



*physical sciences  
forum*

Editorial

---

# Preface of the First International Conference on Physics of Semiconductor Devices, Renewable Energies, and Environment

---

Mebarka Daoudi, Syham Kadri, Youcef Himri, Mohamed Bensafi and Abdelkarim Talhi



<https://doi.org/10.3390/psf2023006009>

Editorial

# Preface of the First International Conference on Physics of Semiconductor Devices, Renewable Energies, and Environment <sup>†</sup>

Mebarka Daoudi <sup>1,\*</sup> , Syham Kadri <sup>1</sup>, Youcef Himri <sup>1</sup>, Mohamed Bensafi <sup>1</sup> and Abdelkarim Talhi <sup>2</sup>

<sup>1</sup> Department of Sciences of Matter, Faculty of Exact Sciences, University of Bechar, Bechar 08000, Algeria; kadri.syham@univ-bechar.dz (S.K.); himri.youcef@univ-bechar.dz (Y.H.); bensafi.mohamed@univ-bechar.dz (M.B.)

<sup>2</sup> Laboratory of Environmental and Energy Systems, Institute of Science and Technology, University Center of Tindouf, Tindouf 37000, Algeria; karim.talhi@gmail.com

\* Correspondence: daoudi.mebarka@univ-bechar.dz; Tel.: +213-657171428

<sup>†</sup> Presented at the 1st International Conference on Physics of Semiconductor Devices, Renewable Energies and Environment, Bechar, Algeria, 14–16 November 2022.

## 1. Conference Overview

The University of Bechar, Algeria, held an international conference on physics, renewable energies, and environment (ICPSDREE) from 14 to 16 November 2022. Professors and researchers from various countries attended ICPSDREE 2022, both virtually and in-person. The conference included four regular sessions and one special session, which were organized as follows: physics of semiconductor devices; renewable energies; environment; heat flow and matter transfer (Figure 1).



Figure 1. ICPSDREE 2022 Bechar, Algeria.



Citation: Daoudi, M.; Kadri, S.; Himri, Y.; Bensafi, M.; Talhi, A. Preface of the First International Conference on Physics of Semiconductor Devices, Renewable Energies, and Environment. *Phys. Sci. Forum* **2023**, *6*, 9. <https://doi.org/10.3390/psf2023006009>

Published: 13 October 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 2. Conference Program

The first day, 14 November 2022: Physics of semiconductor devices session in parallel with the environment session. There were 4 interventions—3 internationals on Zoom, 1 national in person; and 20 national interventions—3 in person, 17 on Zoom. The event explored experimental topics related to semiconductors; specifically, their characteristics and applications in optoelectronics. In the morning, the keynote presentation was given by Researcher Professor Shunipati Jagadish from Australia, entitled: “Semiconductor Nanostructures for Optoelectronics Applications”.

In the evening, Professor Merad Abdelkarim from the University of Tlemcen, Algeria, presented an intervention entitled: “Promising alternative new class of A<sub>2</sub>BX<sub>6</sub> double lead-free perovskites for solar cell applications”. These were the stages of a partnership project with other international countries.

The second intervention was presented by Professor Tse Nga Ng from the USA, under the title: “Polymeric Devices for Infrared Up conversion Imagers and Energy Storage”.

Most of the national interventions dealt with basic topics, such as are the study of the various properties of semiconductor compounds such as ZnO, Mn<sub>2</sub>PdSn, CoFe-TiAs, CsPbCl<sub>3</sub>, AgCl, AgBr, CdS, SnO<sub>2</sub>, CrCoScGa, KMgO<sub>3</sub>, CsBrF<sub>4</sub>, (ZnO)<sub>(0.4)</sub>(CdO)<sub>(0.6)</sub>, BaMg<sub>2</sub> × 2N<sub>4</sub>, and TlBiTe<sub>2</sub>.

The presented results were intended as an incentive for these types of compounds to be used in optoelectronics. Stakeholders compared different generations of solar cells to understand them better or to improve their production.

During the environment session, there were 3 national interventions in person and 18 interventions via Zoom. This session included the following topics: geophysics and its applications in geothermal; underground water and pollution with proposed solutions to all problems.

The second day, 15 November 2022: The organizers arranged two sessions, one on renewable energies, and another one heat flow and matter transfer. The renewable energies session contained one international via Zoom and 21 nationals, which we divide them in 13 via Zoom and 8 in presence. They discussed renewable energies with a focus on solar energy, concentrated solar energy, and studying various types of solar cells. The presentations covered the study of several photovoltaic, thermal, and hybrid systems. They explained how to calculate photovoltaic and thermal sizing and how to cool them to improve efficiency. In the session on flow, heat transfer, and matter, the activities took place in the morning and only for the limited number of participants. The session contained one general intervention and seven national interventions, including four in person and three via Zoom. The session began with a talk from Professor Draoui Belkacem of the University of Bechar, discussing the modeling, identification, and control of buildings in terms of improving their thermal energy performance. The case in point was in southwest Algeria.

The final day, 16 November 2022: it focused This session on medical physics. It contained three interventions, two nationals in attendance and one was international via Zoom. Dr. Rahal Lotfi from the Faculty of Medicine at the University of Bechar performed the initial intervention, giving a talk entitled: “Methods and interests of bioelectric impedance in medical practice”. The doctor discussed biology topics such as the environment, intracellular fluid (ICF), and extracellular fluid (ECF). He also discussed the phase angle, the resistance ratio, and the relationship between them. The second intervention, given by Prof. Luca VARANI from the University of Montpellier, France, was a presentation entitled: “Investigation of the interactions between biomolecules: a crossroad of physics, electronics, chemistry and biology”.

He talked about Terahertz spectroscopy and its relation to absorption spectrum and diffusion coefficient. Professor Djamila Halich presented about entrepreneurship and the University.

ICPSDREE 2022 hosted over 50 physical participants and over 60 virtual participants (Figure 2 presents the most participants). It included four keynote speakers (from Algeria,

Australia, the USA, and France), one guest speaker, three invited speakers, and one hundred talks in oral sessions.



**Figure 2.** ICPSDREE 2022 participants.

### 3. Conference Committee

#### 3.1. Scientific Committee

Prof. Mebarka DAOUDI (U. Bechar, Algeria)  
 Prof. Abderrahme BELGHACHI (U. Bechar, Algeria)  
 Prof. Abderrachid HELMAOUI (U. Bechar, Algeria)  
 Prof. Ahmed KETTAB (U. Bouira, Algeria)  
 Prof. Krim LOUHAB (U. Bumerdes, Algeria)  
 Prof. Abdelhak MAAZOUZI (U. Bechar, Algeria)  
 Prof. Hafid AOURAG (ex. Director DGRSDT, Algeria)  
 Prof. Mohammed Ben youcef AZIZI (U. Bechar, Algeria)  
 Prof. Abdelkrim E. MERAD (U. Tlemcen, Algeria)  
 Prof. Luca VARANI (France)  
 Prof. Tina NG (USA)  
 Prof. Chennupati JAGADISH (Australia)  
 Prof. Ali J. CHAMKHA (Kuwait)  
 Prof. Ali MOSTAFAEIPOUR (Iran)  
 Dr. Shafiqur REHMAN (Saoudi Arabia)  
 Prof. Syham KADRI (U. Bechar, Algeria)  
 Prof. Adel MELLIT (U. Jijel, Algeria)  
 Prof. Mounir AKSAS (HS.R.E.E.S.D. Batna, Algeria)  
 Prof. Elkenani Bernes ELKENANI (Egypt)  
 Prof. Mohammed GHAZALI (U. Bechar, Algeria)  
 Prof. Abdelhamid TOUHAMI (U. C. Tindouf, Algeria)  
 Prof. Safia TALEB (U. Sidi Bel Abbes, Algeria)  
 Prof. Karima YAHIAOUI (U. Bumerdes, Algeria)  
 Prof. Nabila BENSACIA (U. Blida 1, Algeria)  
 Prof. Rym RAYAHI (ISTEG, Tunisia)  
 Prof. Jalal HALWANI (U. Lebanon, Lebanon)  
 Prof. Radwan EL-WESHAH (U. Jordan, Jordan)  
 Prof. Ragab RAGAB (C.E.H., UK)

Prof. Djaouida CHENAF (R. M. C., Canada)  
Prof. Lucila CANDELA (Spain)  
Prof. Baghdad OUDDANE (U. Lile 1, France)  
Prof. Serm JANJAI (U. Silpakorn, Thailand)  
Prof. Fouad KHALDI (HS.R.E.E.S.D. Batna, Algeria)  
Prof. F. COMAIR (Chypre)  
Prof. Leila ALIOUANE (Boumerdes INH, Algeria)  
Prof. Abdelghani BOUBEKRI (U. Oualgla, Algeria)  
Prof. Naima TAHRAOUII (U. Chlef, Algeria)  
Prof. Nesrine BOUJEBEN (Tunisia)  
Prof. Meriem ELLOUZE (U. Sfax, Tunisia)  
Prof. Concetta Buzzoniti Maria (Italy)  
Prof. H. LOUNICI (U. Bouira, Algeria)  
Prof. Eric DUCHEMIN (Editor in chief, VERTIGO, Canada)  
Prof. N. KHLIFI (Springer, Germany)  
Prof. B ISSELMOU (Mauritania)  
Prof. Bihrat Onoz (Turkey)  
Prof. Rabia SA'ID (U. Bayero Kano, Nigeria)  
Prof. Noureddine GHAF FOUR (Kaust, Saudi Arabia)  
Prof. S. Nidal GIWEH (Switzerland)  
Prof. Abdelkader NOURI (U. Bechar, Algeria)  
Prof. Benmoussa DENNAI (U. Bechar, Algeria)  
Prof. Abderrahmane HAMANI (U. Bechar, Algeria)  
Prof. Halliche Djamila (USTHB, Algeria)  
Mohammed Amine GHEBOULI (U. M'sila)  
Dr. Ilhem LOUCIF (minis. Agriculture, Algeria)  
Dr. Lotfi RAHAL (U. Bechar, Algeria)  
Dr. Mohammed BENSAFI (U. Bechar, Algeria)  
Dr. Abdelkrim TALHI (U. C. Tindouf, Algeria)  
Dr. Said BENNACEUR (U. Bechar, Algeria)  
Dr. Youcef HIMRI (U. Bechar, Algeria)  
Dr. Houaria BOURBABA (U. Bechar, Algeria)  
Dr. Ahmed BOUIDA (U. Bechar, Algeria)  
Dr. Khelifa HAMI (U. C. Tindouf, Algeria)  
Dr. Chibuisi C. OKORIEIMOH (Ireland)  
Dr. Abdelghani DRAOUI (U. C. Tindouf, Algeria)  
Dr. Wahiba MOUKRANE (N. P. S. Algiers, Algeria)  
Dr. Fatima HADJADJ (U. Bechar, Algeria)  
Dr. Sabira Nour (H. N. S. Bechar, Algeria)  
Dr. Fathia CHEKIREN (UDS. CDER, Algeria)  
Dr. Abdelkader HELLAL (U. Setif, Algeria)  
Dr. Lyes Bennamoun (Canada)  
Dr. F. BOUHIRED/SAHNOUNE (CDER, Algeria)  
Dr. Rumman Nancy RUMMAN (Palestine)  
Dr. Naima Ghoutia SABRI (U. Bechar, Algeria)  
Dr. Wafa DIFALLAH (U. Bechar, Algeria)  
Dr. Abdelouahab BENSEDDIK (URAER/Ghardaia, Algeria)  
Mr. Daniel LOUDIERE (SHF, France)  
Dr. Selmin BURAK (Turkey)

### 3.2. Organizing Committee

Prof. Mebarka DAOUDI (U. Bechar, Algeria)  
Prof. Ahmed KETTAB (U. Bouira, Algeria)  
Prof. Abdelhak MAAZOUZI (U. Bechar, Algeria)

Prof. Syham KADRI (U. Bechar, Algeria)  
 Prof. Mohammed GHAZALI (U. Bechar, Algeria)  
 Prof. Souad DOULI (U. Bechar, Algeria)  
 Dr. Mohammed BENSAFI (U. Bechar, Algeria)  
 Dr. Abdelkrim TALHI (U. C. Tindouf, Algeria)  
 Dr. Said BENACEUR (U. Bechar, Algeria)  
 Dr. Youcef HIMRI (U. Bechar, Algeria)  
 Dr. Houaria BOURBABA (U. Bechar, Algeria)  
 Dr. Ahmed BOUIDA (U. Bechar, Algeria)  
 Dr. Khelifa HAMI (U. C. Tindouf, Algeria)  
 Dr. Fatima BELHOSSINE (U. Bechar, Algeria)  
 Dr. Sabira NOUR (U. Bechar, Algeria)  
 Dr. Naima Ghoutia SABRI (U. Bechar, Algeria)  
 Dr. Wafa DIFALLAH (U. Bechar, Algeria)  
 Dr. Kenza DJARMANE (U. Bechar, Algeria)  
 Asma MISSOUM PhD (U. Bechar, Algeria)  
 Karima SEDDIKI PhD (U. Bechar, Algeria)  
 Mr. Youcef WOUSTANI (U. Bechar, Algeria)  
 Mrs. Kenza BENYAHYA (U. Bechar, Algeria)  
 Dr. Souad GUESSAR (U. Bechar, Algeria)  
 Dr. Tadj GHOMRI (U. Bechar, Algeria)  
 Miss Fouzia MEHDI  
 Miss Hanane MAMMERI  
 Miss Romayssa ESSALAMI

#### 4. Conference Speaker

Figure 3 sets introduces the speakers at our conference.

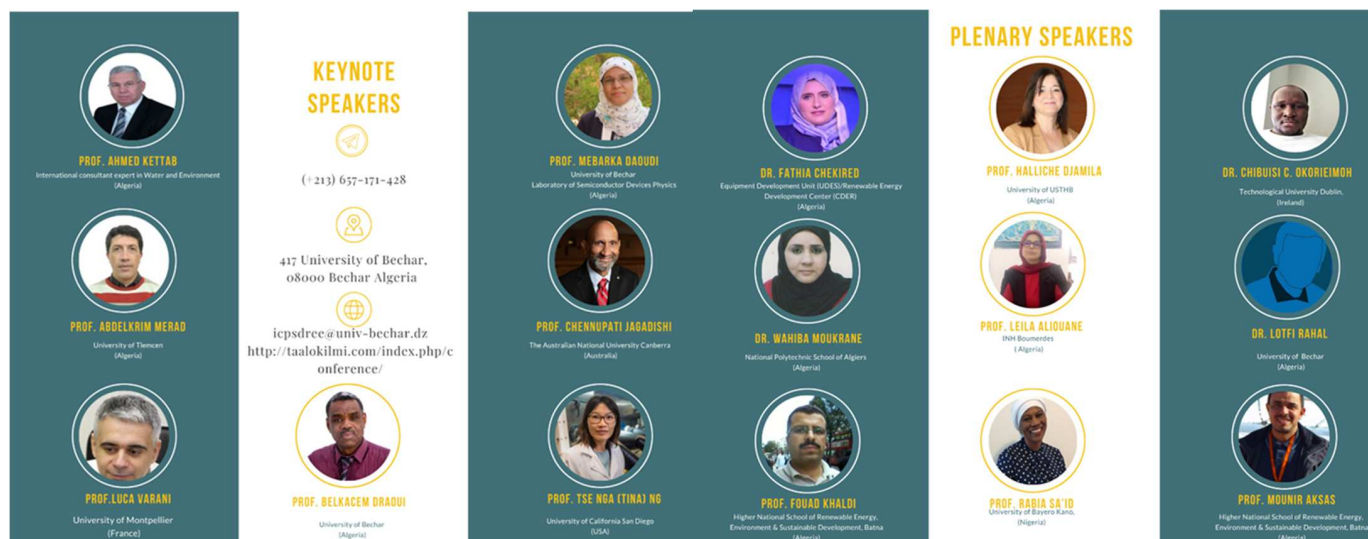


Figure 3. Conference speakers.

#### 5. Conference Sponsor

The conference chair would like to thank the sponsors (Figure 4) for supporting this event.



Figure 4. ICPSDREE sponsors.

**Conflicts of Interest:** The authors declare no conflict of interest.

**Disclaimer/Publisher’s Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.