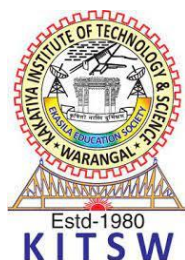


# A Brief Report On

**NATIONAL SCIENCE DAY CELEBRATION February 28,2023**

A Seminar on

*'Smart Materials for Global Wellbeing'*



Organized by

**DEPARTMENT OF PHYSICAL SCIENCES**

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE WARANGAL**

In association with Centre for Innovation Incubation Research & Entrepreneurship (C-I 2RE) & Institution's Innovation Council (IIC) 5.0-  
KITSW

**(An AUTONOMOUS Institute under Kakatiya University-Warangal)**

**Opp: Yerragattu Gutta, Hasanparthy (M)**

**Warangal-506015 (Telangana), INDIA**

## CONTENTS

- 1.Information about Seminar
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## INFORMATION ABOUT SEMINAR

The engineers of should possess a unique, broad level of expertise when it comes to the application of smart materials. Smart Materials are materials that respond to changes in their environment and then undergo a material property change. These property changes can be leveraged to create an actuator or a sensor from the materials without any additional control or electronics required. The engineers understand the advantages and limitations of each material so the appropriate solution can be suggested for each of our customer's applications. Smart materials has the experience necessary to source materials, design and fabricate prototypes, perform modeling and simulation, and manufacture products. The options of smart materials have a wide range as evidenced by the list below our sensor kit products.

# NATIONAL SCIENCE DAY CELEBRATION

## February 28, 2023

### INVITATION

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE - WARANGAL**



*(An Autonomous Institute under Kakatiya University, Warangal)*



**The Management, Principal, Staff and Students**

**Cordially invite you to the seminar on**

***'Smart Materials for Global Wellbeing'***

***On the eve of* National Science Day**

*Organized by*

**Department of Physical Sciences**

*In association with*

**Centre for Innovation Incubation Research & Entrepreneurship (C-I<sup>2</sup>RE) &  
Institution's Innovation Council (IIC) 4.0- KITSW**

**Dr. D. HARANATH**

Professor of Physics

National Institute of Technology, Warangal (NITW)

*has kindly consented to be the Chief Guest and deliver the seminar*

**Capt.V.Lakshmikantha Rao**

Hon'ble Ex.M.P(R.S)&Chairman, KITSW

*will preside over the function*

**Sri.P.Narayana Reddy**

Treasurer, KITSW

*will grace the occasion*

**Date : February 28, 2023**

**Time: 3:00 PM to 5:00 PM**

**Venue: Silver Jubilee Seminar Hall**

**Dr. E. Kalyan Rao**  
Faculty Coordinator  
C- i<sup>2</sup>RE

**Dr.S.Sunil Pratap Reddy**  
President, IIC-KITSW

**Dr.P.Srikanth**  
Head, C- i<sup>2</sup>RE

**Dr. D. Prabhakara Chary**  
Associate Professor & HOD,  
Dept of PS

**Dr.K. Ashoka Reddy**  
Principal, KITSW

## PROGRAM

*Seminar*

*On*

***“Smart Materials for Global Wellbeing”***

***(February 28, 2023)***

<b>3.00 PM</b>	<b>Welcoming dignitaries</b>
<b>3.05 PM</b>	<b>Welcome Address by Head, PS-KITSW</b>
<b>3.10 PM</b>	<b>Address by President -IIC, KITSW</b>
<b>3.15 PM</b>	<b>Address by Head, Centre for i<sup>2</sup>RE, KITSW</b>
<b>3.20 PM</b>	<b>Address by Principal, KITSW</b>
<b>3.30PM-3.35 PM</b>	<b>Introduction of Chief Guest</b>
<b>3.35PM-4.35PM</b>	<b>Session on <i>Smart Materials for Global Wellbeing</i></b>
<b>4.35PM - 4.50PM</b>	<b>Interaction</b>
<b>4.50PM-5.00PM</b>	<b>Felicitations to Chief Guest</b>
<b>5.00 PM - 5.10 PM</b>	<b>Vote of Thanks, National Anthem, Group photo</b>

## **Dr. D. HARANATH**

*(Former Principal Scientist, CSIR-National Physical Laboratory, New Delhi)*

### **Professor of Physics**

**National Institute of Technology  
Warangal (NITW) Warangal 506 004,  
Telangana State.**

**Email address:** [haranath@nitw.ac.in](mailto:haranath@nitw.ac.in); [haranathnitw@gmail.com](mailto:haranathnitw@gmail.com)

**Mobiles:** +91-995 810 1115; 767 824 8149



**Web Page:** <https://nitw.irins.org/profile/102312>

**Research Papers:** <http://www.researcherid.com/rid/C-4908-2009>

**Google Citations:** <http://scholar.google.co.in/citations?user=4qjBMicAAAAJ&hl=en>

### **Academic:**

1992: Graduated from A.P. Residential Degree College, Nagarjuna Sagar with the Physics, Chemistry and Mathematics as main subjects.

1994: Post-graduated (M. Sc.-Physics) from Kakatiya University, Warangal, Telangana with University First Rank and Two Gold Medals

1999: Doctorial degree (Ph.D.–Materials Science) from Shivaji University, Maharashtra, the thesis entitled "Sol-Gel Processing and Characterization of Silica Gels and Glasses" under the guidance of Dr. A. Venkateswara Rao.

2000: Since then worked as Research Scientist in developing Advanced Luminescent Materials & Devices at CSIR-NPL.

2006: Worked as Post Doctorial Fellow for 15 months at Nanocrystals Technology, NY, USA for the synthesis and characterization of Binary and Ternary Nanophosphors for white LED applications

### **Important Awards/Medals Received:**

1. National Innovative Research Excellence Award-2022 in Physics (2022)
2. Grassroot Innovators Virtual Mela Award given by MeitY, Govt of India (2020)
3. Visiting Scientist for M/s Nanotheranoustics Inc., NY, USA (2019-2024)
4. Transfer of Technology Appreciation Award in CSIR-NPL (2017)
5. Fellow of Luminescence Society of India (2017)
6. VIRA's Distinguished Scientist Award in Physical Sciences (2016)
7. Visiting Scientist for Nanocrystals Technology, NY, USA (since 2007-2018)
8. Visiting Researcher for PACE University, NY, USA (2007-2011)
9. DST's BOYSCAST Fellow Award in Physical Sciences (2006)
10. CSIR Young Scientist Award in Physical Sciences (2004)

11. NPL Young Scientist Award (2004)
12. Two Gold Medal Awards in M. Sc. (1999)
13. University First Rank Award in M. Sc. (1994)
14. VI National Science Foundation Day (NSFD) Award (1993).

**Teaching Experience:** 14 years

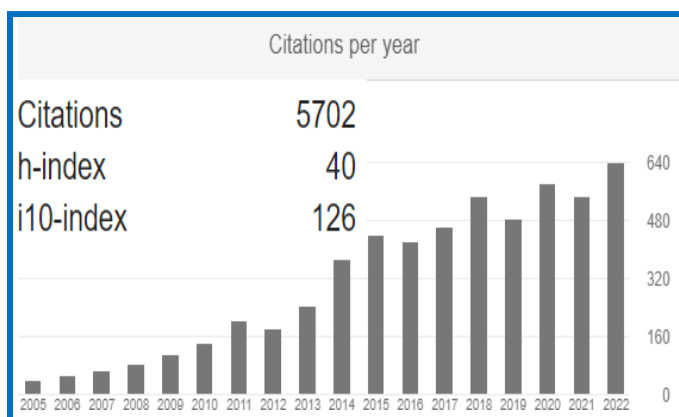
- 1) **NITW:** Teaching Optical Physics and Nanophotonics for M.Sc. Tech (Engg Phys) students, Engineering Physics for B.Tech. students since 2018.
- 2) **AcSIR:** Taught Nanostructured Materials to MTech and PhD students at Academy of Scientific and Innovative Research (AcSIR), CSIR-NPL, New Delhi from 2010-2018.
- 3) **MGIT:** Worked as Lecturer in Physics in regular post at Mahatma Gandhi Institute of Technology, Gandipet, Hyderabad for 2 years (1998-2000).

**R&D Experience:** 28 years

**Areas of Research Interest:** Photonics, Luminescence, Nanomaterials & Sol-gel Technology

**Nature of R&D Activities:**

1. Development of Primary Colour (RGB) Long Persistent Phosphors for Dark Vision Display Applications.
2. Fabrication of Electroluminescent Panels for Back-lighting of LCD panels.
3. Synthesis and Characterization of Nanophase Luminescent Materials & Devices.
4. Development of Radioluminescent Screens for High Energy (80 MeV) X-ray real-time Imaging.
5. Band gap Engineering of Nanophosphors for White LED Applications.



No. of Papers in SCI Journals till Dec-2022:  
**275**

<https://scholar.google.com/citations?user=spt-IygAAAAJ&hl=en>

<https://nitw.irins.org/profile/102312>

Summary of Research Contributions:

Criteria	Status	Nos	Criteria	Status	Nos
Transfer of Technologies	Industry	1	Papers Presented in Conferences	International	25
	Govt.	2		National	190
	Organizations				
Patents	Granted/Pub.	10	Invited Presentations Delivered	Scientific Meetings	18
	Filed	1		Workshops	30
Research Grants	Completed	13		Conferences	155
	Sanctioned	1	Seminars	76	
SCI/ SSCI Indexed Articles	Published	291	PhD Students	Graduated	7
	Accepted	1	Supervised	Current	4
SCOPUS Indexed Articles	Published	291	Books Authored with ISBN	Books	1
	Accepted	1	Professional Membership	International	1
Other Indexed Articles	Published	10	Editorial Appointments in Journals	National	5
	Accepted	1		Editor in Chief	0
Countries Visited	For Study	1	Associate Editor	0	
	For Presentation	1	Board Member	2	
Awards Received	International	3	Reviewer	>25	
	National	11			

**Editorial Board Member:** “*International Journal of Luminescence and Applications*”  
(ISBN: 81-6717-806-5). [http://ijlindia.org/Editorial\\_Board.aspx](http://ijlindia.org/Editorial_Board.aspx)

**Reviewer for International Journals:**

Applied Physics Letters                      Journal of  
Applied Physics Journal of Materials Chemistry C  
Journal of  
Luminescence Materials Letters      Journal of  
Powder Technology  
ACS Appl. Mater. and Interfaces      Journal of Physics D:  
Applied Physics Nanotechnology (IOP) Journal of American  
Ceramic Society Journal of Alloys and Compounds  
Journal of Colloid and  
Interface Science Journal of Experimental Nanoscience  
Materials Chemistry and  
Physics Applied Surface Science      and many more.....



## **DETAILS OF THE SEMINAR**

A total of 120 participants from various years of study from all branches have participated the event. Also, 5 organizers and 6 volunteers have guided participants in the event. The event started with address of the guests where the Head of the Department of Physical Sciences, Dr. D. Prabhakara Chary has brought to light about the importance of science & technology by giving an example about how Smart or intelligent materials are materials that would respond to external stimuli such as temperature, pressure, electric flow, magnetic flow, light, mechanical, etc. and environmental changes to continue to impact many aspects of modern medical issues. And then followed by the address of Dr. P. Srikanth, Head, Centre for I2RE, KITSW who briefed about various opportunities in the world of entrepreneurship which will help a student bring their idea into reality and given a statement that our KITSWians should not only be job seekers instead, create opportunities. Then followed by the inaugural address of Chief guest Dr. D. Haranath, where sir addressed the importance of technology in present era of technical revolution. And then followed by Dr. K. Ashoka Reddy, Principal, KITSW, who ignited the brains of the upcoming graduates with the new technologies and stating the importance of National Science Day.

The Seminar has been started by stating importance of National Science Day, Its been celebrated to mark the invention of the Raman Effect. Sir then stated how important is education in every human's life and engineering education signifies man's supreme position. Dr. D. Haranath, sir addressed the need for smart biomaterials stems from an inability to treat many diseases, injuries and conditions with other therapies or procedures for the replacement of body part that has lost function (total hip, heart); correct abnormalities (spinal rod); improve function (pacemaker, stent); or assist in healing (structural, pharmaceutical effects, drug release) etc. In the current talk, we describe recent advances and application of smart biomaterials in tissue engineering, drug delivery systems, medical devices and immune engineering.

## Photo Gallery







# Seminar organised at KITS

STATE BUREAU

Warangal

Kakatiya Institute of Technology and Sciences (KITS) has organised a seminar on 'Smart materials for global wellbeing' on the occasion of national science day here on Monday.

Addressing the students, Prof D Haranath from NIT-Warangal stressed the need for 'Smart biomaterials' comes from inability to treat many diseases, injuries and conditions with other therapies or procedures for the replacement of body parts. He detailed some recent advances and applications of smart biomaterials in tissue engineering, drug delivery systems, medical devices, and immune engineering.

Convenor of seminar, Dr D Prabhakara Chary said that they had six research centers in various departments at KITS-Warangal. "Interdisciplinary research gives fruitful results and leads to latest innovations for the benefit of scholars and also society. Hence, our team members have to work on them by utilising advanced equipment with help of basic science principles," he added. Faculty members, over 220 students attended seminar.