of Alkali Concentration in Delignification
Treatment for Cellulose Extraction from Rice Straw

Maha AL-Rajabi
Jordan

15:00-15:20

Corrosion Under Insulation Management
(CUI)and Integrity Management

Abdelkarim Najdawi
Jordan

JERASIA Hall

Chemical Process Modeling, Simulation, Optimization and Control

Chairman : Dr. Ibrahim Suleiman

Co-Chairman : Eng. Zainab Abu Zaid

12:00-12:20

Model meets Reality: Distillation Simulation at BASF

Aisha Naddaf
Germany / Online

12:20-12:40

Artificial Neural Network (ANN) Modeling Techniques For
Employed to Study Desulfurization of Zawia Refinery DieselABDULSALAM ABDU
Libya

12:40-13:00

Investigation of the Effect of GMAW Process Parameters on the
Hardness of API 5L-X52 Welds using DoE and ANOVA ApproachsOmar Aldenali
Libya

13:00-13:20

Mapping-Probing for reverse osmosis plants: Al osmosis

Djedouani Djamila
Algeria / Online

13:40-14:00

Coffee Break

JERASIA Hall

Environmental Protection and Sustainability & Chemical Process Safety and Health

Chairman : Dr. Khalid Bani-Melhem

Co-Chairman : Eng. Hala Al-Qadhat

14:00-14:20

Performance Indicators as a Tool for Health and
Safety Management In Chemical IndustryMohammed S. El-Ali Al-Waqfi
Jordan

14:20-14:40

Monitoring Coastal Thermal Pollution Using Landsat 08 OLI-TIR Imagery and
Google Earth Engine: A Case Study of Power Plant/Discharges in the Red SeaKhalid Mohammed
KSA

14:40-15:00

Olive Pomace-Lignin as a Green
Alternative for Bitumen in Jordan.Ala Alobeideyen
Jordan

15:00-15:20

Chemical Recycling and Catalytic Upgrading of
Plastic and Biomass Wastes: A General OverviewMohammednoor Altarawneh
UAE / Online

HAMMURABI Hall

Polymer and Composite Materials

Chairman : Dr. Dr. Midhun Dominic

Co-Chairman : Prof. Habis Al-Zoubi

12:20-12:40

Utilizing Waste Cigarette Butts for Sustainable Thin-Film Composite
Membranes for Pressure Retarded Osmosis ApplicationsSyed Javaid Zaidi
Qatar

12:40-13:00

Blending PlasticsWaste with Highly Available Jordanian
Kaolin for Preparation of Alkali-Activated MortarsFarezh Muhana
Jordan / Online

13:00-13:20

Novel Solid-State Polymer-Based Electrolyte for
Room-Temperature Sodium-Sulfur BatteriesBasem Al Alwan
KSA / Online

13:20-13:40

Polypyrrole/Zelite Composites Adsorbent for
Efficient Crude Oil RemovalBanan Hudaib
Jordan

13:40-14:00

Coffee Break

HAMMURABI Hall

Desalination, water and Waste water processing (continued)

Chairman : Dr. Mohammad Alnaief

Co-Chairman : Dr. Muhanad Al-Qudah

14:00-14:20

Date Palm Fiber as A Potential Low-Cost Adsorbent for Real Olive Oil Mill
Wastewater Treatment: Kinetic, Modeling and Thermodynamic StudyOsama Al-Matari
Jordan

14:20-14:40

Industrial wastewater remediation in Qatar using advanced
block copolymer membranesMohammad K. Hassan
Qatar / Online

14:40-15:00

The Potential of Atmospheric Water Generation in Water Resource Management:
Assessment of Spatial and Temporal Temperature Distribution ImpactMohammed Assaf
Jordan

15:00-15:20

Enhanced Electrochemical Water Oxidation Efficiency and
Stability by Iron on Carbon NanotubesSahir Mohammed Alzurajji
Iraq

15:20-16:00

Lunch

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Day 3

Time

09:00 -09:50
Chairman : Dr. Nidal Hussein Co-Chairman : Dr. Ashraf Alsafasfeh
Keynote Speech (4) Dr. Pedro Castano, Netherlands, KSAH
**Multiscale protection against deactivation of Ni catalysts for
hydrogen production routes**

09:50 -10:40
Chairman : Prof. Reyad Shawabkeh Co-Chairman : Prof. Khalid Aref
Keynote Speech (5) Prof. Mohammad R. Qtaishat
**Emerging membrane technologies in water
desalination and wastewater treatment**

10:40 -11:00 **Coffee Break**

ISHTAR Hall Chairman : Eng. Haider Al-Rikabi Co-Chairman : Eng. Eyad Al-Khraisat
National Industries

11:00-11:15 Overview on the Development of Jordan Uranium Project Mohammad Al-Shannag
Jordan

11:15-11:30 Decarbonizing Nitric Acid Production in Kemapco Ramzi Sinnokrot
Jordan

11:30-11:45 JPMC PAP Revamping Project: Abstract Jan Tytgat
Belgium

11:45-12:00 LOYAL/LAYAN Abdulrahman Al-Khalil
Jordan

12:00-12:15 Increase 15% of the production rate with a phase separator Amer Qudah
Jordan

JERASIA Hall Chairman : Dr. Syed Javaid Zaidi Co-Chairman : Dr. Omar Aldenali
Energy first, Green Energy, Renewable Energy

11:00-11:15 Green Hydrogen Production challenges: Overcoming
Technological and Economic Challenges" Rawan Al-Maaitah
Jordan

11:15-11:30 Future vision on the optimal use of natural gas at a Risha field Ola abuhanieh
Jordan

11:30-11:45 Blue Hydrogen Production by Methane Cracking Over Supported
Metallic Catalysts: Effect of Metal Compositions and Supports Basem Al Alwan
KSA / Online

11:45-12:00 Catalytic pyrolysis of low value biomass towards
renewable fuel and high value chemicals Ahmad Nawaz
KSA / Online

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12:00-12:15 Vapor recovery of Caustic concentration unit Mohammad Abu Qwaider
Jordan

12:15-12:30 Hydrogen storage Using Mg-Ni/Zeolite material Reyad Shawabkeh
Jordan

HAMMURABI Hall Separation Processes

Chairman : Dr. Mohd Zubair Co-Chairman : Eng. Fedaa Abdul-Haq

11:00-11:15 Impact of storage time on grey water treatment by electrocoagulation technique Khalid Bani-Melhem
Qatar

11:15-11:30 A novel water-soluble Nano additive incorporated to PPSU membrane for textile dye removal Younus Rashid
Tunisia

11:30-11:45 The Effect of hydrophilic/ hydrophobic Metallic Organic Frameworks (MOFs) on the Performance of Membrane in the Membrane Distillation Majd. Hijazeen
Jordan

11:45-12:00 A preliminary Vanadium Storage Battery based on Vanadium Pentoxide Recovered from Spent Vanadium Catalyst Hiba H. Al Amayreh
Jordan / poster

12:00-12:15 Lime Pretreatment and Nano-Limestone Based Treatment Adsorption Strategies for Olive Mill Wastewater: Enhancing Efficiency and Sustainability Abeer Al Bawab
Jordan / poster

12:15-12:30 Green crystal cells Rashed Harbi Alsihamat
Jordan

Time open

Poster session

Lime Pretreatment and Nano-Limestone Based Treatment Adsorption Strategies for Olive Mill Wastewater: Enhancing Efficiency and Sustainability Abeer Al Bawab

Removal of Microplastics Pollutants from Aqueous Solutions Sara Jaradat

12:30-13:00

Closing Session

13:00-14.00

Lunch

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