



**DCT's**

Dhempe College of Arts and Science  
Miramar, Goa

**Report on International Symposium on “Emerging Trends in Chemistry and its Allied Sciences”**

Department of Chemistry, under the DBT Star college scheme and Research and development Cell of DCT's Dhempe College of Arts and Science in association with the Royal society of Chemistry (UK)-Local Section Deccan, India, jointly organized an International Symposium on “Emerging Trends in Chemistry and its Allied Sciences” on 29<sup>th</sup> and 30<sup>th</sup> September 2023, at the Swami Vivekananda Hall of Dhempe College of Arts and Science. This symposium was intended to promote chemical sciences and research among students and academicians for the benefit of the society.

Prof. Vrinda Borker, Principal, DCT's Dhempe College of Arts and Science, welcomed the participants and the resource persons of the symposium at the Inaugural program of the two day symposium, held on 29<sup>th</sup> September 2023. The Chief Guest for Inaugural program, was Prof. A. Varada Rajulu, Fellow of Royal Society of Chemistry and Visiting Professor at Kalasalingam University, Tamilnadu. He emphasized on the importance of research and their applications in daily life. Trustee, Dempo Charities Trusts', Mrs. Pallavi Dempo, lauded the efforts of the Royal Society of Chemistry in the field of research and expected good research output through this Collaboration. Also present on the dais were Administrator, Mr. Rajesh Bhatikar, Principal, Prof. Vrinda Borker, and Head of Department of Chemistry, Mrs. Varsha Virginkar. The Fellows of the Royal Society of Chemistry called Trustee, Mrs. Pallavi Dempo, a visionary and felicitated her with a book from Royal Society of Chemistry. The Principal, Prof. Vrinda Borker was also felicitated with a memento of Royal Society of Chemistry.

The Inaugural program was followed by a series of lectures delivered by the eminent scientists, Dr. U. N. Das, Consultant Physician & Diabetologist, USA, on “How to do research and why to do research?”, Prof. Ranjan Dey from BITS Pilani Campus, Goa and Fellow of Royal Society of Chemistry, on “Intermolecular Interactions based on

Thermophysical Properties”, Prof. A. Venkataramana, Professor, Gulbarga University, Karnataka and Fellow of Royal Society of Chemistry, on “Some interesting aspects of the Chemistry of High Energy Molecules”, Prof. A. Varada Rajulu, Visiting Professor at Kalasalingam University, Tamilnadu and Fellow of Royal Society of Chemistry on “Biodegradable nanocomposite fabrics for medical applications” and Prof. K. S. Rane, Adjunct Professor, Gogte Institute of Technology, Belgaum on “Semiconductors in Electrical vehicles”.

Dr. U. N. Das, delivered a lecture on “How to do research and why to do research?” through Google meet platform via online mode (Google Meet Link: [meet.google.com/kpp-npsu-gxf](https://meet.google.com/kpp-npsu-gxf)). Dr. Shashank Mhaldar, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science, introduced the guest speaker. Dr. Das highlighted the importance of Research in day to day life. He also explained how to select an Institute, Guide and topic for Research, wisely. He emphasized on the significance of the four P’s in the field of Research; Proposal-hypothesis, Publication, Patent and Product. He motivated the students to select an Institute for Research that encourages innovation and freedom to think and also provides good access to facilities.

The next lecture was delivered by Prof. Ranjan Dey, on “Intermolecular Interactions based on Thermophysical Properties”. Dr. Bhanudas Naik, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science, introduced the guest speaker. Prof. Dey conducted an interactive, problem solving session wherein many interesting questions were asked to the students and he also illustrated and cleared the basic concepts of thermodynamics. He then featured his Research in the field of Thermophysical properties. Prof. Dey requested the students to be prepared for the competitive world outside their Institute. He concluded the session, by informing about the upcoming events in the BITS Pilani, Goa campus, on the occasion of celebration of completion of 20 years.

The next lecture, post lunch, was delivered by Prof. A. Venkataramana, on “Some interesting aspects of the Chemistry of High Energy Molecules”. Dr. Durga Timble, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science, and the local organising secretary of the two day symposium, introduced the guest speaker. The fascinating aspects of high energy molecules and materials were discussed with some interesting examples. Prof. Venkataramana, provided a brief explanation regarding oxygen balance and velocity of detonation. The impact of presence of certain chemical groups in a molecule on its explosive

properties was also discussed. This informative session was made even more interesting with the display of audio-visuals.

The next lecture, titled “Biodegradable nanocomposite fabrics for medical applications”, was delivered by Prof. A Varada Rajulu. Dr. Sonia Parsekar, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science, introduced the Resource Person. His lecture focused on the preparation, characterization and properties of biodegradable nanocomposite films and fabrics using natural materials for packaging and medical applications. He highlighted the importance and benefits of selecting natural materials especially the Indian traditional materials such as turmeric, tea powder, tulsi leaf extract in the preparation of the nanocomposite films. He demonstrated some of the nanocomposite films prepared by his group as well as the method of preparation and interesting applications of these films.

The first day of the two day symposium, concluded with Prof. K. S. Rane’s inspiring talk on “Semiconductors in Electrical vehicles”. Prof. Rane focused on the chemistry and scope in the field of research, of semiconductor materials. He informed about the India Semiconductor Mission (ISM) and Design Linked Initiation (DLI) and emphasized on the need to promote innovative research in semiconductor industry. Prof. Rane also expressed the need for developing problem solving skills of the students.

The lecture of each resource person was followed by a question-and-answer session. The first day of the symposium was attended in large numbers by 73 students and 16 faculty members.

The second day of the symposium started with the Intercollegiate Quiz Competition for the Undergraduate students, conducted by Prof. V Jayathirtha Rao, Retd. Director, Indian Institute of Chemical Technology, Emeritus Professor and Fellow of Royal Society of Chemistry. Dr. Chandan Naik, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science introduced the Quiz Master. Ten Science Colleges from Goa participated in this quiz competition. Each team representing the college was comprised of two students. The students of DCT’s Dhempe College of Arts and Science, Ms. Vaishnavi V. Nadkarni and Ms. Pooja Naik secured first place in this quiz competition. The second place was secured by the students of Govt. College of Arts, Science and Commerce, Khandola, Goa.

The quiz, comprising of two rounds was made very interesting by the Quiz Master and involved active participation by the audience. The answers from audience were appreciated by prizes from the Royal Society of Chemistry.

The next session of the workshop “Quest for Science”, after a short tea break, included Word search puzzles, concept map: acids /bases, chemical reactions and bingo conducted by the fellows of Royal Society of Chemistry along with the enthusiastic Principal of DCT’S Dhempe College of Arts and Science, Prof. Vrinda Borker, Head, Department of Chemistry, DCT’S Dhempe College of Arts and Science, Mrs. Varsha Virginkar and the faculty members of the Department of Chemistry, DCT’S Dhempe College of Arts and Science. The answers from participants were appreciated by prizes from the Royal Society of Chemistry. 47 students and 14 faculty members participated in the workshop held on 30<sup>th</sup> September 2023.

The symposium concluded with a valedictory function. All the Resource persons were felicitated with a memento by the Principal of DCT’S Dhempe College of Arts and Science, Prof. Vrinda Borker. Thanking the Management, Principal, and faculty members of Dhempe College of Arts & Science for collaboration for the symposium, Prof. A. Venkataramana expressed the need of active participation by the academicians in the organization of such events to benefit the society. He informed that the Royal Society of Chemistry intends to interact with students in order to improve their concepts in chemistry. Mrs. Deepa Audi proposed the vote of thanks. The participants were asked to submit the feedback of the symposium on each day. Majority of the Participants rated the symposium as excellent and extremely informative.

Prof. V. Peesapati, Fellow of Royal Society of Chemistry, Retd. Prof. OU, JNTU & NIPER-H and the convener of the two day symposium, Prof. Vrinda Borker, Principal, DCT’s Dhempe College of Arts and Science and the co convener of the symposium, Mrs. Varsha Virginkar, Head, Department of Chemistry, Dr. Durga Timble, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science and the local organising secretary of the symposium, Dr. Bhanudas Naik, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science and the treasurer of the symposium, Dr. Chandan Naik, Assistant Professor, Department of Chemistry, Dhempe College of Arts and Science and the key member of the symposium along with all the faculty members of the Department of Chemistry of Dhempe College of Arts, coordinated the event.

## Brochure of the International Symposium



DEMPO CHARITIES TRUST'S  
**DHEMPE COLLEGE OF ARTS & SCIENCE**  
MIRAMAR, GOA  
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Estd: 1962



DEPARTMENT OF CHEMISTRY & RESEARCH & DEVELOPMENT CELL  
IN ASSOCIATION WITH  
**ROYAL SOCIETY OF CHEMISTRY (UK) – LOCAL SECTION DECCAN, INDIA**  
ORGANISES AN INTERNATIONAL SYMPOSIUM  
ON  
**“EMERGING TRENDS IN CHEMISTRY AND ITS ALLIED SCIENCES”**  
(UNDER DBT STAR COLLEGE SCHEME)

**RESOURCE PERSONS**



**DR. U. N. DAS**  
CONSULTANT PHYSICIAN &  
DIABETOLOGIST, USA



**PROF. RANJAN DEY**  
PROFESSOR, CHEMISTRY, BITS  
PILANI CAMPUS, GOA



**PROF. A. VENKATARAMANA**  
PROFESSOR, GULBARGA UNIV.  
KARNATAKA.



**PROF. A. VARADA RAJULU**  
RETD. PROFESSOR  
KRISHNADEVARAYA UNIV.  
ANANTHAPUR.



**PROF. K. S. RANE**  
ADJUNCT PROFESSOR, GOGTE  
INSTITUTE OF TECHNOLOGY,  
BELAGAVI



**DATE: 29<sup>TH</sup> SEPTEMBER 2023, VENUE: SWAMI VIVEKANAND HALL, DHEMPE COLLEGE OF ARTS & SCIENCE**

**DR. DURGA TIMBLE**  
(LOCAL ORGANISING SECRETARY)


**MRS. VARSHA VIRGINKAR**  
(HOD- DEPARTMENT OF CHEMISTRY)

**PROF. VRINDA BORKER**  
(PRINCIPAL & CO-CONVENOR)

**PROF. V. PEESAPATI**  
(CONVENOR)




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**WORKSHOP**  
**QUIZ & QUEST FOR SCIENCE**



**RESOURCE PERSON**  
**DR. V. JAYATHIRTHA RAO.**  
RETD. DIRECTOR, GR. SCIENTIST,  
IICT-H, EMERITUS PROFESSOR

WORD SEARCH PUZZLES,  
CONCEPT MAP: ACIDS /BASES,  
CHEMICAL REACTIONS, BINGO  
ETC.

**DATE: 30<sup>TH</sup> SEPTEMBER 2023, VENUE: SWAMI VIVEKANAND HALL, DHEMPE COLLEGE OF ARTS & SCIENCE**  
**REGISTRATION LINK: <https://forms.gle/2FnXCo9GYWPpjdTs8>**

**DR. DURGA TIMBLE**  
(LOCAL ORGANISING SECRETARY)

**MRS. VARSHA VIRGINKAR**  
(HOD- DEPARTMENT OF CHEMISTRY)

**PROF. VRINDA BORKER**  
(PRINCIPAL & CO-CONVENOR)

**PROF. V. PEESAPATI**  
(CONVENOR)



**Royal Society of Chemistry (UK) –Local Section Deccan, India**  
**In association with DCT's Dhempe College of Arts & science, Goa**  
**(Under DBT Star College Scheme)**  
**Organizing an International Symposium**  
**On "Emerging Trends in Chemistry and Its Allied Sciences"**  
**29<sup>th</sup> & 30<sup>th</sup> September, 2023**

**Program details**

**29/09/2023 – Invited Lectures**

- 09.30 - 10.00 am Inauguration
- 10.00 – 11.00 am **"How to do research and why to do research?"**  
By Dr. U N Das, Consultant Physician & Diabetologist, Founding Editor by BMC Lipids in Health and Disease, USA
- 11.00 - 12.00 pm **"Intermolecular interactions based on thermophysical properties"**  
By Prof. Ranjan Dey, Professor, Chemistry, BITS Pilani Campus, Goa.
- 12.00 – 1.00 pm **Lunch break**
- 1.00 – 2.00 pm **"Some interesting aspects of the chemistry of high energy molecules."**  
By Prof. A. Venkataramana PhD, FRSC Professor, Gulbarga Univ. Karnataka, Hon. Director, Premier Explosives Limited, Hyderabad
- 2.00 – 3.00 pm **"Biodegradable nanocomposite fabrics for medical applications"**  
By Prof. A Varada Rajulu, PhD, FRSC. Retd. Prof. Krishnadevaraya Univ., Ananthapur, A.P. & Visiting Professor, Kalasalingam Univ. Tamilnadu.
- 3.00 – 3.45 pm **"Semiconductors in electrical vehicles"**  
By Prof. K. S. Rane, Adjunct Professor, Gogte Institute of Technology, Belgaum, India

**30/09/2023 Workshop**

- 09.30 – 11.30 am **Quiz**  
Conducted by DR V Jayathirtha Rao, PhD, CChem, FRSC, FTAS, Retd. Director Gr. Scientist, IICT-H, Emeritus Professor.
- 11.30 – 12.30 pm **Quest for Science**  
Word search Puzzles, Concept map: Acids /bases, chemical reactions, bingo etc.
- 12.30 – 1.00 pm **Valedictory**

Prof. V. Peesapati, PhD, FRSC FTAS  
Chairman, RSC-LSD & Convener

Prof. V. Borker, PhD  
Principal & Co-convener  
Dhempe College of Arts & Science, Goa

Dr. Durga Timble  
Local Organising secretary,  
Dhempe College of Arts & Science, Goa



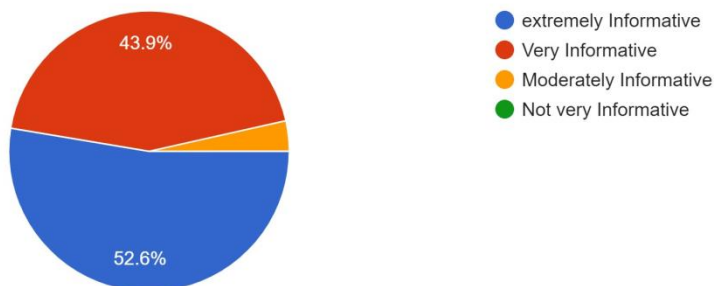
PROGRAM DETAILS		ORGANIZING COMMITTEE	
<b>DAY 1 29/09/2023 INVITED LECTURES</b>			
09.30 – 10.00 AM	<b>INAUGURATION</b>	<b>PATRONS</b>	
10.00 – 11.00 AM	"HOW TO DO RESEARCH AND WHY TO DO RESEARCH?" By <b>Dr. U. N. Das</b> , Consultant Physician & Diabetologist, Founding Editor by BMC Lipids in Health and Disease, USA	SHRI SRINIVAS DEMPO MRS. PALLAVI DEMPO	CHAIRMAN TRUSTEE
11.00 – 12.00 PM	"INTERMOLECULAR INTERACTIONS BASED ON THERMOPHYSICAL PROPERTIES" By <b>Prof. Ranjan Dey</b> , Professor, Chemistry, BITS Pilani Campus, Goa.	<b>ADVISORY COMMITTEE</b>	
12.00 – 1.00 PM	<b>LUNCH BREAK</b>	PROF. VRINDA BORKER	PRINCIPAL
1.00 – 2.00 PM	"SOME INTERESTING ASPECTS OF THE CHEMISTRY OF HIGH ENERGY MOLECULES" By <b>Prof. A. Venkatarumana</b> , PhD, FRSC Professor, Gulbarga Univ. Karnataka, Hon. Director, Premier Explosives Limited, Hyderabad.	<b>LOCAL ORGANIZING COMMITTEE</b>	
2.00 – 3.00 PM	"BIODEGRADABLE NANOCOMPOSITE FABRICS FOR MEDICAL APPLICATIONS" By <b>Prof. A Varada Rajulu</b> , PhD, FRSC, Retd. Prof. Krishnadevaraya Univ., Anantapur, A.P. & Visiting Professor, Kalasalingam Univ. Tamilnadu.	MRS. VARSHA VIRGINKAR DR. DURGA TIMBLE	HEAD DEPARTMENT OF CHEMISTRY LOCAL ORGANIZING SECRETARY
3.00 – 3.45 PM	"SEMICONDUCTORS IN ELECTRICAL VEHICLES" By <b>Prof. K. S. Rane</b> , Adjunct Professor, Gogte Institute of Technology, Belgaum, India	DR. BHANUDAS NAIK MRS DEEPA AUDI	TREASURER, KEY MEMBER MEMBER
<b>DAY 2 30/09/2023 WORKSHOP</b>		DR. SONIA PARSEKAR DR. CHANDAN NAIK	MEMBER MEMBER
09.30 – 11.30 AM	<b>QUIZ</b> Conducted by <b>DR V Jayathirtha Rao</b> , PhD, CChem, FRSC, FTAS, Retd. Director Gr. Scientist, IICT-H, Emeritus Professor.	DR. SHASHANK MHALDAR MS. DIPIKA GOSAVI	MEMBER MEMBER
11.30 – 12.30 PM	<b>QUEST FOR SCIENCE</b> Word search Puzzles, Concept map: Acids/bases, chemical reactions, bingo etc.	MS. SUJATA KERKAR MS. MEDHA GAUDE	MEMBER MEMBER
12.30 – 1.00 PM	<b>VALEDICTORY</b>		

## Pie chart of feedback received from participants

### Day 1

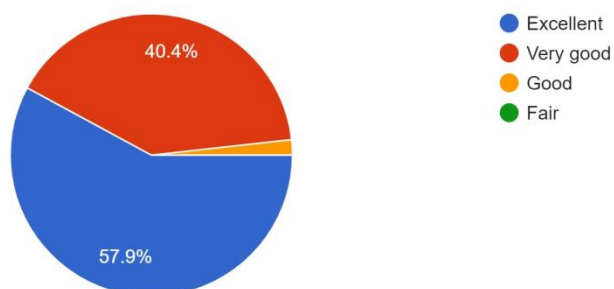
How informative did you find our Symposium?

57 responses



How you will rate the overall Symposium?

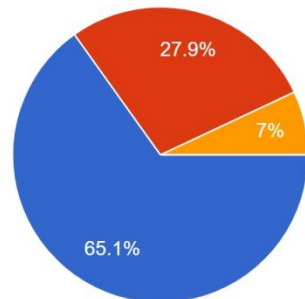
57 responses



## Day 2

How informative did you find the workshop?

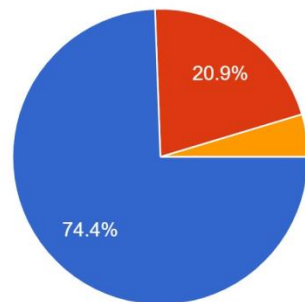
43 responses



- extremely Informative
- Very Informative
- Moderately Informative
- Not very Informative

How you will rate the overall workshop?

43 responses



- Excellent
- Very good
- Good
- Fair



## Photos of the International Symposium



