

UNIVERSITY GRANTS COMMISSION
Bahadurshah Jafar Marg, Delhi
ASSESSMENT/EVALUATION REPORT UGC MRP (F. No. 41-918/2012 (SR))
PONDICHERRY UNIVERSITY, PUDUCHERRY

A	DETAILS OF THE PROJECT	
	Title of the Project	Nanocrystalline Dye -Sensitized Solar Cell: An Experimental and Theoretical investigation for high performance
	Total Duration of the project	Three years (01-07-2012 to 30-06-2015)
	Project status	Completed
	Subject	Physics
	File Number: UGC Reference N. & Date	F. No. 41-918/2012 (SR) dated 23-07-2012
	Grand Approved	Rs. 7,66,240/-
B		
1	Name of Principal Investigator	Dr. Ramaswamy Murugan
2	Designation	Professor
3	Address with e-mail and mobile No.	Department of Physics Pondicherry University, Puducherry 605014 E-mail: moranamurugan.phy@pondiuni.edu.in Mobile: +91-9486521397
4	Whether the work is focused on the title of the project	Yes.
5	Whether original work is done	Yes. The work is original
6	Whether significant contribution made by the principal investigator	Yes. The reported dye sensitized solar cell based on molecular dyes attached to nanoporous TiO ₂ is the latest technology that efficiently uses the dye's capability to inject photoexcited electrons into the semiconductor materials. There is an increase in the photocurrent from 16 mA/cm ² to 23 mA/cm ² also the photovoltage from 750 mV to 900 mV.
7	Whether proposed work have relevance to the society/ scientific community	Yes, the present societies' demand for sustainable and environmentally friendly energy sources makes the research on solar cell development a highly relevant study to both society and the scientific community
8	What type of contribution found in the final report? Theoretical/ Practical, if there are theoretical contribution given by the principal investigator, whether real applications are given	Practical contributions.
9	Whether theoretical/ Practical contributions and their results and finds are	Yes, the results are published in journals with good Impact factors, and the list is given

	published	
10	Whether results and findings are significant	Yes, results and findings are significant
11	Whether the significant publications are made by principal investigator, peer reviewed journal	Yes, significant publications are made in the following peer-reviewed journals: 1. Performance of dye-sensitized solar cells fabricated with extracts from fruits of ivy gourd and flowers of red frangipani as sensitizers. Spectrochim, Acta. Part A: Molecular and Biomolecular Spectroscopy 104 (2013) 35-40. (Impact Factor: 4.098) (citation: 136) 2. Room temperature ferromagnetic properties of Cu ₂ O microcrystals. Published in Journal of Alloys and Compounds , 579, (2013) 572-575 (Impact Factor: 4.175). 3. Green grasses as light harvesters in dye-sensitized solar cells. Spectrochim, Acta. Part A: Molecular and Biomolecular Spectroscopy 135 (2015) 947-952. (Impact Factor: 4.098) (citation: 43)
12	The number of publications made by the principal investigator is sufficient	3 (Three)
13	Whether the contribution made by the principal investigator is sufficient	Yes, the contribution made by the principal investigator is sufficient
14	The findings and results of the sanction major research projects are justifiable	Yes, findings and results of the sanctioned major research project are justifiable
15	Whether completed project work meet the proposed objectives	The proposed objectives have been achieved.
16	Give your brief comments on the overall work of the project	The project is well-executed, achieved most of the proposed targets and results were published in reputed high-impact journals.
17	Any specific comments	The results obtained will be helpful to increase the efficiency of DSSC with other suitable natural dyes and further optimization.
18	Indicate your overall assessment of the project Poor/ Good/ Excellent	EXCELLENT

Date:

Place:

Name and address of the Expert: Prof. Balan Palanivel,

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