

### Basic Information :

**Name :** MOSTAFA MOHAMED SALAHELDIN ABDELKHALEK ELEWA

**Title :** lecturer



Mostafa Mohamed Salah El Dein  
Born on October 1, 1991

### Education:

| Certificate | Major | University | Year |
|-------------|-------|------------|------|
| PhD         |       |            | 2023 |
| Masters     |       |            | 2019 |
| Bachelor    |       |            | 2013 |

### Teaching Experience:

| Name Of Organization | Position | From Date  | To Date |
|----------------------|----------|------------|---------|
| FUE                  | Lecturer | 01/10/2013 | Current |

### Researches / Publications :

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| Optoelectronic Device Modeling and Simulation of Selenium-Based Solar Cells under LED Illumination  |
| An Investigation of the Inverted Structure of A PBDB:T/PZT:C1-Based Polymer Solar Cell  |
| Advancements in adsorption based carbon dioxide capture technologies- A comprehensive review  |
| Numerical Analysis of Carbon-Based Perovskite Tandem Solar Cells: Pathways Towards High Efficiency and Stability  |
| A Novel Approach for Hand-written Digit Classification Using Deep Learning  |
| Excellent Thermoelectric Performance in KBaTh (Th = Sb, Bi) Based Half-Heusler Compounds and Design of Actuator for Efficient and Sustainable Energy Harvesting Applications            |
| Developing an Integrated Soft-Switching Bidirectional DC/DC Converter for Solar-Powered LED Street Lighting   |
| Theoretical insights into the structural, optoelectronic, thermoelectric, and thermodynamic behavior of novel quaternary LiZrCoX (X = Ge, Sn) compounds based on first-principles study |
| Studies on Optoelectronic and Transport Properties of XSnBr <sub>3</sub> (X = Rb/Cs): A DFT Insight   |
| Adaptive Fast-Terminal Neuro-Sliding Mode Control for Robot Manipulators with Unknown Dynamics and Disturbances   |
| Similarity Index of the STFT-based Health Diagnosis of Variable Speed Rotating Machines   |
| Concurrent Design of Alloy Compositions of CZTSSe and CdZnS Using SCAPS Simulation: Potential Routes to Overcoming VOC Deficit  |
| First Principle Study on Structural, Thermoelectric, and Magnetic Properties of Cubic CdCrO <sub>3</sub> Perovskites: A Comprehensive Analysis  |
| A Cache-Enabled Device-to-Device Approach Based on Deep Learning  |
| Efficient DCNN-LSTM Model for Fault Diagnosis of Raw Vibration Signals: Applications to Variable Speed Rotating Machines and Diverse Fault Depths Datasets                              |
| Development of a New Zeta Formula and Its Role in Riemann Hypothesis and Quantum Physics  |
| An Evolutionarily Based Type-2 Fuzzy-PID for Multi-Machine Power System Stabilization   |
| Investigation of Polymer/Si Thin Film Tandem Solar Cell Using TCAD Numerical Simulation   |
| Electronic Properties, Linear and Nonlinear Performance of KAgCh (Ch = S, Se) Compounds: A First-Principles Study   |

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| Analytical Design of Optimal Model Predictive Control and Its Application in Small-Scale Helicopters   |
| First-Principles Studies on the Physical Properties of the Half Heusler RbNbCd and RbNbZn Compounds: A Promising Material for Thermoelectric Applications                            |
| A New Self-Tuning Deep Neuro-Sliding Mode Control for Multi-Machine Power System Stabilizer  |
| A Comprehensive Review on Recent Advancements in Absorption-Based Post Combustion Carbon Capture Technologies to Obtain a Sustainable Energy Sector with Clean Environment           |
| Metal Oxide Nanosheet: Synthesis Approaches and Applications in Energy Storage Devices (Batteries, Fuel Cells, and Supercapacitors)  |
| Numerical Simulation and Optimization of Inorganic Lead-Free Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> -Based Perovskite Photovoltaic Cell: Impact of Various Design Parameters |
| A Comprehensive First-Principles Investigation of SnTiO <sub>3</sub> Perovskite for Optoelectronic and Thermoelectric Applications   |
| Device Modeling of Efficient PBDB-T:PZT-Based All-Polymer Solar Cell: Role of Band Alignment   |
| Investigation of High-Efficiency and Stable Carbon-Perovskite/Silicon and Carbon-Perovskite/CIGS-GeTe Tandem Solar Cells   |
| Design and Simulation of ETL-Free Perovskite/Si Tandem Cell With 33% Efficiency  |
| Simulation of High open-circuit voltage Perovskite/CIGS-GeTe tandem cell   |
| Investigation of Electron Transport Material-Free Perovskite/CIGS Tandem Solar Cell  |
| Analysis of an Efficient ZnO/GeTe Solar Cell Using SCAPS-1D  |
| High-Efficiency Electron Transport Layer-Free Perovskite/GeTe Tandem Solar Cell: Numerical Simulation  |
| On the Investigation of Interface Defects of Solar Cells: Lead-Based vs Lead-Free Perovskite   |
| High Efficiency Tandem Perovskite/CIGS Solar Cell  |
| A comprehensive simulation study of hybrid halide perovskite solar cell with copper oxide as HTM   |
| A comparative study of different ETMs in perovskite solar cell with inorganic copper iodide as HTM   |