

Report of the Science Academies Lecture-Workshop

on

“Recent Advances in Functional Materials ”

10-12, November 2022

Organized by

**Department of Physics
NTR Govt. Degree College
Vayalpad
Andhra Pradesh**

Convener

Dr. Ck. Jayasankar, Ph.D. FNASc.
Rtd. Professor
S.V. University
Tirupathi .

Coordinator

Dr. S. Guru Prasad
Lecturer in Physics
NTR Govt. Degree College
Vayalpad.

Report of the Science Academies Lecture-Workshop on “Recent advances in functional materials”

A three day Science Academies Lecture Workshop on “Recent advances in functional materials” was held in NTR Govt. Degree College, Vayalpad on 10-12th November 2022. The Lecture workshop was sponsored by the three Science Academies, Indian Academy of Science (IASc) Bangalore, Indian National Science Academy (INSA), New Delhi and The National Academy of Sciences India (NASI), Prayagraj. The Lecture workshop was organized by the Department of Physics, NTR Govt. Degree College, Vayalpad. Dr. C. K. Jayasankar, Rtd. Professor, S. V. University, Tirupathi, was the convenor and Dr. S.Guru Prasad, Lecturer in Physics Department Physics, NTR Govt. Degree College, Vayalpad was coordinator for this programme.

The workshop was organized to get the basic aspects of Advanced materials and its applications for the benefit of Society. A total of 12 lectures were delivered by resource persons. About 150 participants (Faculty and UG and PG students) from various colleges participated in the workshop.

Following are resource persons who delivered lectures during the lecture workshop:

1. Dr. K Natarajan, Scientist, IISc., Bangalore
2. Dr. John Philip, Scientist, IGCAR, Kalpakkam
3. Dr. M.L.P.Reddy, Professor, NIIST, Trivendrum, Kerala
4. Dr N.P Rajesh, Professor, Nadar University, Chennai
5. Dr. C.K Jayasankar, Professor, S. Venkateswara University, Tirupati
6. Dr. K.T .Ramakrishna Reddy, Professor, S. Venkateswara University, Tirupati
7. Dr. B. Devaprasad Raju, Professor, S. Venkateswara University, Tirupati



Inauguration of A Three day Science academies Sponsored Lecture Workshop



Introductory speech about lecture workshop by local MLA Sri Chintala Ramachandra Reddy Garu

A three day lecture workshop was inaugurated by MLA Sri Chintala Ramachandra Reddy Garu at 9.30 am on 10-11-2022 at NTR Govt. Degree College, Vayalpad, Dr P. Babu Principal , NTR Govt. Degree College, Vayalpad welcomed the gathering. Dr C. K. Jayasnakar, Convenor of this workshop gave introductory speech and mentioned the objectives of the lecture workshop. He also

explained the various activities of the Science Academies'. Dr. O. Mahammad Hussian, Registrar, Sri Venkateswara University, Tirupati, gave Inaugural speech about the importance of science and Recent advances in materials.

First lecture has given Dr N.P. Rajesh on the topic “Development of Piezoelectric Ceramics for energy storage applications” which explains the importance, relevance of Piezoelectric ceramics and its importance and applications in energy storage devices.



Dr. N.P.Rajesh delivering a Lecture on “Development of Piezoelectric Ceramics for energy storage applications”



Lecture by Dr. Jhon Philip

Second and third sessions of 1st day are taken by Dr. John Philip. He delivered a lecture on "Role of science and materials in modern technology". He clearly explained about Material design age, Material processing, Raman spectroscopy and also delivered a lecture about how the development of advanced materials have led to many new technologies. In 4th session, Dr. C.K Jaysankar delivered an inspirational lecture on 'Fundamentals and applications of analytical techniques to characterize functional materials'.



Lecture by Prof. C.K.Jayasankar

On 11 November 2022, 1st and 4th sessions have taken by Dr MLP Reddy and he delivered a lecture on “Organelle: Specific Luminescence lanthanide Complexes: From molecular design to bioimaging”.



Lecture by Dr. M.L.P Reddy

On the same day, the 2nd and 3rd session are taken by Dr. S. Natarajan and gave lecture on "PXRD - Principles and applications (2nd session) and New Materials from Minerals (3rd session).



Lecture by Prof. S. Natarajan on 11-11-2022

On 12-11-2022, the first session was taken by Dr. B. Deva Prasad Raju and he delivered a lecture on "Functional materials for energy and photonics -1" and in 3rd session his talk is on "Functional materials for energy and photonics - 2"



Lecture by Dr. B. Deva Prasad Raju on 12-11-2022

On 12-11-2022 2nd session was taken by Dr. K. T. Ramakrishna Reddy and he delivered a lecture on "Progress on earth abundant solar cell materials". He explained about various new materials for solar energy conversion.



Lecture by Prof. K.T. Ramakrishna Reddy

The last day last session of the workshop was taken by Dr. C.K. Jayasankar. He delivered a lecture on "Recent trends in lanthanide doped glasses - Photonic applications"



Lecture by Prof. C. K Jayasankar



Valedictory session

The valedictory address was given by the Junior Civil judge Ch.V. Ramakrishna. He gave good suggestion to the participants and students on how to develop scientific attitude.

In the feedback session, the young and energetic participants and students from various institutions expressed their views about the Lecture workshop. They appreciated the lectures delivered by the resource persons and the arrangements made by the College. At the end Dr S. Guru Prasad, Coordinator of the program delivered vote of thanks. He especially thanked the Science Academies for their generous funding, Convener of the programme, Dr C.K. Jayasankar and all the resource persons for successfully conducting the Lecture workshop. A total of 150 members participated in the Lecture workshop.

Details of participants

Sl. No.	Participants representing institution	Number
1	PVKN Govt. College, Chittoor (PG Students)	15
2	Govt. Degree College for women, Madanapalle	38
3	APSWR Degree College, Kalikiri	35
4	NTR Govt. Degree College, Vayalpad	37
5	SVCR Govt. Degree College, Palamaner	10
5	Staff from different Colleges in AP	15
	Total	150

Composition of participants

S. No.	Composition of participants	Number
1	Teachers	15
3	Students	135
	Total	150