

# Development and Deployment of Advanced Manufacturing Techniques for the fabrication of Flexible Solar Cells using Printing techniques

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**Name of the Funding Agency**  
Department of Science and Technology  
(DST)

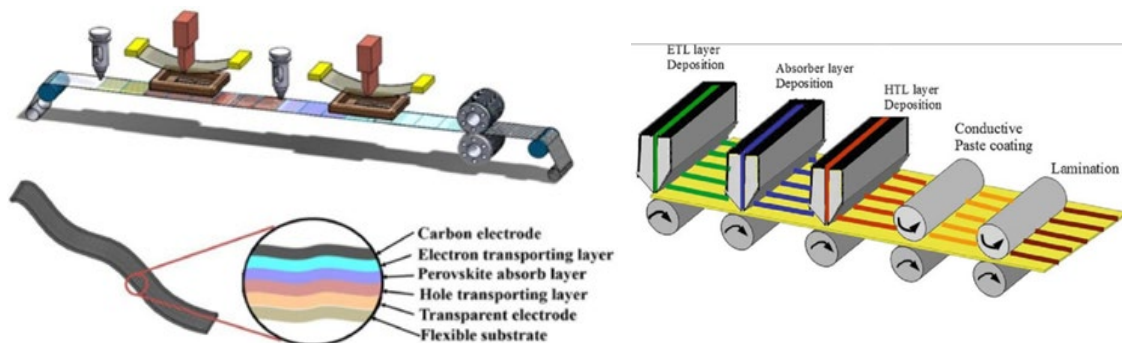
**Name of the Scheme**  
Technology Development and Transfer

**Sanctioned Amount (in Rupees)**  
Rs. 45,11,056

**Duration of the Project (years)**  
2

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## Graphical Abstract/ Layout



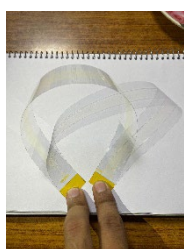
## Project Description:

Printed electronics needs to pass the translational phase from lab level to market level and to cater the energy needs, the biggest challenge is the optimization of the manufacturing method of flexible solar cells.

With a view of energy necessities, this project is focussed on deploying advanced manufacturing techniques via additive printing protocols and strategies for the development of Flexible/Transparent solar cells.

In general advanced manufacturing of printed solar cells on flexible substrates involves the following protocols viz. (1) material preparation (2) ink preparation and property optimization to make it ready for printing (3) designing printer and optimizing its parameters (4) material activity testing for solar cells (5) electrode level testing (6) device level testing (7) design of flexible electrode & Mechanical Testing (8) Choosing appropriate printing technique (9) R2R/inkjet printing (10) Testing and Validation.

## Products/ Instruments/ Results/ Outreach Activities



Sponsored Research and Industrial Consultancy (SpORIC)