

Calling for applications

RESEARCH ASSISTANTS (FULLTIME)

Grant/Project:

Enhancing the performance of CdS/CdTe thin film solar cells and analysis and design of microinverters for thin film solar cell applications.

Minimum Qualifications:

Research Assistant Position 01

- Bachelor of the Science of Engineering Honours specializing in Electrical and Electronic Engineering or Electronic and Telecommunication Engineering with First Class or Second-Class Upper Division pass
- Exposure to design, simulation, hardware implementation and testing of power electronic circuits.

Research Assistant Position 02

- B.Sc. Honours specialized in Physics or Chemistry or B.Sc. Honours in Applied Sciences (with a major in Physics/Chemistry) or B.Sc. (with a major in Physics/Chemistry) with a First Class or Second-Class Upper Division pass
- Or B.Sc. with a major in Physics/Chemistry with Master's Degree in the relevant field
- Demonstrated expertise in thin film fabrication techniques (e.g., chemical bath deposition, electro deposition, close-space sublimation) and material characterization methods will be added qualifications.

Salary: Rs. 60,000/= All inclusive

Duration: 6 Months extendable up to 1 year

Work Description:

Research Assistant Position 01

- Design a micro-inverter consisting of dc-dc and dc-ac converters for a solar PV system containing CdS/CdTe solar panels.
- Simulate the micro-inverter using a suitable software tool to finalize the hardware implementation.
- Develop the controllers for the micro-inverter
- Implement the micro-inverter in hardware
- Testing and verification of the micro-inverter
- Publishing the results in high ranked journals

Research Assistant Position 02

- Fabricate CdS, CdSe, CdSe_xTe_{1-x} and CdTe thin films using appropriate techniques, such as chemical bath deposition, electro deposition, or close-space sublimation, based on project requirements
- Fabricate of CdTe-based solar cells
- Improve CdTe-based solar cells efficiency through modifications
- Characterize thin films and solar cells/modules for their optical, physical, electrical properties
- Publish the research findings in high-impact scientific journals

Application Procedure:

Research Assistant Position 01

Applications/CV must be sent to Prof. Lilantha Samaranyake, Department of Electrical and Electronic Engineering, Faculty of Engineering, University of Peradeniya via registered post or email (lilantha@eng.pdn.ac.lk) on or before 09th December 2024. For further information, please contact Prof. Lilantha Samaranyake at 0716848319.

Research Assistant Position 02

Applications/CV must be sent to Head, Department of Physics, Faculty of Science, University of Peradeniya via registered post or email (headphysics@sci.pdn.ac.lk) on or before 09th December 2024. For further information, please contact Head, Physics, Prof. Kalinga Bandara at 0777619271 or Director, Solar Research Center, Prof. T.M.W.J. Bandara at 0711640654.