Hadjer SOUFI

Masters of Energy Physics and Renewable Energy

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EDUCATION

2018-2021

Bachelor in fundamental physics, University of Abou Bakr Belkaïd - Tlemcen, Algeria

2021-2023

Master in Energy Physics and Renewable Energy, University of Abou Bakr Belkaïd - Tlemcen, Algeria.

AREAS OF

- Material Sciences .
- Photovoltaic.
- Photovoltaic/ Thermal Sciences.

COMPUTER SKILLS

- MATLAB software
- PC1D , SCAPS, AMPS, GPVDM softwares
- Microsoft Word, Excel,
- PowerPoint, Outlook

LANGUES

- ARABIC
- FRENCH
- ENGLISH

BIOGRAPHY

Hadjer SOUFI received her Bachelor in fundamental physics in 2021 and her Masters in Energy Physics and Renewable Energy in 2023 from University of Abou Bakr Belkaïd - Tlemcen, Algeria. Her research interests include Thermoelectric, Photovoltaic energy. Its current research interest is to improve the performance of the recent PV cell materials, diode technology. Currently, Hadjer is research assistant in the Renewable Materials and Energies Research Unit (U.R.M.E.R.), University of Tlemcen-Algeria.

ADDITIONAL TRAINING

1-Summer University: Algerian American Foundation Summer University 2022. On line conference, August 26th-28th, 2022 and September 09th-11th, 2022.

ACADEMIC CONTRIBUTION

1- Conference proceeding

Hadjer Soufi, Khadidja Rahmoun, Numerical simulations of device performances made of Formamidinium tin iodide $CH_4N_2SnI_3$ based perovskite solar cells, in the proceeding of International Conference on Solar Energy and Hybrid Systems (ICSEHS'22) , Laghouat Algeria, 3 Mai 2023.

2- Paper

Hadjer Soufi, Khadidja Rahmoun, Mohamed El Amine Slimani, Design of a Hybrid Photovoltaic-Thermal Solar Collector: Utilization of High-Efficiency Perovskite-Based Solar Cells, a springer book series Lecture Notes in Networks and Systems. https://doi.org/10.1007/978-3-031-60629-8_33

3- Book Contribution

- **SOUFI Hadjer,** RAHMOUN Khadidja, SLIMANI Mohamed El Amine. (2024) Device Simulation of Cesium Tin Iodide Based Perovskite Solar Cell. LAMBERT Academic Publishing. ISBN: 978-620-7-46204-9.

- BOUHENNA Abdelkader, BELOUFA Nabil, **SOUFI Hadjer.** (2024) GGA and GGA+ TB-mBj Study of Oxyde Perovskite in Cubic Phase. LAMBERT Academic Publishing. ISBN : 978-620-7-45795-3.

4- Scientific Communications

1. **Hadjer Soufi,** Khadidja Rahmoun, Device simulation of formamidinium tin iodide (FASnI3) based perovskite solar cell using SCAPS-1D , **The 1ST International conference on renewable materials and energies (ICRME2022)**, 26-27 Octobre 2022,Ouargla-Algerie.

2. **Hadjer Soufi,** Khadidja Rahmoun, Numerical simulation of device performaces made of methylammonium tin iodide [CH_3 NH_3SnI_3] based perovskite solar cells, **Day on materials, renewable energies and environment (DMREE'2022)**, 23 Novembre 2022, Tlemcen-Algerie .

3. **Hadjer Soufi,** Khadidja Rahmoun, Numerical simulations of device performances made of Formamidinium tin iodide [$CH_4N_2SnI_3$] based perovskite solar cells, **International Conference on Solar Energy and Hybrid Systems (ICSEHS'22)** , 3 Mai 2023, Laghouat –Algerie .

4. **Hadjer Soufi,** Khadidja Rahmoun, Mohamed El Amine Slimani, Numerical simulation of device performances made of cesium tin iodide [$CsSnI_3$] based perovskite solar cells, **International Conference on Environment and Sustainable Development (ICSEHS'23)** , 5-6 Juin 2023, Oran–Algerie ,

5. **Hadjer Soufi,** Khadidja Rahmoun, Mohamed El Amine Slimani, Abdelkader Bouhenna, Wissem Benaissa, Device Simulation of Methylammonium Tin Iodide ($MASnI_3$) Based Perovskite Solar Cell Using SCAPS-1D, **The First National Conference Of Materials Sciences And Renewable Energy CMSRE23** on November 22-23, 2023 in Relizane, Algeria,

6. **Hadjer Soufi,** Advancements in High-Performance Lead-Free Perovskite Solar Cells, **2nd International Conference on Frontiers in Academic Research** on 4-5 December in 2023 at Konya/Turkey **.**

7. **Hadjer Soufi,** Enhancing Efficiency in Perovskite Solar Cells: Exploring Parameters for Optimal Performance, **2nd International Conference on Frontiers in Academic Research** on 4-5 December in 2023 at Konya/Turkey.

8. **Hadjer Soufi ,** Modeling Device Efficiency in $CsSnI_3$ Perovskite Solar Cells: A Numerical Approach, **2nd International Conference on Frontiers in Academic Research** on 4-5 December in 2023 at Konya, Turkey.

9. **Hadjer Soufi,** DFT study on the structural and optoelectronic properties of cubic perovskite type $GdAlO_3$ AND $DyAlO_3$, **2nd International Conference on Frontiers in Academic Research** on 4-5 December in 2023 at Konya, Turkey.

10. **Hadjer Soufi,** Numerical simulation and performance optimisation of a perovskite solar cell, **3rd International Conference on Scientific and Academic Research** on 25-26 December in 2023 at Konya/Turkey.

11. **Hadjer Soufi,** Optimization of Oxide Perovskites materials XOsO3 (X= B,Cs, In , Pa): A theoretical study, **3rd International Conference on Scientific and Academic Research** on 25-26 December in 2023 at Konya/Turkey.

12. **Hadjer Soufi,** Design and Simulation of Perovskite Solar cell Using SCAPS-1D WS2 / CH3NH3BiI3 / Spiro-OMeTAD, **3rd International Conference on Scientific and Academic Research** on 25-26 December in2023atKonya/Turkey.

13. Hadjer Soufi, Enhancing Hole Transport Layer Materials for Lead-Free Perovskite Solar Cells, **3rd International Conference on Scientific and Academic Research** on 25-26 December in 2023 at Konya/Turkey.

14. **Hadjer Soufi,** Khadidja Rahmoun, Mohamed El Amine Slimani, Design of a Hybrid Photovoltaic-Thermal Solar Collector: Utilization of High-Efficiency Perovskite-Based Solar Cells, **Seventh International Conference on Artificial Intelligence in Renewable Energetic Systems**.

15. **Hadjer Soufi,** Studies on the Optoelectronic Properties of Various TCO Materials for Photovoltaic Applications, **4th International Conference on Innovative Academic Studies** March 12 – 13 in 2024 at Konya/Turkey.

16. Hadjer Soufi, Structure, Electronic Structure, Optical Studies of Oxide Perovskite : A Numerical Study, **4th International Conference on Innovative Academic Studies** March 12 – 13 in 2024 at Konya/Turkey.

17. Hadjer Soufi, Optoelectronic Properties and Device Performance of perovskite, **2nd International Conference on Scientific and Innovative Studies ICSIS** 2024 on April,18-19, 2024 in Konya/Turkey.

18. **Hadjer Soufi**, Mohamed El Amine Slimani, Khadidja Rahmoun , Efficiency optimization of lead-free perovskite solar cell with CsSnI3 active layer: A Numerical Study, **International Conference On Energy And Sustanability ICES** 2024, April, 22-23,2024 in Ibra, Sultanate of Oman.

19. **Hadjer Soufi**, Abdelkader Bouhenna, Khadidja Rahmoun, Mohamed El Amine Slimani, Wissem Benaissa, Improving Solar Cell Efficiency: Exploring High-Performance Tandem Solar Cells Integration Lead-Free Perovskite on Silicon (PV/Si) via Design and Numerical Analysis, The International Conference On Engineering, Natural Sciences And Technological Developments (ICENSTED 2024) on July 19-21, 2024 in Erdek, Turkiye.