



Centenary Celebrated Sharanabasaveshwar Vidya Vardhak Sangha's

## Sharanabasaveshwar College of Science Kalaburagi 585 103

(Diamond Jubilee Celebrated 1956-2016, ISO Certified 9001-2015)



### *A Report on "Two Day Workshop - Solar Cell Technology"*

Organized by:  
Department of Physics,  
Sharanabasaveshwar College of Science, Kalaburagi

In association with  
Shastra Fest IIT Madras & Makeintern New Delhi,

Held on  
5<sup>th</sup> & 6<sup>th</sup> October, 2019.

Programme Coordinator  
Dr. Basavaraj Evale

Asst. Programme Coordinator  
Dr. Omprakash S

Principal:  
Dr. S.G. Dollegoudar

Scanned with CamScanner

  
PRINCIPAL  
SHARANBASAVESHWAR COLLEGE  
OF SCIENCE, GULBARGA



Workshop Brochure



Inaugural Function of the Workshop



Felicitation to Resource Person Shri Utsava Singh



Felicitation to Chief Guest Dr. Anilkumar Bidave



## REPORT ON A TWO DAY WORKSHOP - “SOLAR CELL TECHNOLOGY”

Nowadays many people are looking for different types of energy sources not only because nonrenewable fuels pose threat to the environment, but also everyone knows that the world will face one of the worst crisis, the energy shortage in the near future. However, for India to reach its potential and to boost the necessary investment in renewable energy it will be essential to introduce comprehensive and long term support. The micro grids using hybrid renewable energy sources and solar energy are most prominent solutions for today's electricity demand in India. By this proposed technology individual can generate their own power and cut their energy bills while helping to protect the environment.

Department of Physics, Sharanbasaveshwar College of Science, Kalaburgi in association with Shaasta Feest IIT Madras & Makeintern New Delhi, organized **A Two Day workshop in “Solar Cell Technology”** On 5<sup>th</sup> & 6<sup>th</sup> October, 2019 to create awareness and interest among students in area of solar photovoltaic and related technologies.

The workshop was organized for B.Sc./M.Sc/B.E. students having physics background. Letter of intimation about the workshop was widely sent to colleges in and around Kalaburgi to draw participants. Many participants sent their willingness to participate in the workshop and many students registered their names. There was a good response from the students from different academic institutions. Many participants sent their willingness to participate in the workshop. There were around 72 students participants from following different educational institutions that attended the workshop.

1. Sharanbasaveshwar College of Science, Kalaburgi
2. Department of Physics, Sharanabasava, University, Kalaburgi
3. Appa Engineering College, Kalaburgi
4. GET's College, Kalaburgi
5. AV Patil Degree College, Aland
6. N.V.Degree College, Kalaburgi

The main objective of this workshop was to provide the fundamental knowledge of Solar Cell Technology with hands on practical session. The topics covered in the workshop include –

- Business Overview of Solar Energy and career opportunities,
- Principles of photo Voltaic effects,
- Cells modules & emerging PV Technologies,
- Synthesis of Nano particle.

Practical session on synthesis of nano-particle was also conducted. A test and oral presentation was conducted after the completion of workshop to select five participants for final round which will held at IIT, Madras. The selection of participants was immediately announced at the Valedictory function.

The outcome of the workshop was in the form of synthesis of nano-particle which is useful to enhance the efficiency Solar Cell. The workshop was conducted by external training agency Makintern, New delhi in association with Shaastra Fest IIT Madras. The main trainer was Dr. (Ms) T.Theivasanthi, Faculty, International Research Center, Kalasalingam University, Krishnankoil,Tami Nadu and assistant trainer Mr. Utsav Singh, Software Developer, Makintern, New delhi.

### **DAY 1 : Date 5-10-2019**

#### **Inaugural Session :**

The first day started with an inaugural session which included a welcome and introductory speech about the workshop by event Programme Coordinator Dr. Basavaraj Evale, Associate Professor of Physics, Sharanbasveshwar College of Science, Kalaburgi. Dr. Omprakash S. Assistant Co-ordinator briefly gave the introduction of Chief Guest & Resource Persons.

The workshop was formally inaugurated by Chief Guest-Dr.Anilkumar Bidave, Registrar, of Sharan Basava University, Kalaburgi & in his motivational address emphasized upon the importance of Solar Cell technologies, application and tools for the students. Dr. S.G. Dollegoudar, Principal of Sharanbasaveshar College of Science, Kalaburgi presided over the function and in his in his presidential remarks highlighted the vast scope of Solar Cell Technology with hands on practice.

Mr. Utsav Singh, -Resource Persons from the Makeintern, New Delhi highlighted the technical details of the workshop in his address. Mr. Shivashakar Swamy, faculty proposed the vote of thanks to all dignitaries and participants.

#### **Technical Sessions:**

After the inaugural session the workshop progressed continuously with three technical session on different topics of Solar Cell Technology delivered by, resource persons Assistant trainer Mr. Utsav Singh, Software Developer, Makintern, New delhi & trainer Dr. (Ms) T.Theivasanthi, Faculty, International Research Center, Kalasalingam University, Krishnankoil,Tami Naadu byThree technical sessions.

### **DAY 2 : Date 06-10-2019**

On the Second day two technical sessions were delivered by Dr. (Ms) T.Theivasanthi, Faculty, International Research Center, Kalasalingam University, Krishnankoil,Tamil Naadu on Principles of photo Voltaic effects, Cells modules & emerging PV Technologies, Synthesis of Nano particle.

Before the lunch break hands on experiment session was conducted to the participants by Dr. (Ms) T.Theivasanthi & Mr. Utsav Singh in the laboratory.

After the lunch break the test was conducted to all the participants and top ten students were selected. Among the ten students, top five meritorious students were selected on the basis of individual oral presentation. Also a feedback on the workshop was collected from all the participants.

A two day workshop came to an end with valedictory session, graced by Prof. V.M.Jali Professor, Department of Physics, Gulbarga University, Kalaburgi. Participants shared their enriching experiences at the function. Chief Guest, Prof. V.M.Jali shared his knowledge on Solar Cell technology with the participants. Finally, Dr. B.D.Malipatil, Senior faculty of Physics Department gave presidential remarks. The program was concluded with vote of thanks by Mr. Gurnath N.

\*\*\*\*\*



## Two day workshop on Solar Cell Technology

### Program Schedule

#### First Day (5.10.2018) Solar PV Workshop

From	To	Topics
9.00 AM	9.30 AM	Registration
9:30 AM	10:00 AM	Introduction
10:00 AM	11:00 AM	Business Overview of Solar Energy Business and career opportunities
11:00 AM	11:45 PM	Inauguration
11:45 AM	12.00 PM	<b>Tea Break</b>
12:00 N	1:30 PM	Principals of photo Voltaic effects, cells, modules & emerging PV Technologies
1.30 PM	2.15 PM	<b>Lunch Break</b>
2.15 PM	3:45 PM	Principals of photo Voltaic effects, cells, modules & emerging PV Technologies Continued
3:45 PM	4:00 PM	<b>Tea Break</b>
4:00 PM	5:30 PM	Understanding of solar Orientation, isolation & Meteorology

#### Second Day (6.10.2018) Solar PV Workshop

From	To	Topics
9:00 AM	10:30 AM	PV Modules ,Voc ,Isc Study of all Electrcial, Thermal and mechanical Parameters
10:30 AM	10:45 AM	<b>Tea Break</b>
10:45 AM	12:15 PM	PV Modules ,Voc ,Isc Study of all Electrcial, Thermal and mechanical Parameters Continued
12:15 PM	1:30 PM	Study of Solar Tracking system by using models
1:30 PM	2:15 PM	<b>Lunch break</b>
2:15 PM	3:00 PM	Solar Pumping ūsing DC Motors
3:00 PM	4:00 PM	Test, Evaluation, Selection
4.00 PM	5.00 PM	Valedictory

List of Students Registered For  
Two Days Workshop in **"Solar Cell Technology"** & National Level Competition  
Fest For Physics Students Which is held **On 5<sup>TH</sup> & 6<sup>TH</sup> October, 2019**

Sl. No.	Name of the Student	Class	Name of the College	Registration Fee Paid by in Rs.		
				Students	College	Total Fee
01	Pranjali N K	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
02	Preeti S C	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
03	Revati Halli	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
04	Veeresh Wali	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
05	Pooja Rodagi	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
06	Ankita R B	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
07	Nikhil S.	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
08	Megha H B	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
09	Harees Firdous	Bsc I Sem	S B College of Science, Klb.	550/-	600/-	1150/-
10	Naveen Kumar	Bsc Iii Sem	S B College of Science, Klb.	550/-	600/-	1150/-
11	Rachayya S H	Bsc Iii Sem	S B College of Science, Klb.	550/-	600/-	1150/-
12	Tanuja Patil	Bsc Iii Sem	S B College of Science, Klb.	550/-	600/-	1150/-
13	Annapurna T	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
14	Ganga Shree	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
15	Akshata P	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
16	Pooja A H	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
17	Archana Patil	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
18	Anuradha A	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
19	Kavya Kulkarni	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
20	Chandrika G	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
21	Bhagyashree B	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
22	Suma Sahukar	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
23	Sharada M	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
24	Girijadevi	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-



25	Mamata G B	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
26	Anuja S M	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
27	Bhagyashree B	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
28	Bhagyashree S	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
29	Shilpa A J	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
30	Varsha N S	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
31	Preeti D J	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
32	Ashwini S T	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
33	Nagaratna V M	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
34	Aishwarya S B	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
35	Veenashri N	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
36	Gayatri G K	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
37	B Arunakumar	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
38	Bheemashanakar	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
39	Chetan S Singe	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
40	D Manjunath	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
41	Avinash Dadage	Bsc V Sem	S B College of Science, Klb.	550/-	600/-	1150/-
42	Revansiddappa	Msc IIISem	Sharnbasva University, Klb.	1150/-	-	1150/-
43	Arun Kanteppa	Msc III Sem	Sharnbasva University, Klb.	1150/-	-	1150/-
44	Vivekanand D H	Msc Iii Sem	Sharnbasva University, Klb.	1150/-	-	1150/-
45	Eshwari B Patil	Msc I Sem	Sharnbasva University, Klb.	1150/-	-	1150/-
46	Megha P Sonar	Msc I Sem	Sharnbasva University, Klb.	1150/-	-	1150/-
47	Shilapa S Khed	Msc IIISem	Sharnbasva University, Klb.	1150/-	-	1150/-
48	Soumy S Davankar	Msc IIISem	Sharnbasva University, Klb.	1150/-	-	1150/-
49	Ajayakumar B	B.Sc. VSem	N.V.Degree College, Klb.	1150/-	-	1150/-
50	Ashwini M.D.	B.Tech.	Appa Eng. College, Klb.	1150/-	-	1150/-
51	Nandini M.P.	B.Tech.	Appa Eng. College, Klb.	1150/-	-	1150/-
52	Rachita Reddy	B.Tech.	Appa Eng. College, Klb.	1150/-	-	1150/-
53	Hrishikesh S.S.	B.Tech.	Appa Eng. College, Klb.	1150/-	-	1150/-
54	Pooja R. Biradar	B.Tech.	Appa Eng. College, Klb.	1150/-	-	1150/-

55	Akshta H K	B.Tech	Appa Engg College, Klb.	1150/-	-	1150/-
56	Kavyashree Kalal	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
57	Varsha V S	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
58	Channama U K	Bsc Iii Sem	S B College of Science, Klb.	1150/-	-	1150/-
59	Neha Begum	BTech I Sem	Appa Eng College Kalaburgi	1150/-	-	1150/-
60	Saroja D B	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
61	Pooja A H	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
62	Poornima J H	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
63	Sonali C D	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
64	Sarswati A P	Msc I Sem	Sharnbasva University, Klb.	1150/-	-	1150/-
65	Anand S Jewoor	Bsc Iii Sem	Gets First Grade College	1150/-	-	1150/-
66	Raziya Sultana G.	Bsc Iii Sem	A V Patil Degree Clg Aland	1150/-	-	1150/-
67	Tushar S Miskin	Bsc Iii Sem	A V Patil Degree Clg Aland	1150/-	-	1150/-
68	Dilshad Begum	Bsc Iii Sem	A V Patil Degree Clg Aland	1150/-	-	1150/-
69	Kaveri S Ghante	Bsc V Sem	S B College of Science, Klb.	1150/-	-	1150/-
70	Pooja S Malagatti	Msc I Sem	S B College of Science, Klb.	1150/-	-	1150/-
71	Vijayendra R Joshi	Bsc Iii Sem	S B College of Science, Klb.	1150/-	-	1150/-
72	Vikash	Bsc I Sem	S B College of Science, Klb.	1150/-	-	1150/-

### The List of Rank Students Awarded Merit Certificate

Sl. No.	Name of the Student	Class	Name of the College	Remarks
01	Tanuja Patil	Bsc V Sem	S B College of Science Klb.	I Rank
02	Hrishikesh S.S.	B.Tech.	Appa Engg. College, Klb.	II Rank
03	Revansiddappa	M.Sc. III Sem.	Sharnbasva University, Klb.	III Rank
04	Akshta P.	B.Sc. V Sem.	SB College of Science, Klb.	IV Rank
05	Veeresh Wali	B.Sc. I Sem.	SB College of Science, Klb.	V Rank

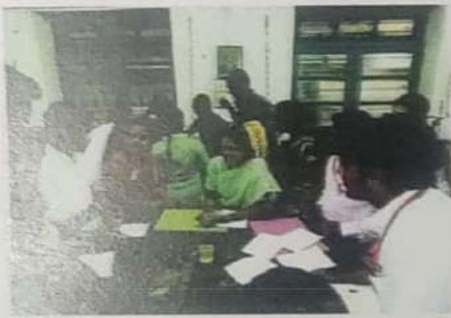




Technical Session I - Shri. Utasva Singh



Discussion with Participants - Dr. T. Theivasanthi



Group Discussion with Resorce Person



Laboratory Session - Hands on Experiment



Students Exhibiting Prepared Samples



Students Discussion with Resorce Person Shri Utasva Singh



Student Feedback - Kum. Tanuja Pati



Student Participants writting Test



Technical Session - II by Dr. T. Theivasanthi



Evaluation & Feedback - Dr. T. Theivasanthi



**Shastra 2k19 (17 - Madras Event)**

**Certificate of Merit**

This is to certify that

**Dr. S. G. Dolegoutar**

has been awarded the Shastra 2k19 (17 - Madras Event) Certificate of Merit for his contribution to the Shastra 2k19 Madras Event.

Department of Physics, Shanmugasundaram College of Science, Kalluraj Chokkalingam

**Shastra 2k19 (17 - Madras Event)**

**Certificate of Merit**

This is to certify that

**Dr. S. G. Dolegoutar**

has been awarded the Shastra 2k19 (17 - Madras Event) Certificate of Merit for his contribution to the Shastra 2k19 Madras Event.

Department of Physics, Shanmugasundaram College of Science, Kalluraj Chokkalingam





Felicitation to Chief Guest Dr. V M. Jali



Distribution of Merit Certificates



Felicitation to Resorce Person - Dr. T. Theivasanthi



Distribution of Merit Certificates



### Organized with the Support:

Dr. S.G. Dollegoudar, Principal  
Dr. Jayashree C. , HOD, Physics  
Dr. B. D. Malipatil, Asso. Proffesor  
Dr. Chitralekha Alur, Asst. Proffesor  
Mr. Gurunath N., Lecturer  
Mr. Abhishek S. , Lecturer  
Mr. Shivshankaryya Swamy, Lecturer  
Miss. Pooja C. Lecturer  
Mr. Shrikanth K. Lecturer  
Mr. Ramling S ., Lecturer



