



POST GRADUATE DEPARTMENT OF ELECTRONICS
UNIVERSITY OF JAMMU

No. PGD/EL/1618

Dated 10/6/22

The Deputy Registrar RUSA
University of Jammu
Jammu

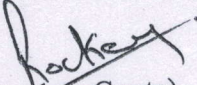
Sub: Project Report and Utilization certificate for seed grant under RUSA 2.0

Sir,

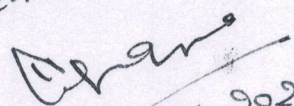
With refrence to university circular No. RUSAJU/2022-23/136/127-77 dated 26/05/2022, Kindly find attached the report of the project along with details of utilization.

Thanking you

Yours Faithfully


(Dr. Rocky Gupta)
Associate Professor

Recommended & forwarded



10/6/2022

Head
Department of Electronics
University of Jammu Jammu

Enclosures: 1. Project Report
2. Utilization certificate

Project Report

1. Title:

Investigation of ternary metal oxide interface for organic thin film solar cells.

2. Report:

Organic photovoltaic (OPV) technology is one of the promising approaches of cheap energy production with advantages of solution processing, half transparency and flexibility. Besides low temperature deposition processes make OPVs attractive to researchers for developing high efficiency OSCs. However long term stability of such devices is still an issue and requires significant improvements before they are commercialized. New materials for interface layers and electrodes for OSCs are required to be identified and investigated so that their efficiency and stability can be improved.

The seed grant sanctioned for the above mentioned project in order to strengthen the research in the area of thin film solar cells has been utilized to purchase various chemicals (Zinc Acetate Dihydrate, Aluminium Nitrate, Molybdeum Oxide, Aluminium wire, Methanol Anhydrous, Chloroform and Hydrochloric Acid) glassware(Beakers, Vials, and Petridishes) and other consumables (magnetic beads and soap solution) for synthesizing precursor solutions for different interfacial layers. The chemicals so purchased are utilized for research work in the area of ternary metal oxides as interfacial layers for high efficiency thin film solar cells.

Following Objectives have been achieved:

- i. Different metal oxides along with their optical and electrical properties with focus on ternary metal oxides along with their synthesis have been studied.
- ii. Efficient and stable interfacial layers for OSCs have been identified.
- iii. Interfacial layers like ZnO and ZnOS have been deposited on FTO glass substrates.
- iv. The structural, optical and electrical characterization of the interface layer are being performed at IIT Bombay.

Rockey

Key Gupta

Anana

MOD Head Electronics

UTILIZATION CERTIFICATE

Title of the work: Investigation of ternary metal oxide interface for organic thin film solar cells.

Name of the Faculty: Dr. Rockey Gupta
Designation: Associate Professor
Department: Department of Electronics, University of Jammu
Amount Sanctioned: Rs. 1,00,000.00
Amount Utilized: Rs. 80248.46
Unspent Amount: Rs. 19751.54
Sanction No. & Date: RUSA/JU/2/2019-20/36/4084 Dated: 02.12.2019

Statement of Expenditure

Funds	Amount allotted (INR)	Spent (INR)	Unspent (INR)
Consumables (Chemicals & Glassware)	Rs. 1000,00/	Rs. 80248.46	Rs. 19751.54
Contingency	Nil	Nil	Nil
Travel	Nil	Nil	Nil
Any Other Head	Nil	Nil	Nil
Total	Rs. 1,00,000	Rs. 80248.46	Rs. 19751.54

Signature of Faculty Member

Signature of HoD

Head
Department of Electronics
University of Jammu Jammu