Report on - A Three-day Indian National Science Academies'

Lecture Workshop On

"Physics Behind Smart Materials"

During 28th – 30th March 2022

Hosted by

Department of Physics, Andhra Loyola College, Vijayawada-8

Prof. C. K. Jayasankar, FNASc.

Convener of Workshop

Formerly UGC-BSR Faculty Fellow Department of Physics

Sri Venkateswara University

Tirupati - 517 502, India

Dr. Ch. Srinivasa Rao

Organizing Secretary

Dept. of Physics

Andhra Loyola College, Vijayawada - 520008

Workshop Brochure

A Three-day Indian National Science Academies'

Lecture Workshop On
"Physics Behind Smart Materials"

Registration Form

Name:……
Designation:……
Gender:……
Address:……
Phone:……
Email:……
I plan to attend the Workshop: Yes/No
Accommodation requirement……yes/no

Google Link: https://forms.gle/g9fQ2TxceLt82zt88

Organizing Committee

1. Dr. G. Murali Krishna
2. Dr. G. Sahaya Baskaran
3. Sri. P. Srinivasa Sastry
4. Dr. T. Srikumar
5. Dr. M C Rao
6. Dr. Ch. Srinivasa Rao
7. Dr. D.V. Satish
8. Dr. P.V.S. Sairam
9. Sri. N. Ramakrishna Chand
10. Sri B.K. Sudhakar
11. Dr. B. Johnson
12. Mrs. K. SeshuLatha
13. Mrs. Gunjan Mahajan
14. Dr. T. Kalpana
15. Sri. P. Arun Kumar
16. Mrs. L. Prashanthi
17. Ms. P. Devika
18. Sri. K. Pullaiah
19. Ms. P. Mounika
20. Ms. V. Gayathri
21. Mrs. K. Kalyani
22. Dr. J. Ramesh Babu
23. Ms. T. Vennela
24. Dr. P. Jayaprada
25. Sri. K. Srinu
26. Sri M. Vicky Raj

Chairperson

Rev. Fr. G.A.P. Kishore, SJ
Principal, Andhra Loyola College
Vijayawada - 520008

Co-Chairperson

Sri. P. Srinivasa Sastry
Head, Dept. of Physics
Andhra Loyola College
Vijayawada - 520008

Convener

Prof.C.K.Jayasankar, FNASc.
Formerly UGC-BSR Faculty Fellow
Department of Physics
Sri Venkateswara University
Tirupati - 517 502, India

Organizing Secretary

Dr. Ch. Srinivasa Rao
Dept. of Physics
Andhra Loyola College
Vijayawada - 520008

A Three-day Indian National Science Academies'

Lecture Workshop On
"Physics Behind Smart Materials"

28th to 30th March 2022

Organized by

DEPARTMENT OF PHYSICS
ANDHRA LOYOLA COLLEGE
(Autonomous)
Accredited with A+ Grade with a CGPA of 3.66/4.00 in III Cycle by NAAC and recognised in ARIIA – 2021
Vijayawada – 520 008, A.P.

About the College

Andhra Loyola College is managed and administered by the members of the Society of Jesus (Jesuits), a Catholic religious order, which has significant service in the fields of education and humanity for over 450 years. The college was founded in December 1953, at the request of the Catholic bishops of Andhra Pradesh and began its academic sessions in July 1954. The college offers Intermediate Degree and Postgraduate courses and conducts research programmes in collaboration with several reputable universities. In 1988, the college was accorded the status of autonomy for the Degree-level programmes by the University GrantsCommission (UGC) in recognition of its excellentcontribution to the cause of higher education. The degrees for both UG and PG programmes are awarded by Krishna University, to which the college is affiliated. In 2004, the college won the prestigious 'College with Potential forExcellence' (CPE) status from the UGC. In September 2018, the college was re-accredited by the National Assessment and Accreditation Council (NAAC), Bangalore, with Grade A (CGPA 3.66 out of 4.00) and recognised in ARIIA – 2021.

About the Department:

The Department is blessed with 26 faculty members, out of which 11 are Ph.D. holders and 10 completed their M.Phil. Degrees. There are 05 faculty members recognized as research guides approved by Krishna University as well as other Universities. The department actively involved in student-centred activities and organizes National Seminars/workshops. Besides regular teaching, the students are also encouraged to adopt various tools of learning MOOCS, Projects and ICT.

About the Programme:

The Joint Science Education Panel of the three science Academics of our country. Such as Indian Academy of Sciences (Bangalore), Indian National Science Academy (New Delhi) and The National Academy of sciences (Allahabad) aims at promoting the programs and upholding the cause of applied Physics in diverse technological fields. It major activities include refresher courses, lecture workshops and summer research fellowship for students, research scholars and college teachers at various Institutions/Universities/Colleges throughout our country towards the improvement of Science education. Lecture workshop is one such education programme under the auspices of the Joint Science Education Panel of the three Science Academics that facilities to understand the fundamental and advanced concepts of frontier topics of science by the student's community.

Theme of the Workshop

Smart materials are the functional materials and are also called as intelligent or responsive materials which are specially designed for so many applications required for human needs. The properties of these materials can be significantly changed by controlling composition, stress, Electric, Magnetic, Moisture, Temperature, pH and so on. They are many multifunctional smart materials available with the introduction of nanotechnology and these materials should be synchronized with our living environment. It is customary for the student community to know how these smart materials are synthesized, characterized and useful to the community and also require basic fundamental knowledge of Physics behind Smart Materials.

Resource Persons

Prof. C.K.Jayasankar, FNASc.
Formerly UGC-BSR Faculty Fellow,
Department of Physics
Sri Venkateswara University
Tirupati, A.P.

Prof. N.Veeraiah
Research Director, ALC,
Formerly UGC-BSR Faculty Fellow,
Department of Physics
Acharya Nagarjuna University
Guntur, A.P

Prof. Soma Venugopal Rao, FNASc,
Professor
ACRHEM, University of Hyderabad,
Hyderabad, T.S.

Dr.John Philip FNASc.
Professor
(HBNI)Head, Corrosion Science & Technology Division,Metallurgy and Materials Group,
IGCAR, Kalpakkam, T.N.

Prof Srinivasa Natarajan FNASc.
Professor
Framework Solids Laboratory
Solid State and Structural Chemistry Unit,IISC, Bangalore 560 012.

Dr. P Abdul Azeem
Associate Professor
Department of Physics
National Institute of Technology, Warangal ,T.S.

Dr. B T P Madhav,
Professor & Associate Dean (Academic Research)
ALRL-R&D, ECE Department,
KLU, Guntur, A.P.

Dr .Venkateswara Rao Kalagadda
Professor of Nanotechnology & Controller of Examinations JNTUH, Hyderabad, T.S.

Dr. V. N. Mani,
Principal Scientist-F
Head, High Pure Electronic Materials Division (C-MET), Hyderabad, T.S.

Hospitality

The Pannel will meet the boarding, lodging and local transportation expenses of resource persons. The Panel will also meet expenses on lunch, coffee/tea during sessions, and other working expenses in organizing the programme, as per approved rates.

Travel guidance:

By Train: Vijayawada Junction Rly. Station
* From Rly. Station to Andhra Loyola College Less than 8 kms
By Flight: Gannavaram - Vijayawada Airport
* From Airport to Andhra Loyola College Less than 15 kms

Address for communication

Dr. Ch. Srinivasa Rao
Dept. of Physics
Andhra Loyola College
Vijayawada – 520008
+919490608071
drchsr1971@gmail.com

Workshop Schedule

ANDHRA LOYOLA COLLEGE (AUTONOMOUS)

Vijayawada – 520008, A.P.

Accredited with A+ Grade with a CGPA of 3.66/4.00 in III Cycle by NAAC

A Three-day Indian National Science Academies'

Lecture Workshop On

"Physics behind Smart Materials"

on 28th - 30th March 2022

Organized by

Department of Physics

PROGRAMME SCHEDULE

Tentative Program (Day – 1) 28th March 2022

Technical Session – 1	**10.00 AM - 11.15 AM**
Resource Person	Prof. C K Jayasankar
Theme of the Talk	Fundamentals and Applications of Analytical Techniques to Characterize Smart Materials.
Session Break (11.15 AM -11.45 AM)	
Technical Session – 2	**11.45 AM - 01.00 PM**
Resource Person	Prof. N. Veeraiah
Theme of the Talk	Sb_2O_3 glass ceramica possible smart materials
LUNCH Break (1:00 PM – 2:00 PM)	
Technical Session – 3	**2.00 PM -3.15 PM**
Resource Person	Prof. Soma Venugopal Rao
Theme of the Talk	Nanomaterials for Defence Application's. (ONLINE MODE)
Session Break (3:15 PM – 3:45 PM)	
Technical Session – 4	**3.45 PM – 5.00 PM**
Resource Person	Dr B T P Madhav
Theme of the Talk	Advanced conformal and flexible materials-based antennas and microwave devices.

PROGRAMME SCHEDULE

Tentative Program (Day – 2) 29th March 2022

Technical Session – 1	**10.00 AM - 11.15 AM**
Resource Person	Dr. John Philip
Theme of the Talk	Basics of Smart Magnetic materials.
Session Break (11.15 AM -11.45 AM)	
Technical Session – 2	**11.45 AM - 01.00 PM**
Resource Person	Dr. John Philip
Theme of the Talk	Interesting applications of smart magnetic fluids.
LUNCH Break (1:00 PM – 2:00 PM)	
Technical Session – 3	**2.00 PM -3.15 PM**
Resource Person	Dr. P Abdul Azeem
Theme of the Talk	Fabrication of amorphous and crystalline materials of tissue engineering applications. (ONLINE MODE)
Session Break (3:15 PM – 3:45 PM)	
Technical Session – 4	**3.45 PM – 5.00 PM**
Resource Person	Dr. V. N. Mani
Theme of the Talk	Technology for the development of select nano devices for aero- space related smart electronic applications-a bird's eye view

PROGRAMME SCHEDULE

Tentative Program (Day – 3) 30th March 2022

Technical Session – 1	**10.00 AM - 11.15 AM**
Resource Person	Prof Srinivasa Natarajan
Theme of the Talk	New pigments from Minerals - I and II (more about new materials, structures, properties etc.,)
Session Break (11.15 AM -11.45 AM)	
Technical Session – 2	**11.45 AM - 01.00 PM**
Resource Person	Prof Srinivasa Natarajan
Theme of the Talk	Diffraction: Principles and Applications (X-ray, Neutron and Electron)
LUNCH Break (1:00 PM – 2:00 PM)	
Technical Session – 3	**2.00 PM -3.15 PM**
Resource Person	Dr K. Venkateswara Rao
Theme of the Talk	Basics of nano structures & sensor applications
Session Break (3:15 PM – 3:45 PM)	
Technical Session – 4	**3.45 PM – 5.00 PM**
Resource Person	Prof. C K Jayasankar
Theme of the Talk	International Year of Glass 2022– Lanthanide Doped Glasses- Connecting Universe

Program Sheet

DEPARTMENT OF PHYSICS

ANDHRA LOYOLA COLLEGE (Autonomous), Vijayawada, A.P.

A Three-day Indian National Science Academies' Lecture Workshop On "Physics Behind Smart Materials"

28th to 30th March, 2022

Inaugural Function

Time: 9.00 AM, Date: 28th March, 2022

Venue: Old Seminar Hall

1. **Introduction**	:	Dr. T. Kalpana
2. **Prayer Song**	:	Brother Ankith & Team
3. **Inviting the dignitaries**	:	Dr. J. Ramesh
4. **Lighting the lamp**	:	Dignitaries on the Dias
5. **Invocation**	:	Rev. Fr. Dr. M. Sagayaraj, S.J, Correspondent
6. **Presidential Remarks**	:	Rev.Fr. Dr. G.A.P. Kishore, S.J Principal
7. **Greetings**	:	Rev. Fr. Dr. S Raju, S.J Vice Principal (PG)
8. **Greetings**	:	Rev. Fr. Dr. S Melchior, S.J Vice Principal (UG)
9. **Greetings**	:	Rev.Fr. Dr. G. Rayappa, S.J Vice Principal (UG)
10. **Theme and dynamics of the workshop**: Dr. Ch. Srinivasa Rao, Organizing Secretary		
11. **Message by Convener**	:	Prof. C. K. Jayasankar,
12. **Message by Guest of honour**	:	Prof. N. Veeraiah, Research Director, ALC
13. **Introduction to Chief Guest**	:	Sri. P. Srinivasa Sastry, HOD of Physics
14. **Message by Chief Guest**	:	Sri. K. Uma Maheswara Rao, Registrar, School of Planning and Architecture, Vijayawada - 8
14. **Vote of Thanks**	:	Dr. P. Jayaprada

Workshop Report

The workshop on physics behind smart materials is aimed at inspiring young minds students and faculty towards science and technology.

The Three-day national workshop was organized by Andhra Loyola college Vijayawada and is sponsored by three national science academies they are Indian academy of sciences, the national academy of science and Indian national science academies, Bangalore.

Prof. CK Jayasankar garu acted as a convener and **Dr. Ch. Srinivasa Rao** garu was the organizing secretary. 9 scientists from the leading national institutions and universities are the resource persons. There were **12 sessions**. Faculty of physics and other science departments, students from various colleges numbering 150 are participated in this Workshop.

The first day of the workshop started with the **inaugural function** on 28th March 2022 at 9 am in old seminar hall. Fr. Dr. M Sagaya raj correspondent, Fr. G. Rayappa Vice principal of UG, Fr. S Raju vice principal of PG, Prof. CK Jayasankar garu convener, Dr. Ch. Srinivasa Rao garu organizing secretary, Sri P. Srinivasa Sastry garu HOD OF PHYSICS, and Dr. T. Srikumar garu Dean of sciences, addressed the gathering. the chief guest of the workshop for inaugural function Sri K Uma Maheswara Rao, registrar in school of planning and architecture Vijayawada, he greeted the gathering with valuable message to the students.

Prof. CK Jayasankar garu, professor in SVU Tirupati, in his **first session** gave a wonderful lecture on fundamentals and applications of analytical techniques to characterize smart materials, the introduction about atoms, molecules, spectrum and its types, the fundamentals of spectroscopy, transition atoms and lasers.

Prof. N. Veeraiah garu research director in ALC Vijayawada, delivered. The theme **second session** of the second session is the Nobel ion mixed antimony oxide i.e., Sb2O3 glass ceramics as a possible smart material. He gave his lecture with introduction of smart materials and piezoelectric materials, properties of antimony oxide with XPS studies. Professor ended this fascinating lecture.

Session 3 was an online session with **Dr. S Venugopal** FNASc, central university of Hyderabad, as the resource person. He explained nanomaterials for defense applications such as protective shield, nano fabrics, propulsion application, nano sensors, filtrations. This engrossing lecture was ended with last topic nano technology for better clothing, lightweight and helmet.

In **session 4 Dr. BTP Madhav**, KLU, gave the wonderful lecture on advanced conformal and flexible materials-based antennas and microwave devices.

In **session 5 Dr. john Philip** IGCAE kalpakkam, gave the basics of smart materials. He started his lecture by giving the outline of the seminar, materials, processing and engineering. He has explained about advanced materials, functional materials, multi-functional materials, nano materials with best examples.

During his **session 6 Dr. John Philip** presented applications of smart materials like smart nano materials, liquid magnet, structural color, magnetic nano fluid (ferrofluid), magnetic emulsion, unusual properties of MNP, ION sensing, glucose sensing tempura and pH sensing and with detection of defect.

In **session 7 Dr. Abdul Azeem** associative professor in NIT WARANGAL, gave a wonderful talk about the fabrication of amorphous and crystalline materials for tissue engineering applications. He has described biomaterials, metals, ceramics, polymers, natural polymers.

The speaker of **session 8** was **Dr VN Mani** principal scientist-f, C- MET Hyderabad, the theme of this session was the technology for the development of select nano device for aerospace related smart electronics applications - a bird eye view. He explained about micro electronics, hybrid materials, silicate particles in sand, uses of germanium, uses of silicon metal, why the cost of gold, platinum is higher than the iron.

In **session 9 and 10, Prof. Srinivasa Natarajan**, FNASc IISC, Bangalore explained about new pigments from minerals 1 and 2 structure of minerals in large family and also explained about how the different materials exhibiting in different colors and emission of white light from combination of Red, Blue and Green.

Session 11 was an online session with **Dr. K Venkateswara Rao** JNTUH Hyderabad, gave a very detailed information about nano structure and sensor applications.

In session 12, Prof CK Jayasankar garu SVU Tirupati gave a clear information about glasses and its applications in daily life and lanthanide dopped glass – connecting universe.

Photographs of Workshop

Inaugural function on 28th March 2022 at 9 am in old seminar hall.

Audience (1st Day)

Group photo of Department of Physics, Andhra Loyola College

Motivational lecture by Prof. CK Jayasankar

Group Photo with Stella College Students

Group Photo with SDMS College Students

Group photo with all participants

Participated Students & Faculty List

S.NO	Name of the College	No. of Students registered	No. of Faculty Registered	Total
1	SDMSM College	15	-	15
2	NIT Warangal	-	1	1
3	MARIS STELL COLLEGE	5	7	12
4	K. L. Deemed to be University	-	1	1
5	IGCAR & HBNI	-	1	1
6	Veer Narmad South Gujarat University	-	1	1
7	ANDHRA LOYOLA COLLEGE	85	34	119

172

Press Clippings

THE HINDU

Call to motivate students to take up research as career

SPECIAL CORRESPONDENT
VIJAYAWADA

There has been a sharp decline in the number of students in the higher education sector opting for research in basic sciences in last 20 years, especially after the advent of the engineering colleges and the IT boom, said Srinivasa Natarajan from the Indian Institute of Science, Bengaluru..

Speaking on "Physics behind Smart Materials" organised by the Department of Physics in Andhra Loyola College (ALC) as part of National Science Academies' Lecture, on third day on Wednesday, Prof. Natarajan said the trend needs to be reversed and bright students should be motivated to take up research as a career.

He said the Science Academies provided summer internships to B.Sc. and M.Sc. students to facilitate their interaction with leading scientists in research labs. Interested students could apply for these fully-sponsored internships in September every year, he informed.

He said national academies also provided an opportunity for faculty, especially those who had completed PhD in the recent past.

"There is a possibility that about 70% of the applicants getting into it. After their selection, the staff could interact with the scientist in the host institution and come back and continue their research, he said.

Professor of Nanotechnology , JNTUH, Hyderabad, Venkateswara Rao spoke on the basics of nano structures and sensor applications.

Prof. C K Jayasankar, spoke on the importance of glasses and how Lanthanide Doped Glasses are used in fibre optics. Registrar of Krishna University Rami Reddy gave participation certificates.

ALC Principal, Fr Kishore, Director of Research Prof N Veeraiah, organising secretary Ch. Srinivasa Rao, Head of the Department of Physics P Srinivasa Sastry, and participated in the workshop.

THE HANS INDIA

Concern over research taking back seat

HANS NEWS SERVICE
VIJAYAWADA

Prof Srinivasa Natarajan of Indian Institute of Science, Bengaluru, addressing the workshop on Physics behind Smart Materials at Andhra Loyola College in Vijayawada on Wednesday

THE number of students moving to higher education and research in basic sciences has sharply declined over the past 20 years, especially after the advent of Engineering Colleges and IT industry, said Prof Srinivasa Natarajan of Indian Institute of Science in Bangalore. "This trend needs to be reversed and bright students should be motivated to take up research as a career," he added as a resource person on the third day of the National Science academies' lecture workshop on 'Physics Behind Smart Materials' organised by Andhra Loyola College here on Wednesday.

He recalled that the National Science Academies provide summer internships to the B Sc and M Sc students so as to facilitate them to interact with leading scientists in research labs. Interested students can apply for these fully sponsored internships in the month of September every year.

National Academies also provide opportunity for faculty especially those completed PhD in recent past.

There is a possibility about 70 percent of staff who apply can get into this. Once selected the staff could interact with the scientists in the host institution and come back and continue their research. The members of the staff and scholars could use this facility, he said.

Prof Natarajan explained the scientific reasons for the colours that we see and narrated the cause of retention of colours in ancient paintings. Application of the concepts of infrared radiation in solar spectrum will enable constructing cooler rooms. By coating radiation reflective, cool pigments for exterior painting, we can reduce the AC bill especially in places like Vijayawada wherein we have hotter climate during most of the year.

Professor of Nanotechnology of JNTUH Dr Venkateswara Rao spoke on Basics of Nano structures and sensor applications.

Prof C K Jayasankar spoke on the importance of glasses and how Lanthanide Doped Glasses are used in fiber optics.

During the Valedictory function, Registrar of Krishna University Dr Rami Reddy was the chief guest and distributed the participation certificates.

Principal, Fr Kishore, Director of Research Prof N Veeraiah, Convener Prof CK Jayasankar from S V University, organising secretary Dr Ch Srinivasa Rao, HoD of Physics P Srinivasa Sastry, the Faculty of Physics and Science Departments, the students from various colleges participated in the workshop.

31/03/2022 VIJAYAWADA Pg 04

the pioneer
VIJAYAWADA | WEDNESDAY | MARCH 30, 2022

Andhra

04

'Smart materials will rule future'

PNS ■ VIJAYAWADA

The two-day National Science Academies' workshop on Physics was held at Andhra Loyola College on Tuesday. Dr. John Philip from the Indira Gandhi Centre for Atomic Research,. Kalpakkam, Dr. Abdul Azeem from NIT-Warangal and Dr. Mani, Principal Scientist-F at the Centre for Materials For Electronics Technology, Hyderabad, spoke.

Dr John Philip said that during the ancient period, man used the sword and arrow as his weapons. But today, the soldiers on ground use a number of sensors and electronic gadgets that can protect them as well as attack the enemy. Thirty years ago, no one thought that cell phones would occupy such a prominent position in our lives. Similarly, 30 years later, devices based on smart materials and multi-functional materials will occupy a prominent position. Smart materials are the ones that respond to various stimuli like light, heat, magnetic and electric exposure and change their properties.

Dr. Abdul Azeem explained the materials that are used as implants in the body like heart valves, bone replacement ceramics, and other body parts. His research work on bio-glasses was well explained to the students.

Dr. Mani explained the process involved in manufacturing the purest form of electronic materials. These are used to make integrated circuits, he said.

Director of Research, Prof N Veeraiah, and Convener Prof Jaya Shankar from S V University, Faculty of Physics and Science Departments and students from various colleges participated in the workshop.

https://www.dailypioneer.com/uploads/2022/epaper/march/vijayawada-english-edition-2022-03-30.pdf

THE HANS INDIA

Overuse of devices harmful to health

Says Dr John Philip, Indira Gandhi Centre for Atomic Research, Kalpakkam

Dr John Philip from Indira Gandhi Centre for Atomic Research at Kalpakkam addressing the workshop at Andhra Loyola College in Vijayawada on Tuesday

HANS NEWS SERVICE
VIJAYAWADA

DURING ancient period, man used sword and arrow as his weapons. Today soldiers on ground use a number of sensors and electronic gadgets that can protect them as well as attack the enemy, said Dr John Philip of Indira Gandhi Centre for Atomic Research at Kalpakkam.

He addressed the second day of national academies - sponsored workshop held at Andhra Loyola College, Degree Seminar hall here on Tuesday. Dr John Philip along with Dr Abdul Azeem from NIT Warangal and Dr Mani, principal scientist from Centre for Materials for Electronics Technology, Hyderabad were the resource persons.

Dr John Philip said that 30 years back no one thought that cell phones will occupy such a prominent position in humans' life. 'Similarly, 30 years from now devices based on smart materials and multifunctional materials will occupy prominent position. Smart materials are the ones that respond to various stimuli like light, heat, magnetic and electric exposure and change their properties.'

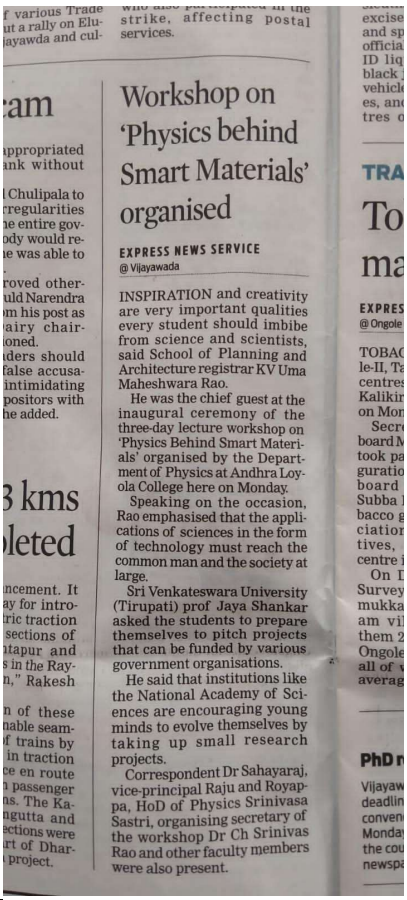
Dr John said scientific world is inventing a variety of sensors and smart materials that has applications in every sphere of our life. Overuse of these technologies like cell phones will have disastrous effects on human health and environment. He suggested that care should be taken while choosing and using the new devices and gadgets.

Dr Abdul Azeem explained the materials that are used as implants in body like heart valve, bone replacement ceramics, and other body parts. His research work on bioglasses was well explained to the students.

Dr Mani explained the process involved in manufacturing purest form of electronic materials. These are used to make integrated circuits, he said.

Director of Research Prof N Veeraiah, Convener Prof Jaya Shankar from SV University, the faculty of Physics and Science Departments, about 150 students from various colleges participated in the workshop.

30/03/2022 VIJAYAWADA Pg 07



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Workshop on 'Physics behind Smart Materials' organised

EXPRESS NEWS SERVICE
@ Vijayawada

INSPIRATION and creativity are very important qualities every student should imbibe from science and scientists, said School of Planning and Architecture registrar KV Uma Maheshwara Rao.

He was the chief guest at the inaugural ceremony of the three-day lecture workshop on 'Physics Behind Smart Materials' organised by the Department of Physics at Andhra Loyola College here on Monday.

Speaking on the occasion, Rao emphasised that the applications of sciences in the form of technology must reach the common man and the society at large.

Sri Venkateswara University (Tirupati) prof Jaya Shankar asked the students to prepare themselves to pitch projects that can be funded by various government organisations.

He said that institutions like the National Academy of Sciences are encouraging young minds to evolve themselves by taking up small research projects.

Correspondent Dr Sahayaraj, vice-principal Raju and Royappa, HoD of Physics Srinivasa Sastri, organising secretary of the workshop Dr Ch Srinivas Rao and other faculty members were also present.

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THE HANS INDIA

Students exhorted to take up research projects

HANS NEWS SERVICE
VIJAYAWADA

INSPIRATION and creativity are very important qualities that students should imbibe from science and scientists, said Registrar of School of Planning and Architecture Uma Maheshwara while speaking as a chief guest at the inaugural session of the three-day national science academies' lecture workshop on 'Physics Behind Smart Materials' organised by the Department of Physics at Andhra Loyola College here on Monday. He emphasised that the application of sciences in the form of technology must reach the common man and society at large.

Prof Jaya Shankar of SV University and convener of the workshop said that at the end of the workshop, all the participating students must be able to write projects that can be funded by various government organisations like Department of Atomic Energy, Department of Science and Technology, Department of Biotechnology and others. He said that of late the institutions like National Academy of Sciences are encouraging young minds to involve themselves by taking up small research projects.

"Nature has taught us how to fly, how to float on a ship. We need to love the nature and learn lessons," Prof Jayasankar said.

Research Director of ALC Prof N Veeraiah, Prof Soma Venugopal Rao of Hyderabad Central University and Dr BTP Madhav of KLU spoke on the occasion.

Registrar of School of Planning and Architecture Uma Maheswara speaking at the inaugural session of national science academies workshop at Andhra Loyola College in Vijayawada on Monday

29/03/2022 VIJAYAWADA Pg 03