

Ministry of Higher Education & Scientific Research  
University of El Oued / Faculty of Exact Sciences  
LELVRES Laboratory

## ICOMRE'22



### 1<sup>st</sup> International Conference on Optoelectronics, Materials & Renewable Energy

#### Honorary Chair

Pr. Omar FERHATI

Rector of University of El Oued

#### Keynote Speakers:



Pr. Adel MELIT  
University of Jijel  
Algeria



Pr. Wissem CH.KOUBAA  
University of Sfax  
Tunisia



Pr. Ferhat REHOUMA  
University of El Oued  
Algeria



Pr. Radhouane CHTOUROU  
CRTE  
Tunisia



Pr. Imad Hamadneh  
University of Jordan  
Jordan



Pr. Mohammed TRAICHE  
CDFA  
Algeria



Pr. Mosbah ZIDANI  
University of Batna2  
Algeria

#### Conference Director

Dr. Mourad MIMOUNI

Member of LEVRES Laboratory

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#### Conference Topics

The topics of interest include, but are not limited to, the following:

#### Optoelectronics:

- Laser and optoelectronics characterization and applications
- Laser Materials
- Integrated optics
- Optical sensors

#### Materials:

- Nanomaterials: synthesis, characterization and applications.
- Advanced Materials: Ceramics, Inorganic materials, Electronic-Magnetic Materials, Biomaterials.
- Optical and Lasers Materials

#### Renewable energies:

- Renewable Energy Systems RESs
- Control Techniques for RESs
- Renewable Energy Water Pumping Systems
- Artificial Intelligence and Machine Learning Studies for RESs and Applications
- New Trends and Technologies for RESs

#### Scope:

The 1<sup>st</sup> International Conference on Optoelectronics, Materials and Renewable energy 2022 (ICOMRE'22) will be held in, El Oued, Algeria from 12 to 13 Dec. 2022. The conference is organized by the Laboratory for the Exploitation and Valorization of Saharan Energy Resources LEVRES, Algeria. The main aim of the ICOMRE'22s to bring together all potential participants: from industry, experts, researchers, academics, manufacturers and suppliers of several countries to review the latest developments that are achieved in these areas and to exchange research ideas to explore current challenges in Optoelectronic.

#### Scientific Committee:

President : Pr. Ferhat REHOUMA,

Co-President: Dr. Said MEHELLOU

#### International members

Ahmed HAFIZ, UK  
Akram ALHUSSEIN, France  
Anant Kumar VERMA, India  
Azeddine HOUARI, France  
Fadwa ODEH, Jordan  
Imad HAMADNEH, Jordan

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Mohamed Asaad HAMIDA, France  
Mohammed Ikbil HOUCHEM, Tunisia  
Mostefa KERMADI, Malaysia  
Muna ABU-DALO, Jordan  
Nacer DEBBAR, Saudi Arabia

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#### National Members

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Abdelaziz KHELLOU, Algiers  
Abdelghani AISSAOUI, Béchar  
Abdelhamid KHALEF, El Oued  
Abdelkader MADJOURI, El Oued  
Abderrahim ACHOURI, Ouargla  
Abia BOUGUERNE, Tebessa  
Adel BENARFA, CRAPC-Laghouat  
Ali DJEROUJ, M'sila  
Ammar MOSBAH, Sétif  
Aziz BOUKADOU, Tebessa  
Azeddine BEGGAS, El Oued  
Boubaker Benhaoua, El Oued  
Dhaouadi GUIZA, Tebessa  
El Habib Guedda, El Oued  
Dialel DIB, Tebessa  
Djamal OUNNAS, Tebessa  
Djamila REKIOUA, Bejaia  
Fayçal CHEMAM, Tebessa  
Fayçal DJANI, Biskra

Fethi BOURAS, El Oued  
Fethi KHELFAOUI, Ouargla  
Ghedamsi KACI, Bejaia  
hakim BAAZIZ, M'sila  
Hakim BELKHAJA, Ouargla  
Hichem MERABET, Algiers  
Kamel Eddine Aladi, Ouargla  
Kamel Saoudi, Bouira  
Karima BELAKROUM, Ouargla  
Khououd BEDOUD, Algiers  
Lazhar BECHKI, Ouargla  
Linda AISSANI, Khencela  
Mamoun FELLAH, Khencela  
Mebrouk GHOUALI, El Oued  
Mohammed MENAA, Algiers  
Mohammed SAAIDIA, Souk Ahras  
Mohammed YOUSFI, Laghouat  
Mohammed TRAICHE, Algiers  
Mohammed Sadok MAHBOUB, El Oued  
Mustafa MOSBAH, Laghouat

Nabil MAHAMDILOUA, Jijel  
Nadjet Ben CHIHEUB, Bordj Bou Arreridj  
Naouel HEZIL, Khencela  
Omar BENTOUILA, Ouargla  
Ried TOUFOUTI, Souk Ahras  
Ridha AHMED, El Oued  
Mosbah ZIDANI, Batna  
Said DRID, Batna  
Samir LADACI, Algiers  
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Sallani Med TOUFIK, Biskra  
Saraya GOUDER, Batna  
Soria ZEROUAL, El Oued  
Soudani Mohammed ELBAR, Ouargla  
Wassila TEBIB, Taref  
Youssef BEKAKRA, El Oued  
Youssef Soufi, Tebessa  
Yousfi LAATRA, Tebessa  
Zohair TIR, El Oued  
Zoubir Aouimi, Tebessa

#### Organizing Committee Chairs:

President: Abdelmalek ATIA  
Co-President: Mohammed Sadok MAHBOUB

#### Publication Chairs:

President: Mosbah ZIDANI  
Co-President: Youssef SOUFI

#### Website Chair:

Hanzla ADAJKA

#### Registration Fees:

The Conference registration fees

Students	8000.00 DZ
Teachers/Researchers	12000.00 DZ
Exhibitors	20000.00 DZ
Foreign participants	20000.00 DZ

**Note :** All participants benefit from access to all ICOMRE'22 sessions including keynotes and industry sessions, Welcome Reception, coffee breaks, lunches, sightseeing tours, Dinners, and accommodation are not included.

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#### Important dates

**Deadline of full papers submission**  
October 25, 2022.

**Acceptance notification**  
November 20, 2022.

**Early Registration deadline**  
November 25, 2022.

**Date of the Conference**  
December 12-13, 2022.

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#### Paper Submission:

Papers must be written in English and should describe the work in detail. Please download the template from the conference website:  
<https://levres.info/icomre22/>  
Paper submission is through:  
<https://easychair.org/conferences/?conf=icomre22>

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#### Publication

The selected outstanding papers will be invited to submit extended versions of their articles for publication as full journal papers in the following journals:  
Journal of Mechanical Engineering and Sciences JMES, (indexed by: Thomson Reuters ESCI)



## Sunday 11/12/2022

14:00 – 20:00

Conference Registration in Louss Hotel

## First Day- Monday: 12/12/2022

07 :30 - 08 :30

Conference Registration in Lecture Hall – Pr.A.SADALLAH

08 :30 - 09 :30

Opening Ceremony  
Lecture Hall – Pr.A.SADALLAH

09 :30 – 10 :00

**Plenary Session 1**  
Chairs:  
Pr. Soria Zeroual

Prof. Wissem Chikhrouhou  
**Director of LT2S  
Laboratory, CRNS Sfax -  
Tunisia**

**Nanoparticules  
magnétiques pour le  
traitement des tumeurs par  
hyperthermie magnétique**

10 :00 – 10 :30

**Plenary Session 2**  
Chairs:  
Pr. Houchati Mohammed  
Ikbal

Prof. Mohammed Traiche  
**General Director of CDTA  
Center, Algeria**

**Technologies des Lasers.**

10 :30– 11 :00

**Plenary Session 3**  
Chairs:  
Pr. Khelfaoui Fethi

Prof. Nabil Mahamdioua  
**Director of NDT Laboratory,  
Jijel University**

**Lanthanum Perovskite-  
Based Manganites for  
Spintronic Applications:  
Structure, Electrical and  
Magnetotransport  
properties**

11 :00 – 11 :30

**Posters Session (1)**  
Chairs:  
Dr. Azzeddine Begas  
Mr. Ghani Rihia

**The presence of Corresponding author of the paper is  
Obligatory**

11:30 – 12:00

**Coffee Break**

12 :00 – 14 :00

**Oral Workshop (1)**

**Materials**

Chairs:  
Pr. Baaziz Hakim

**Room 1**

**Lecture Hall –  
Pr. A. SADALLAH**

**Renewable Energy**

Chairs:  
Pr. Youcef Bekakra

**Room 2**

**1<sup>st</sup> Floor - Central Library**

**Optoelectronics**

Chairs:  
Dr. Omar Bentouila

**Room 3**

**2<sup>nd</sup> Floor - Central Library**

14 :00 – 15 :30

**Lunch**

15 :30

**Tourist Outing & Traditional Dinner.**

## Second Day – Tuesday: 13/12/2022 MediaTek Hall (Front to Technology Faculty)

08:00 – 08:30	Last Conference registration in MediaTek Hall (Front to Technology Faculty)		
08 :30 – 09 :00	<b>Plenary Session 4</b> Chairs: Dr. Attia Abdelmalek	Prof. Ferhat Rehouma <b>Director of LEVRES  Lab, University of  ElOued</b>	glases for integrated optics
09 :00 – 09 :30	<b>Plenary Session 5</b> Chairs: <b>Pr. Wissem  Chikhrouhou</b>	Prof. Mosbah Zidani <b>Batna2 University,  Algeria</b>	The scientific and technological interest of characterizing materials using the EBSD technique.
09 :30 – 10 :00	<b>Plenary Session 6</b> Chairs: Pr. Nabil Mahamdioua	Prof. Radhouane Chtourou <b>General Director of CRTEn  Center, Tunisia</b>	Le stockage de l'énergie et l'hydrogène vert.
10 :00 – 10 :30	<b>Coffee Break, &amp;  Posters Session (2)</b> Chairs: <u>Dr. Azzeddine Begas</u> <u>Mr. Ghani Rihia</u>	The presence of Corresponding author of the paper is Obligatory	
10 :30 – 12 :30	Oral Workshops (2)	<b>Materials</b> Chairs: Pr. Lazhar Bechki	<b>Room 1</b>  <b>1<sup>st</sup> Floor - Central Library</b>
		<b>Renewable Energy</b> Chairs: Pr. Djamila Rekioua	<b>Room 4</b>  <b>MediaTek Hall  (Front to Technology Faculty)</b>
12 :30 – 13 :00	<b>Closing Ceremony</b>  <b>MediaTek Hall  (Front to Technology Faculty)</b>		
13 : 00	Lunch		

## ICOMRE'22 PROGRAM

### Oral Session 1 - Room 1 : Lecture Hall – Pr. A. SADALLAH

#### Materials

Monday, 12/12/2022 ---- 12 :00 - 14 :00

	Topic	Full name	Paper title
01	Materials	Kaouthar AHMOUDA	Study of physicochemical properties of greenly synthesized iron oxide nanoparticles
02	Materials	MAGHCHICHE Abdelhak	Green Synthesis of Nanoparticles from Medicinal Plants
03	Materials	O. BEN MYA	Influence of precursors on ZnO films structural, microstructural, optical properties and copper ions removal
04	Materials	REZIG Walid	Preparation , Characterization of Diatomite Coated Fe(OH) <sub>2</sub> Nanoparticles and application in Photocatalytic Degradation of Organic pollutants
05	Materials	Samia AGGOUNE	Analysis Of Melt Pool Instabilities During Stainless Steel Selective Melting Process

### Oral Session 1 - Room 2 : 1<sup>st</sup> Floor - Central Library

#### Renewable Energy

Monday, 12/12/2022 ---- 12 :00 - 14 :00

	Topic	Full name	Paper title
01	Renewable Energy	Azzedine BOUTELHIG	Strengthening the irrigation need through the reuse of treated wastewater in agriculture. Perspectives in erecting solar still system in M'Zab valley
02	Renewable Energy	CHAIB Ibtissam	A Model Predictive Current Controller For Quasi Z- source Inverter
03	Renewable Energy	GRAIRIA Mohamed islam	An Improved Drooping Control for Distributed Generation Inverters in an Islanded AC Microgrid
04	Renewable Energy	Bennadji Hocine	Backstepping and Modified Backstepping Control for Doubly Fed Induction Motor
05	Renewable Energy	SAYEH Karim Fathi	Direct Active and Reactive Power Control of Wind Energy Conversion System based DFIG passing through different operation modes
06	Renewable Energy	Abdelhak KEDDOUDA	Solar photovoltaic power prediction using artificial neural networks

## ICOMRE'22 PROGRAM

### Oral Session - Room 3 : 2<sup>nd</sup> Floor - Central Library

#### Optoelectronics

Monday, 12/12/2022 ---- 12 :00 - 14 :00

	Topic	Full name	Paper title
01	Optoelectronics	BOUAOUINA Mohamed Salah	Investigation of a fast optical half-adder combining nonlinear 2D-PC ring resonator and interference beams
02	Optoelectronics	MEGUELLATI Sami	Modeling of a distributed fiber optic sensor based on Phase-OTDR for dynamic monitoring applications
03	Optoelectronics	KHERIF Madjeda	Diffraction of vector vortex beams by a circular aperture
04	Optoelectronics	AHMID Djelloul	Comparative study of violet and green InGaN-based SQW LEDs using Silvaco TCAD tool
05	Optoelectronics	YOUSFI A	Angular acceleration of twisted beams

### Poster Session 1

#### Materials, Optoelectronics & Renewable Energy

Monday, 12/12/2022 ---- 11 :00 - 11 :30

	Topic	Full name	Paper title
01	Materials	BRIKI Lyamine	Use of calcination residue from Chicken Egg Shells as a substitute for cement
02	Materials	Rebai BILLEL	Advanced composite materials Study of sandwich Plate structures made of (Metal: Ti-6Al-4V/ Ceramic: ZrO <sub>2</sub> ) exposed at linear and nonlinear external thermal charge.
03	Materials	Amel GHARBI	Elaboration, Characterization and Corrosion Behavior of Al-10%Mo Alloy
04	Materials	LAMECHE Siham	Elaboration and Electrochemical properties of Sn/SnO <sub>2</sub> modified electrode for environmental application
05	Materials	DJEGHADER Djamel	Water absorption and impact toughness of glass-reinforced composite materials
06	Materials	Oualid GHELLOUJ	Effect of Temperature on the Electrochemical Behaviour of API 5L X52 Pipeline Steel in Different Soils
07	Materials	ROUIHA Zohra	Green Synthesis And Characterization Of Nanoparticle
08	Materials	ZELMATI Djamel	Probabilistic notched failure assessment diagram for reliability estimation



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09	Materials	BOUREBBOU Amor	Investigation of the wear of tungsten carbide inserts during cutting in turning
10	Materials	LANEZ Imane	Study of structural, optical, and spectroscopic properties of Eu <sup>3+</sup> doped (Gd <sub>2</sub> O <sub>3</sub> /Lu <sub>2</sub> O <sub>3</sub> )- Al <sub>2</sub> O <sub>3</sub> systems, synthesized by solid state reaction
11	Optoelectronics	ASKRI Souhaila	Determining the Density and Temperature of a Gas Mapping Profile Using Measurement Optical Interferometry. Application He-Ne Laser
12	Optoelectronics	OU DENANI Ahmed	Modeling Study of Different Photonic Crystal Fiber for Sensors
13	Optoelectronics	KOUICEM Imene	Comparative study of solar lasers performance with Nd:YAG and Nd:Glasses active mediums
14	Optoelectronics	REGUIG Maroua	Comparative study of Nd: YAG solar laser performance in end-pumping, side-pumping and end-side-end-pumping configurations
15	Renewable Energy	TIZZAOUI Mouloud	Thermal Loads Evaluation of Cold Storage Container for Vegetables in Rural Saharan Environment
16	Renewable Energy	REHOUMA Youssef	Effet inclination for PV System and data acquisition used CPU in experimental validation
17	Renewable Energy	Hamza ADAIKA	Bearing Fault Diagnosis by Using Convolutional Neural Network and Information Fusion on Induction Motor
18	Renewable Energy	Bouderres Nacer	Comparative Analysis and Optimization of MPPT Algorithms using Classical and Machine Learning Methods Applied to a Standalone Photovoltaic Plant
19	Renewable Energy	ZELLOUMA Dalal	Eliminate of Torque Ripple using Fuzzy Logic Backstepping Control of an Induction Motor
20	Renewable Energy	Abdallah DOGGA	"Experimental study of Biodiesel extraction from the Algerian desert plants: A Case of Castor Bean
21	Renewable Energy	Badreddine GUEMMOU	Optimal Placement of PMUs for Power System Using Gazelle Optimizer Algorithm

## ICOMRE'22 PROGRAM

### Oral Session 2 - Room 2 : 1<sup>st</sup> Floor - Central Library

#### Materials

Tuesday, 13/12/2022 ---- 10 :30 - 12 :30

	Topic	Full name	Paper title
01	Materials	FACI Youcef	An experimental analysis of open-hole composite damage by Digital image correlation.
02	Materials	Kaouthar AHMOUDA	Study of physicochemical properties of greenly synthesized iron oxide nanoparticles
03	Materials	RADJEHI Lamia	Ag <sub>2</sub> O/TiO <sub>2</sub> nanocomposites for improved photocatalytic and antibacterial performance
04	Materials	BELBEL Abdeljabbar	1- Adsorption and Photophysical Properties of Fluorescein Dye over Zr-Pillared Montmorillonite 2- Removal of Imidazolium Ionic Liquids from Aqueous Solutions Using Pillared Clay

### Oral Session 2 – Room 4 : MediaTek Hall -(Front to Technology Faculty)

#### Renewable Energy

Tuesday 13/12/2022 ---- 10 :30 - 12 :30

	Topic	Full name	Paper title
01	Renewable Energy	Nacer LEBBIHIAT	Thermal performance evaluation of spiral earth–air heat exchanger for summer cooling
02	Renewable Energy	Hazem BAKINI	Performance Evaluation of Modulated Model Predictive Control for a Three-Phase two level Inverter
03	Renewable Energy	Fares BETTAHAR	MPPT Design Using Cuckoo Search Algorithm Technique for Photovoltaic System under Partial Shading Conditions
04	Renewable Energy	BAKINI Hazem	An Improved Adaptive Deadbeat Control Using Online Model Parameter Identification for Grid-Connected Two-Level Inverter
05	Renewable Energy	Deboub RAOUF	A Robust Droop Control Technique for Parallel Inverters in Micro Grid Applications

## ICOMRE'22 PROGRAM

### Poster Session 2 - MediaTek Hall -(Front to Technology Faculty)

### Materials & Renewable Energy

Tuesday, 13/12/2022 ---- 10 :00 - 10 :30

	Topic	Full name	Paper title
01	Materials	BAIRA FAYCAL	STUDY OF THE PROPERTIES OF INDUSTRIALLY DEFORMED AND ANNEALED COPPER WIRE
02	Materials	NAIMI Nesrine	Structural and Optical properties of LiGd1-xLux(WO4)2 co-doped Yb3+/Er3+
03	Materials	Sara FARES	Influence of Zr content on the morphology and mechanical properties of chromium nitrides coatings
04	Materials	SALHI FAIZA	X-ray characterization of Cr-N hard coating
05	Materials	HADDAD Nouredine	Degradation of the mechanical behavior of polyethylene PEDH80 by artificial aging under the effects of ultraviolet radiation and tensile testing.
06	Materials	RABHI Chaima	Primary Reagent Nature Effect on Bi-2212 Superconducting Phase Precursor Formation Using Photo-polymerization Based Method
07	Materials	NAIMI NESRINE	Structural and Optical properties of LiGd1-xLux(WO4)2 co-doped Yb3+/Er3+
08	Materials	ALLAG Nassiba	Influence of precursors on ZnO films structural, microstructural, optical properties and copper ions removal
09	Materials	REKIK Brahim	Study of structural, optical, and spectroscopic properties of Eu3+ doped (Gd2O3/Lu2O3)- Al2O3 systems, synthesized by solid state reaction
10	Materials	Ayachi Mohammed Lakhdar	Nonlinear optical properties of pure tin oxide
11	Renewable Energy	Rekioua Djamila	Design and feasibility of a photovoltaic/wind turbine/battery system in Béjaïa area
12	Renewable Energy	Djaafar TOUMI	A Comparative Study Between three Different MPPT Algorithms for Photovoltaic System
13	Renewable Energy	ALIA Imane	Circulating Current Elimination for Double-stage Grid-Connected Modular Multilevel Converter in PV Applications
14	Renewable Energy	Fettah KHALED	A Review of Solar Photovoltaïque Potential in Algeria
15	Renewable Energy	BEN ALI Hammoudi	Direct Torque Control of Doubly-Fed Induction Generator for Wind turbine generation
16	Renewable Energy	Mounira Chelgham	Degradation of the mechanical behavior of polyethylene PEDH80 by artificial aging under the effects of ultraviolet radiation and tensile testing.



**WELCOME TO EL OUED**