

**S.R.R and C.V.R GDC (A), Vijayawada**

**Department of Chemistry**

**Two Day National Seminar**

**On Recent trends in Chemistry and Physics of materials**

**On 15<sup>th</sup> & 16<sup>th</sup> September**

Dept. of Chemistry in collaboration with dept. of Physics organized a two-day National Seminar titled '***Recent Trends in Chemistry & Physics of Materials (RTCPM – 2017)***' on 15<sup>th</sup> and 16<sup>th</sup> September 2017 sponsored by UGC-SERO, Hyderabad. The programme is conducted under the Chairmanship of **Dr. Velaga Joshi**, Principal, SRR & CVR GDC(A), Vijayawada. **Dr. G. Nagarjuna**, (convenor) Lecturer in Chemistry and **Dr. T.V. Rambabu** (co-convenor), Dept. of Physics coordinated the seminar.

It was sanctioned by the Rc. No. F.No. : SEM-2708/16-17/GEN (UGC-SERO) Link No. 2708, UNIQID: APKR00008443 Dated 7<sup>th</sup> February, 2017. Amount sanctioned is Rs.1,25,000. Total 324 Faculty member and 550 Students are attended and 142 papers are submitted and 17 posters were presented.

Being an oldest and largest depts, in college, Chemistry & Physics depts. has taken the privilege to conduct this national seminar in order to inculcate the research aptitude. It provided a national platform, where all the recent methodologies of materials discussed. Undoubtedly this seminar directed all the stakeholders of our college to upgrade their knowledge and created an interest in research.

## **NATIONAL SEMINAR - Programme details**

### **❖ Theme of the programme:**

#### **THEME OF THE SEMINAR**

The aim of the seminar is to provide vibrant understanding about all aspects of Advanced Materials & Materials Science viz., fundamental concepts, various synthesis/preparation approaches, and characterization techniques. It also covers development of new materials and modification of properties of materials suits to numerous technological applications that are gaining importance. There is lot of scope in preparing new materials by selective methods for various applications including optical, thermal, mechanical and electrical applications. It provides a common platform for scientists, academicians and young research scholars working in the fields of basic as well as applied sciences – Physics, Chemistry, Biology, Engineering and Materials Science. It also provides an opportunity to exchange knowledge and ideas with top-level scientists, eminent professors and open new network for future collaboration works. This conference will help the participants to update the knowledge and give an exposure to some of the latest developments in the field of advanced materials. It also provides healthy competition among the researchers to bring out their skills, competences and transform their findings for the promotion of industrial growth. Hoping this conference shall be to strengthen the scientific and technological research, development and commercialization of value added products.

This meeting promises to be a great opportunity to review and expand our knowledge in the important field of advanced materials and will address the need for the exchange of scientific information among experts on various properties viz., spectroscopic, dielectric mechanical, thermal etc.

#### **Objectives of the seminar**

- To share valuable research experience of advanced materials.
- To promote collaboration in implementing national standards in research
- To establish network of scholars and scientists of national class
- To expose scholars and science students to have competencies related to their subject and their future professional development

## ❖ *Scope of the Programme:*

### Scope of the Seminar



The focus of the seminar will be put on several aspects on the synthesis, characterization and applications of Advanced Materials. Topics include but not strictly limited to

- Carbon based materials
- Glasses & Glass ceramics
- Bio-materials
- Ceramic materials
- Photovoltaic materials
- Hybrid materials and Composites
- Materials for optoelectronics
- Super conducting materials
- Solar energy and materials for energy conversion
- Functional materials
- Nano-electronics
- Polymer nano-composites
- Fuel Cell materials and other electro-ceramics
- Thin Films & Surface Chemistry



## ❖ Seminar Invitation & Cover

   <p><b>S.R.R. &amp; C.V.R. GOVT. DEGREE COLLEGE (A), VIJAYAWADA</b></p> <p style="text-align: center;"><i>Invitation</i></p> <p style="text-align: center;">UGC SPONSORED TWO DAY NATIONAL SEMINAR ON <b>RECENT TRENDS</b> IN <b>CHEMISTRY AND PHYSICS OF MATERIALS</b> (RTCPM - 2017)</p> <p style="text-align: center;"><b>15<sup>th</sup> &amp; 16<sup>th</sup> September, 2017</b></p> <p style="text-align: center;"><b>INAUGURATION</b> On 15-09-2017 Friday at 10 A.M.</p> <p><b>VENUE : SEMINAR HALL, SRR &amp; CVR Govt. Degree College (A)</b></p> <p>Chief Guests : Sri <b>BONDA UMAMAHESWARA RAO</b> Hon'ble M.L.A. Vijayawada (Central)</p> <p>Smt. <b>K. NAGA SESHARANI</b> Corporator, 5th Division</p> <p>Special Guests : Prof. <b>G. NAGESWARA RAO</b> Vice - Chancellor, Andhra University</p> <p>Prof. <b>N. VEERAAIAH</b> Dept. of Physics, Acharya Nagarjuna University</p>	<p>Prof. <b>M. V. BASAVESWARA RAO</b> Dept. of Chemistry, Krishna University</p> <p>Dr. <b>L. GIRIBABU</b> Principal Scientist, CSIR-IICT, Hyderabad</p> <p>Chairman : Dr. <b>VELAGA JOSHI</b> Principal, SRR &amp; CVR Govt. Degree College (A)</p> <p style="text-align: center;"><b>VALEDICTORY</b> On 16-09-2017 Saturday at 4 P.M.</p> <p><b>VENUE : SEMINAR HALL, SRR &amp; CVR Govt. Degree College (A)</b></p> <p>Chief Guest : Prof. <b>S. RAMAKRISHNA RAO</b> Vice - Chancellor, Krishna University</p> <p>Special Guests: Prof. <b>V. VENKATA DAS</b> Director, IIIT, Nuzvid</p> <p>Dr. <b>P. RAMU SRIDHAR</b> Dept. of Chemistry, University of Hyderabad</p> <p>Chairman : Dr. <b>VELAGA JOSHI</b> Principal, SRR &amp; CVR Govt. Degree College (A)</p> <p><b>T.V. Rambabu</b>      <b>Dr. G. Nagarjuna</b>      <b>K. Srinivas</b> Co-Convenor      Convener      Co-Ordinator</p> <p style="text-align: center;"><b>Department of Chemistry</b> <b>SRR &amp; CVR GOVT. DEGREE COLLEGE (A)</b></p>
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<p style="text-align: center;">           UGC Sponsored  <b>Two - Day National Seminar</b>          on  <b>Recent Trends</b>          in  <b>Chemistry and Physics</b>          of  <b>Materials</b>          (RTCPM)       </p> <p style="text-align: center;"><b>15<sup>th</sup> &amp; 16<sup>th</sup> September - 2017</b></p> <p style="text-align: center;">To _____</p> <p style="text-align: center;">Pin _____</p> <p style="text-align: center;">Organised by <b>Department of Chemistry</b></p> <p>From : Convenor <b>RTCPM - 2017</b> <b>SRR &amp; CVR Govt. Degree College</b> <b>VIJAYAWADA - 520004</b></p>	
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## ❖ Seminar - Brochure

### Organizing Committee

**Chief Patrons:** Sri G. S. Panda Das, IAS  
Commissioner of Collegiate Education, A.P.  
**Prof. S. Ramakrishna Rao**  
Vice-Chancellor, Krishna University, Machilipatnam  
**Patron:** Dr K. Gangeswara Rao  
R J D of Collegiate Education, Rajamahendravaram  
**Chairman:** Dr V. Ravi  
Principal, SRR & CVR Govt. Degree College, VJA

### Coordinators:

- ★ Sri K. Srinivas, HOD Dept. of Chemistry
- ★ Dr G. Venkata Rao, Coordinator, P.G Studies

**Convener:** Dr G. Nagarjuna, Lecturer in Chemistry  
**Co-Convener:** Sri T.V. Rambabu, Lecturer in Physics

### Organizing Members:

- ★ Dr V. Neeraja, Lecturer in Chemistry
- ★ Sri KVS Prasad, Lecturer in Chemistry
- ★ Dr Phani Kumar, Lecturer in Chemistry
- ★ Sri Ch. Siva Prasad, Lecturer in Chemistry
- ★ Smt. T. Uma Rani, Lecturer in Chemistry
- ★ Dr K.S. Rajesh, HOD, Dept. of Computer Science
- ★ Sri Md. Iqbal Pasha, Lecturer in Physics
- ★ Sri K. Durga Rao, Lecturer in Zoology

### National Advisory Committee

- ★ Prof. G. Nageswara Rao, Vice Chancellor, AU, VSP
- ★ Prof. N. Veeraiiah, Dept. of Physics, ANU, Guntur.
- ★ Prof. M.V. Basaveswara Rao, Dean, KRU, MTM.
- ★ Prof. P.V.V. Satyanarayana, Rtd. Dept. of Chem, ANU
- ★ Prof. R. Venkata Nadi, Dept. of Chemistry, Gitam School of Tech., Bengaluru.
- ★ Dr. P. Ramu Sridhar Dept. of Chemistry, HCU, Hyd
- ★ Dr. P. Syam Prasad, Dept. of Phy, NIT, Warangal.
- ★ Dr. Y.V. Nanchaiah, Scientific Officer - G. Water and Steam Chemistry Division, IGCAR, Kalpakkam
- ★ Dr. L. Giribabu, Senior Scientist, IICT, Hyd
- ★ Dr. M. Subba Rao, HOD, Dept. of Chemistry, ANU
- ★ Dr. D. Ramachandran, Dept. of Chemistry, ANU
- ★ Dr. B. Haribabu, Dept. of Chemistry, ANU
- ★ Dr. N. Venkatarani, HSc, Bangalore
- ★ Dr. N.V.S. Venu Gopal, Dept. of Chemistry, Gitam University, VSP.
- ★ Dr. M. Singanan, Dept. of Chemistry, Presidency College (A), Chennai.

### Important Dates:

Last date for Abstract Submission: 05-12-2016  
Acceptance Notification : 06-12-2016  
Last Date for full paper submission: 10-12-2016

### Registration Fee:

for Faculty: Rs. 500/-  
Research Scholars: Rs. 300/-  
Students: Rs. 100/-

### Address for Correspondence

**Dr G. Nagarjuna,**  
Convener, RTCPM - 2016  
Department of Chemistry,  
SRR & CVR Govt. Degree College,  
Vijayawada-520004. Ph:9440444223,  
Email: rtcpm2016@gmail.com

### Registration Form

Name :  
Designation :  
Address :  
Mobile No :  
Email id :

I am enclosing here with D.D NO \_\_\_\_\_

Date: \_\_\_\_\_ for Rs. \_\_\_\_\_ on \_\_\_\_\_

(Bank Name)

(Station) for registration

DD drawn in favour of the "The Principal, SRR & CVR Govt. Degree College" payable at Vijayawada.

Signature of the Candidate

Please send the filled registration form together with DD to The convener RTCPM - 2016. Scanned copy of the signed form and scanned DD may be sent through e-mail.



ज्ञान-विज्ञान विभूषणे  
University Grants Commission

UGC Sponsored

Two Day National Seminar  
on  
RECENT TRENDS  
IN  
CHEMISTRY & PHYSICS OF MATERIALS  
(RTCPM-2016)  
ON  
16<sup>th</sup> & 17<sup>th</sup> December, 2016



Organised by

DEPARTMENT OF CHEMISTRY

SRR & CVR GOVT. DEGREE COLLEGE

VIJAYAWADA - 520004

(Re - accredited by NAAC  
with B Grade - CGPA 2.70)

www.srrcvr.org, Ph: 0866-2439229

### About the College:

SRR & CVR Government Degree College is the foremost college established in 1937 in Vijayawada. It was originally established by the munificence of Sri Raja Rangayya Appa Rao and Sri Chunduri Venkata Reddy. It is the only Government Degree College serving the socially and economically backward and other weaker sections, near the upcoming capital "Amaravathi" of newly formed Andhra Pradesh state. The Crest and Motto adopted by the college is "VIDYAA DHARMENA SOBHATE"

The college has glorious history of having intellectual stalwarts like first Jnanapita Awardee, Kavisamrat Sri Viswanadha Satyanarayana on the faculty. Among the luminaries, the college mentions with pride the names of Late Sri N.T. Rama Rao, former Chief Minister of Andhra Pradesh, P.S. Rama Mohana Rao Ex- Governor of Tamilnadu and Sri V. Rama Rao Ex-Governor of Sikkim.

College was accredited by NAAC twice and is in the process of waiting for autonomy result. The college is the nodal centre for the activities of CCE, A.P.

### About the Chemistry Department

Chemistry Dept. is one of the major departments of the College. It consists of both UG & PG Courses. It has the privilege of recognized Research Center by Krishna University. 4 members of department faculty have Ph D degrees and 2 members are undergoing FDP. Three members are recognized as Research Supervisors by Krishna University, JNTU Kakinada, and JNTU Anantapur.

Some of our department faculty members are acting as members of Board of Studies (BOS) of different autonomous colleges. Our department staff members published 22 papers in National Journals and 26 papers in International Journals.

Two students of the department were awarded M.Phil and four students are working for their Ph. D. Vibrant research is going on in the Dept. in the fields of Materials Science and Environmental Chemistry. Two Minor Research Projects sponsored by UGC are going on and One Project was completed.

### Scope of the Seminar:

The aim of the seminar is to provide vibrant understanding about all aspects of advanced materials & materials science viz., fundamental concepts, various synthesis preparation approaches, and characterization techniques. It also covers the development of new materials and modification of properties of materials to suit numerous technological applications that are gaining importance. There is lot of scope in preparing new materials by selective methods for various applications including optical, thermal, mechanical and electrical applications. It provides a common platform for scientists, academicians and young research scholars working in the fields of basic as well as applied sciences - Physics, Chemistry, Biology, Engineering and Materials Science.

### Objectives:

- ★ To share valuable research experience of advanced materials.
- ★ To promote collaboration in implementing national standards in research
- ★ To establish network of scholars and scientists of national class
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- Hybrid materials and Composites
- Materials for optoelectronics
- Photovoltaic materials
- Super conducting materials
- Solar energy and materials for energy conversion
- Carbon based materials
- Glasses & Glass ceramics
- Fuel Cell materials and other electro-ceramics
- Bio-materials
- Thin Films & surface chemistry
- Organic & Inorganic nano materials for functional applications

### We Invite

- ✱ Faculty from Academic Institutions
- ✱ Research Scholars from various Universities
- ✱ Young Students of M.Sc. Chemistry, Physics
- ✱ People from Industry and R&D Institutions

### Call for papers:

The participants are invited to contribute abstracts of the papers for oral presentation. Abstracts are in MS Word, Times new Roman font style 12 font size with 1.5 spacing not exceeding 300 words. The Title of the abstract should be in Bold (14 font size) followed by the names of the authors and affiliations in italics. Abstracts can be submitted through e-mail to [rtcpm2016@gmail.com](mailto:rtcpm2016@gmail.com).

All the contributed papers would be peer reviewed and as per the recommendation of the reviewers, the papers will be consider for publication in a reputed journal with ISSN No.



Souvenir:



# SEMINAR PROCEEDINGS



UGC SPONSORED TWO DAY NATIONAL SEMINAR  
ON

## RECENT TRENDS IN CHEMISTRY AND PHYSICS OF MATERIALS

(RTCPM - 2017)

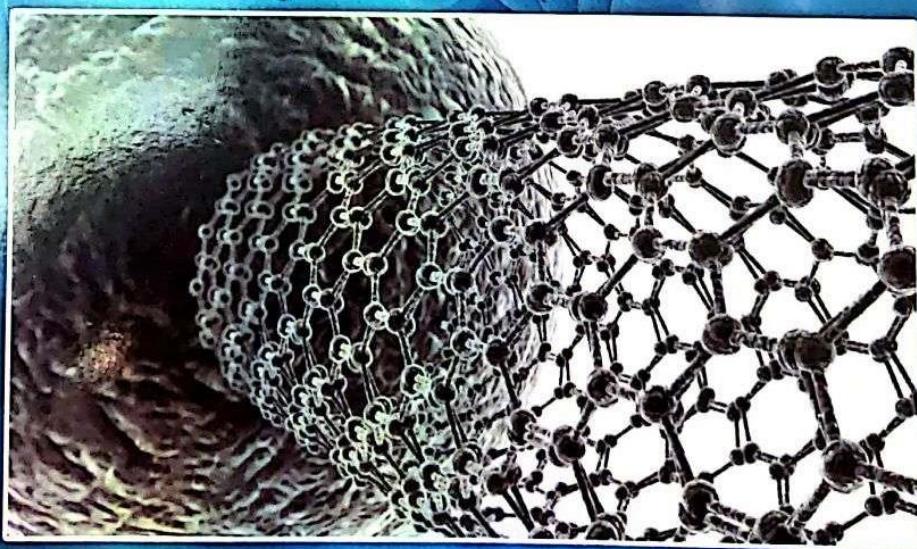


15<sup>th</sup> & 16<sup>th</sup>  
September, 2017



Organized by

Dept. of Chemistry, SRR & CVR Govt. Degree College (A)  
VIJAYAWADA, A.P.





**Programme Schedule:**

**UGC Sponsored Two Day National Seminar**

**RTCPM – 2017**

**Program Schedule**

**Day 1 : 15.09.2017 (Friday)**

09.00 – 09.30 AM	Registration
09.30 – 10.00 AM	Inaugural session
10.00 – 10.10 AM	Tea Brake
<b>TECHNICAL SESSION – 1 ( Chair: Dr. Y.V. Nancharaiah )</b>	
10.10 – 10.40 AM	Distinguished Speaker : <b>Prof. G. Nageswara Rao,</b> Vice-Chancellor, Andhra University, Visakhapatnam.
10.40 – 11.20 PM	Keynote Address : <b>Prof. N. Veeraiah</b> Dept. of Physics, Acharya Nagarjuna University, Guntur.
11.20 – 12.00 PM	<b>Dr. L. Giribabu</b> Principal Scientist, Inorganic and Physical Chem. Division CSIR-Indian Institute of Chemical Tech., Hyd.
12.00 – 12.40 PM	<b>Dr. K. Ramachandra Rao</b> Dept. of Physics, Govt. Arts College (A), Rajahmundry.
12.40 – 01.00 PM	Oral Presentations
01.00 – 02.00 PM	Lunch brake
<b>TECHNICAL SESSION – 2 ( Chair : Prof. N. Veeraiah )</b>	
02.00 - 02.40 PM	<b>Dr. Y. V. Nancharaiah</b> Scientist-G, Water & Steam Chem. Div., BARC-IGCAR, Kalpakkam, T.N.
02.40 – 30.20 PM	<b>Dr. N.V.S. Venugopal</b> Assoc. Prof., Dept. of Chemistry, G.I.T. GITAM University, Visakhapatnam.
03.20 – 04.00 PM	<b>Dr. M.C. Rao</b> Associate Professor, Dept. of Physics, Andhra Loyola College, Vijayawada.
04.00 – 04.10 PM	Tea break
<b>TECHNICAL SESSION – 3 ( Chair : Dr. M.C. Rao )</b>	
04.10 - 04.40 PM	<b>Dr. G. Sivaramaiah</b> Assoc. Prof., Dept. of Physics, G D C, Yerraguntla, Kadapa Dist.
04.40– 05.00 PM	Oral Presentations
05.00 – 05.30 PM	Poster Presentations

**Day2:16.09.2017 (Friday)**

<b>TECHNICAL SESSION – 4 ( Chair : Dr. N. Venkataramaiah )</b>	
09.00 – 09.40 AM	<b>Dr. P. Ramu Sridhar</b> Assoc. Prof., School of Chemistry, University of Hyderabad, Hyderabad
09.40 – 10.20 AM	<b>Prof. R. Venkatanadh</b> Research Director, Dept. of Chemistry, GITAM University, Bengaluru
10.20 – 11.00 AM	<b>Dr. B. Jaganmohan Reddy</b> Dept. of Chemistry Acharya Nannayya Univ, Rajahmundry.
11.00 – 11.10 AM	<b>Tea brake</b>
<b>TECHNICAL SESSION – 5 ( Chair : Prof. R. Venkatanadh )</b>	
11.40 – 11.40 PM	<b>Dr. RVSSN Ravi Kumar</b> Dept. of Physics, Achaarya Nagarjuna Univ., Guntur.
11.40 – 12.20 PM	<b>Dr. N. Venkataramaiah</b> Asst. Prof. (Research), Dept. of Chem & Research Institute SRM University, Chennai.
12.20 – 01.00 PM	<b>Dr. Y.H. Rao</b> Associate Professor, Dept. of Chemistry, Andhra Loyola College, Vijayawada.
01.00 – 02.00 PM	<b>Lunch Break</b>
<b>TECHNICAL SESSION – 6 ( Chair : Dr. P. Ramu Sridhar )</b>	
02.00 -- 02.40 PM	<b>Dr. M. Singanan</b> PG and Research Dept. of Chemistry, Presidency College (A), Chennai.
02.40 – 03.00 PM	<b>Oral Presentation</b>
03.00 – 03.10 PM	<b>Tea brake</b>
<b>TECHNICAL SESSION – 7 ( Chair : Dr. N.V.S. Venu Gopal )</b>	
03.30 – 04.00 PM	<b>Oral Presentations</b>
04.00 - 04.30 PM	<b>Oral Presentations</b>
04.30 – 05.00 PM	<b>Valedictory</b> <b>Chief Guest : Prof. V. Venkata Dasu,</b> Director, IIIT-RGUKT, Nuzvid



## ❖ Invited Talks, Oral presentations & Poster presentations

### 15<sup>th</sup> September:

- **Chief Guest** of our programme, **Prof. G. Nageswara Rao, Vice-Chancellor of Andhra University**, Visakhapatnam was attended to the opening ceremony and delivered Key note address.
- **Honorary guest - Prof. N. Veeraiah**, Dept. of Physics, Coordinator, Research Cell, **Acharya Nagarjuna University** addressed the gathering.
- **Prof. P. Ramu Sridhar**, Associate Prof., School of Chemistry, University of Hyderabad and **Dr. G. Giri Babu**, Senior Scientist, **IICT**, Hyderabad delivered guest lectures.

### 16<sup>th</sup> September:

- Faculty and Scholars from various degree colleges and universities participated in oral presentations and delivered research talks.
- **Prof. V. Venkata Dasu**, Director, **IIIT-Nuzvid**, Krishna Dist., and **Prof. M. Basaveswara Rao**, Dept. of Chemistry and Dean, BoS, Krishna University attended and delivered the talk in valedictory function.
- This National seminar benefited various stakeholders and hereby we are mentioning some of outcomes of our programme:

### Outcomes of the seminar: for various stakeholders

- **College:** National seminar provided a good platform to the College to build a good network with professionals from Industry and Research centers and various academicians from various Universities and Colleges.
- **Faculty:** The faculty members learned various methodologies for research activity and they were motivated for publication of good research work.
- **Students:** The students were most benefited from this seminar. They were more enlightened about all aspects of advanced materials and materials Science viz., fundamental concepts, various synthesis preparation approaches, and characterization techniques.
- **Industry/Society:** The seminar addressed recent advancements and new strategies for development of new materials for global requirements with

an objective to install a dialogue between industries and academic organizations and knowledge transfer from research to industry.

**Acknowledgments:**

- ✚ We would like to thank Dr. Velaga Joshi, Principal, SRR and CVR GDC, Vijayawada, a dynamic leader who encouraged and supported us in all aspects ranging from release of amount to technical support.
- ✚ We extend our heartfelt thanks to Dr, Ramesh, Lecturer in Computer Science, for extending his technical support.
- ✚ Our special Thanks to all are colleague friends particularly in the depts. and in college, without their support, this could not be possible.
- ✚ Special and heartfelt thanks to all the Non-teaching and my dear students who has taken part for making this seminar a grand success.

**Dr. G. Nagarjuna, Dept. of Chemistry**  
**Sri. T.V. Rambabu, Dept. of Physics**



## Photo Gallery



Opening ceremony - 15<sup>th</sup>-16<sup>th</sup> September, 2017



Lightning of the lamp





**Opening of Souvenir**



**Welcoming address by Dr. G. Nagarjuna**



## Other photos



**conclusion:** Feed back form has been collected and consolidated for futuristic benefit.

(News paper Clippings)