

PROCEEDINGS OF THE PRINCIPAL, JNTUA COLLEGE OF ENGINEERING  
ANANTHAPURAM (AUTONOMOUS), JNTUACEA ANANTHAPURAM  
PRESENT: Prof. K. GOVINDA RAJULU, PRINCIPAL

TEQIP-III

Procs. No: TEQIP-III/NPIU/Academics/ 3.3.2(iv)/163/2019-20

Date: 09-12-2019.

Sub: JNTUACEA - TEQIP-III - Academics - Permission to conduct Two days Workshop on "Material for Energy Conversion & Storage Devices" at Chemical Engineering Department, JNTUACEA during 27-28 December 2019 - Orders - Issued.

Ref: Letter dt: 06-12-2019 from Dr. B. Dilip Kumar, Asst., Prof., Chemical Engg., Dept., JNTUACEA

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Dr. B. Dilip Kumar, Asst., Prof., Chemical Engg., Dept., JNTUACEA has submitted a letter requesting the Principal for permission to conduct two days workshop on "Material for Energy Conversion & Storage Devices" at Chemical Engineering Department, JNTUACEA during 27-28 December 2019 and requested to meet the expenditure from TEQIP-III funds.


Title of the Programme	Material for Energy Conversion & Storage Devices
Conducted at	Chemical Engineering Department, JNTUACEA
Dates of Workshop	27-12-2019 to 28-12-2019
Coordinator	Dr. B. Dilip Kumar, Asst., Prof., Chemical Engg., Dept.,

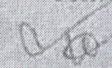
The requisition submitted is approved and the Principal is pleased to accord permission to Dr. B. Dilip Kumar, Asst., Prof., Chemical Engg., Dept., JNTUACEA to conduct the above said programme on the date(s) noted. The expenditure will be met from TEQIP-III funds under Academics 1.3.2(iv) head of account.

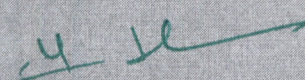
It is requested to follow the rules and regulations in incurring the expenditure and requested to submit the vouchers in original as per the guidelines provided by NPIU. And also requested to submit Photographs, list of participants, reports etc., as per TEQIP-III norms in Performa provided.

To

Copy to Dr. B. Dilip Kumar, Asst., Prof., Chemical Engg., Dept.,  
Copy to Dr. A. P. Siva Kumar, TEQIP-III Co-ordinator & Nodal Officer (P)  
Copy to Prof. M. L. S. Deva Kumar, Nodal Officer (A) - (TEQIP-III)  
Copy to Dr. K. Jithendra Gowd, Nodal Officer (F) & TEQIP MIS officer  
Copy to Bills.

  
PRINCIPAL

  
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J.N.T.U.A College of Engine  
(Autonomous)  
ANANTHAPURAMU-515  
A.P. INDIA.

  
REGISTRAR  
J.N.T.U. Anantapur  
ANANTHAPURAMU-515002

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Prof. S. Srinivas Kumar  
Vice-Chancellor, JNTUA, Ananthapuramu

**PATRONS**

Prof. D. Subba Rao, Rector, JNTUA  
Prof. M. Vijay Kumar, Registrar, JNTUA

**CO-PATRONS**

Prof. K. Govinda Rajulu, Principal,  
JNTUACEA

Prof. M. L.S. Deva Kumar,  
Vice-Principal, JNTUACEA

**CHAIR PERSON**

Dr. S. Sharada  
Assistant Professor & Head (I/c),  
Chemical Engineering, JNTUACEA

**ORGANIZING COMMITTEE**

Coordinator

Dr. B. Dilip Kumar

**Members**

Prof. S.V.Satyanarayana,  
Prof. T. Bala Narsalah  
Dr. P. Dinesh Sankar Reddy  
Mr. M. Kalyan Kumar  
Mrs.A.Meenakshi  
Mr. K. Subba Rao  
Mrs. P. Uma Maheshwari  
Mr. A. Rajasekhar Babu  
Mr. M. Murali Naik  
Mr. K. Peddintaini  
Ms. G. Neha Malika

**Registration Form**



Two-day Workshop on

**"Materials for Energy Conversion & Storage Devices"**  
Under TEQIP-III

1. Name: \_\_\_\_\_
2. Designation: \_\_\_\_\_
3. Institution/organization: \_\_\_\_\_
4. Address for correspondence with e-mail & Phone No.: \_\_\_\_\_
5. Highest Educational Qualification: \_\_\_\_\_
6. Experience (in years): \_\_\_\_\_
7. Accommodation: Required or Not: \_\_\_\_\_

**Declaration**

The information provided is true to the best of my knowledge.

Place: \_\_\_\_\_

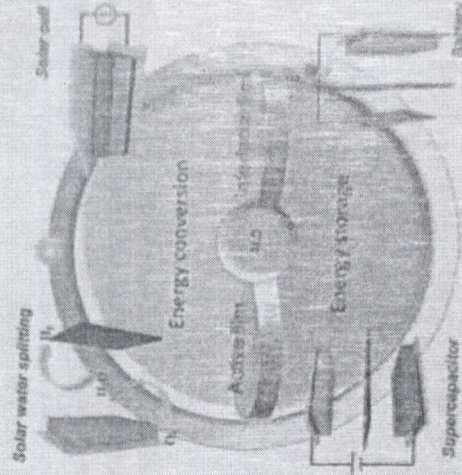
Date: \_\_\_\_\_  
Signature of the applicant

Forwarded through Head Dept./  
Institution

**Two-day Workshop**

On  
**"Materials for Energy Conversion & Storage Devices"**  
December 27 -28, 2019  
(Under TEQIP -III)

In association with  
**The Institution of Engineers (India)**  
Ananthapuramu Local Center



**Organized by**



Department of Chemical Engineering  
JNTUA College of Engineering (Autonomous)  
Ananthapuramu, Andhra Pradesh (AP)

**REGISTRAR**

J.N.T.U. Anantapur  
ANANTAPURAMU-515002

### ABOUT THE COLLEGE

JNTUA College of Engineering, Anantapuramu, is one of the oldest premier colleges in South India, with illustrious alumni. The college has celebrated its Diamond Jubilee in the year 2006 and has an excellent atmosphere for advancement of one's knowledge. In the year 2008 the college has become a constituent college of the newly formed JNTUA, Anantapur. About 194 private Engineering/Pharmacy/MBA colleges in the districts of Anantapuramu, Kadapa, Kurnool, Chittoor and Nellore are affiliated to JNTUA Anantapuramu. Anantapuramu is well connected with major cities like Mumbai, Hyderabad, Bangalore and Chennai by rail and road. It is very near to places of tourist interest like Lepakshi, Hampi, Belum caves and Puttaparthi.

### ABOUT THE DEPARTMENT

The Department of Chemical Engineering was established in 1989 and has very recently celebrated its Silver Jubilee. The department is accredited with NBA and offers UG, PG, MS and Ph.D programs. The Department has highly qualified faculty with expertise in the areas of Membrane Separations, Pervaporation, Environmental Engineering, Nanotechnology, Interfacial Science, Fluidization, Micro-reactors and Bioprocesses. The department has earlier carried out and currently carrying many research projects sponsored by BRNS, BHEL, UCIL, AICTE, UGC, etc....

### ABOUT THE WORKSHOP

In this modern era, our society faces a serious energy crisis due to increasing human population. Energy consumption starts from small-scale electronic gadgets to high power consuming electric vehicles. To supply power on demand, researchers focus on alternative renewable energy resources including solar energy, wind energy, hydropower, geothermal energy, and bio-energy. Effectively, energy conversion and storage technologies such as solar cells, fuel cells, secondary batteries, super capacitors, and other self-powered systems are under rigorous investigation. To meet the growing energy demands in a low-carbon economy, the development of new materials that improve the efficiency of energy conversion and storage systems is essential. The efficient energy conversion and storage performance of those technologies rely on material properties of their electrode, electrolyte, and other device components. This workshop is planned to address the importance of energy materials and their fundamental properties at macro and micro/nano levels. The following Broad Areas/themes were discussed by eminent speakers of the workshop:

- Solar Cells
- Fuel Cells
- Batteries
- Super Capacitors
- Photo-electrochemical Devices
- Smart Grid

### Speakers:

- Dr. Manohar Kakunuri, NIT Warangal
- Dr. Sreedhar Naidu, Senior Engineer (R&D), Amar Raja Batteries, Tirupati, Chittoor District
- Dr. Prashanth Kumar Gupta, Visiting Assistant Professor, IIT Dhanbad
- Dr. Gyan Prakash Sharma, Kanopy Techno Solutions, C/o SIDBI Incubation Center, IIT Kanpur
- Mr. Anuj Awasthi, Kanopy Techno Solutions, C/o SIDBI Incubation Center, IIT Kanpur

### GUIDELINES FOR PARTICIPANTS

Interested Participants should apply in the prescribed registration proforma along with biodata (CV) through proper channel

### ADDRESS FOR CORRESPONDENCE:

**Dr. B. Dilip Kumar, Coordinator**  
Assistant Professor of Chemical Engineering  
JNTUA College of Engineering  
(Autonomous), Anantapuramu - 515 002  
dileepbh@gmail.com, 9247192692

### Who can participate?

Students, Research Scholars, Faculty of Science, Faculty from all Engineering Disciplines (Most useful to EEE, Mech & Chemical Engg.) and other Inter disciplinary programs

DEPARTMENT OF CHEMICAL ENGINEERING  
JNTUA College of Engineering (Autonomous), Ananthapuramu

Two Day Workshop on  
Materials for Energy Conversion and Storage Devices

(Under TEQIP-III)


27-28 December, 2019

SCOPE & JUSTIFICATION:

In this modern era, our society faces a serious energy crisis due to increasing human population. Energy consumption starts from small-scale electronic gadgets to high power consuming electric vehicles. To supply power on demand, researchers focus on alternative renewable energy resources including solar energy, wind energy, hydropower, geothermal energy, and bio-energy. Effectively, energy conversion and storage technologies such as solar cells, fuel cells, secondary batteries, super capacitors, and other self-powered systems are under rigorous investigation. To meet the growing energy demands in a low-carbon economy, the development of new materials that improve the efficiency of energy conversion and storage systems is essential. The efficient energy conversion and storage performance of those technologies rely on material properties of their electrode, electrolyte, and other device components. This workshop is planned to address the importance of energy materials and their fundamental properties at macro and micro/nano levels. The following Broad Areas/themes were discussed by eminent speakers of the workshop:

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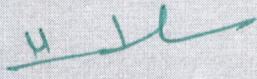
Further, workshop is designed to give hands on session on battery testing, super capacitor testing and other sensor testing & instrumentation aspects. Prof. K. Govinda Rajulu, Principal of

  
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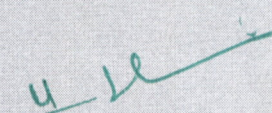
the college acted as Chief Guest and Prof. MLS Deva Kumar, Director, School of Management Studies and Chairman, IIE Anantapuramu Local chapter acted as Guest of Honour for the inaugural function along with Dr. S. Sharada, Head of Chemical Engineering and Dr. B. Dilip Kumar, Coordinator of the program have graced the dais. Prof. Govinda Rajulu addressed the gathering highlighting the importance of renewable energy sources and development of materials for energy conversion and storage devices. Prof. T. Bala Narsaiah, Vice Principal of the college acted as Chief Guest for Valedictory function and spoke about different materials in day to day life which can be used for energy conversion strategies. Participants from different parts of the country have attended which includes academic institutes, industry and research centers. Many participants were given good feedback about the resource persons presentation which was enclosed along with this report for information.

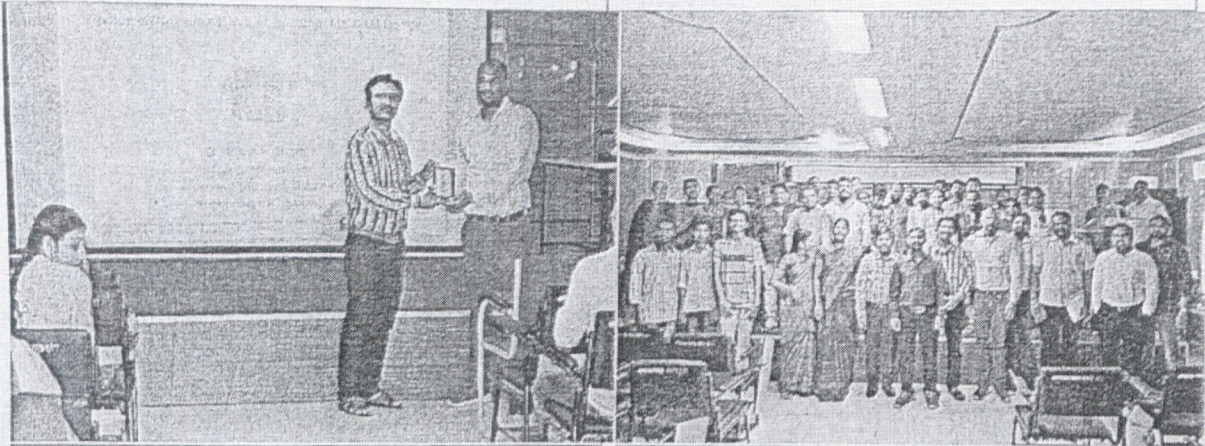
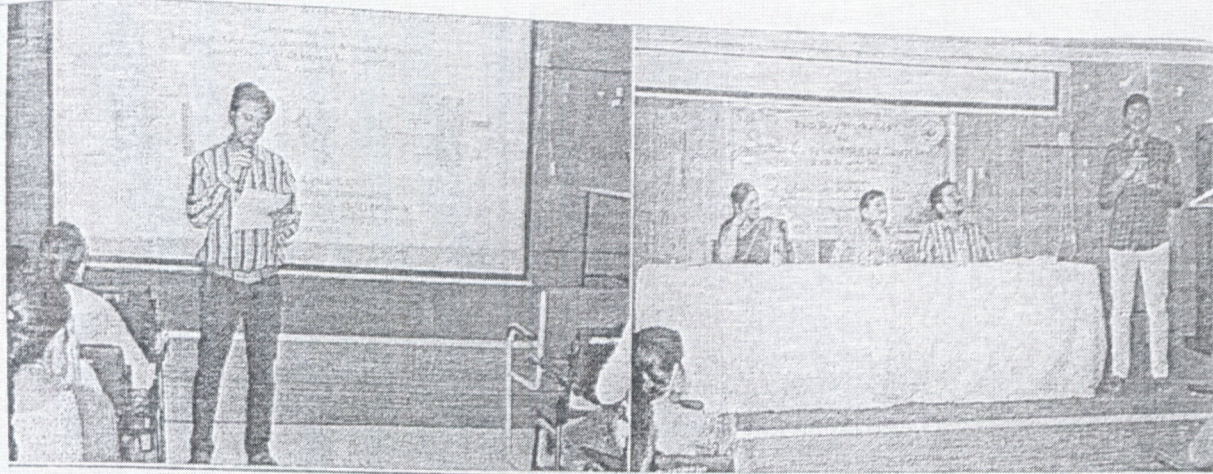
**Resource Persons:**

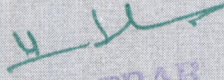
1. Anuj Awasthi, Director & Co-Founder, Kanopy Techno Solutions, c/o SIDBI Incubation Center, IIT Kanpur
2. Dr. Gyan Prakash Sharma, Scientific Adviser, Kanopy Techno Solutions, c/o SIDBI Incubation Center, IIT Kanpur
3. Dr. Manohar. K, Assistant Professor, Dept of Chemical Engineering, National Institute of Technology Warangal
4. Dr. Prashanth Kumar Gupta, Visiting Assistant Professor, Dept of Chemical Engineering, IIT (ISM) Dhanbad
5. Dr. Rajesh Babu, Assistant Professor, Dept of Chemistry, Sri Satya Sai Institute of Higher Learning, Puttaparti, Anantapur
6. Mr. Sreedhar Naidu, Senior Engineer (R&D), Amara Raja Batteries Limited, Tirupati, Chittoor District

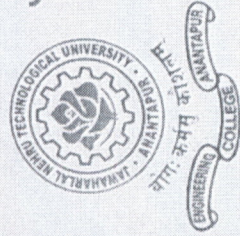
  
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PROGRAMME SCHEDULE		
Day	Time	Event
27-12-2019	08.00 AM – 09.00 AM	Spot Registration
	09.00 AM – 10.00 AM	Inaugural Function
	10.00 AM – 11.30AM	Invited Talk by <b>Dr. Manohar Kakunuri, NIT Warangal</b> Carbon based Anode materials for Li ion Batteries
	11.30 AM – 11.45 AM	Tea Break
	11.45 AM – 01.15 PM	Invited Talk by <b>Lecture by Dr. Rajesh Babu, Satya Sai Institute of higher Learning, Puttaparti</b> Perspectives on Design of Asymmetric Supercapacitors
	01.15 PM – 01.45 PM	Lunch Break
	01.45 PM – 03.15 PM	Invited Talk by <b>Mr. Sreedhar Naidu, Senior Engineer (R&amp;D), Amar Raja Batteries, Tirupati, Chittoor</b> Manufacturing of Lead Acid Energy Storage and its Applications
	03.15 PM – 05.15 PM	Invited Talk by <b>Dr. Gyan Prakash Sharma, Research Consultant, Kanopy Techno Solutions</b> Photo-electrochemical Water Splitting: Material Design Aspects
28-12-2019	08.00 AM – 09.30 AM	Invited Talk by <b>Sri. Anuj Awasthi, Founder Chairman, Kanopy Techno Solutions</b> Importance of Instrumentation in Battery Testing
	09.30 AM – 11.00 AM	Invited Talk by <b>Dr. Prashanth Kumar Gupta, Visiting Assistant Professor, IIT Dhanbad</b> Polymorphic Engineering- A Perspective for Material Design
	11.00 AM – 11.15 AM	Tea Break
	11.15AM– 12.45 PM	Invited Talk by <b>Dr. Gyan Prakash Sharma, Research Consultant, Kanopy Techno Solutions</b> Super Capacitors: Principles, Metrics and Design Aspects
	12.45 PM – 01.45 PM	Lunch Break
	01.45 PM – 03.15 PM	Invited Talk by <b>Dr. Manohar Kakunuri, NIT Warangal</b> Advantages and challenges of sodium-ion batteries
	03.15 PM – 04.45 PM	Practical Session by <b>Dr. Prashanth Kumar Gupta, Dr. Gyan Prakash Sharma, and Anuj Awasthi</b> Batteries, Supercapacitors and other instrumentation aspects
	04.45 PM – 05.30 PM	Valedictory Function & High Tea

  
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 College of Engineering, Ananthapuramu - 515002, AP





**Certificate of Participation**

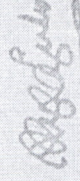
This is to certify that Dr./Prof./Mr./Ms.....

of..... has participated

in Two Day Workshop on "Materials for Energy Conversion and Storage Devices" Organized by  
 Chemical Engineering Department, JNTUA College of Engineering, Ananthapuramu under TEQIP - III  
 Programme from 27<sup>th</sup> to 28<sup>th</sup> December 2019.

  
 Dr. B. Dilip Kumar  
 Convener

  
 Dr. S. Sharada  
 Chairman

  
 Dr. K. GOVINDA RAJULU  
 Patron



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