Keynote

Dr. TATA NARASINGA RAO

Dr. Tata Narasinga Rao received his Ph.D. degree in Chemistry from Banaras Hindu University, India in 1994. After working at IIT Madras as Research Associate, he moved to The University of Tokyo in 1996 as a JSPS post-doctoral fellow and subsequently became lecturer in the same University in 2001. He joined International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad, India, in 2003 as senior scientist, and he has superannuated as the Director of ARCI in May 2004. Presently he is Research Advisor at IIT-Hyderabad, and Adjunct Professor at IIT-Hyderabad and NIT-Warangal.

He is recipient of several awards and honors including 'Material Research Society of India (MRSI) Medal'-2009; 'Tokyo University of Science President Award'-2014; 'Academician of Asia Pacific Academy of Materials (APAM)'-2015; 'Technology Day National Award'-2016 (received from President of India); Fellow of Telangana & AP Academy of Sciences'-2017; 'Bangalore India Nano Innovation Award'-2018 (received from Bharat Ratna, Prof. CNR Rao) and Materials Science Annual Prize-2022 of MRSI. Dr. Rao has been admitted as Fellow of Royal Society of Chemistry through "Leaders in the Field" scheme in 2023. He has been conferred with Honorary Fellowship of Electrochemical Society of India during August 2023. Dr. Rao is Founder President of recently established Battery Research Society of India.

Dr. Rao has published more than 200 research papers and filed/granted more than 20 international and Indian patents several of which have been translated to technological developments. His publications got total citations more than 23,000 (google scholar) with an h-index of 61. The average Impact Factor is above 5 for his publications of last 5 years. Dr. Rao has been a member of several project assessment / standardization and governing board committees at national level.

Dr. Rao is known for his translational nanomaterials research. He has developed novel, scalable and low cost processes for suspension/powder production of nano-silver, nano-copper and nano-TiO_2 for self-cleaning/antibacterial textile applications, high performance Li-ion electrode materials, bio & organic waste-derived activated carbon for supercapacitors, and some of the technologies developed by his team are transferred to industry and commercialized. Recently, Lithium Iron Phosphate (LFP) cathode powder manufacturing technology is transferred to industry for the first time in India, and a pilot facility of 50 Kg/day production is established on ARCI campus. Other areas of his research interest include solar energy materials, Photocatalysis, Diamond Electrochemistry, biosensors/implants.

Tata Narasinga Rao
Vice-Chancellor
Sri Venkateswara University
Tirupati, India

PL – 01

Prof. TOKEER AHMAD

Prof. Tokeer Ahmad did his masters in Chemistry from IIT Roorkee (2000) and Ph.D. from IIT Delhi (2006) in the area of Nano-Chemistry. Immediately after PhD, he joined
Jamia Millia Islamia, New Delhi in 2006 and became full Professor of Chemistry in 2019. His current research interest includes the designing of functional heterostructures for nanocatalysis including photo/electro/photoelectro/organo-catalysis, gas sensing, nitrogen fixation, CO_2 reduction into chemicals, and sustainable green hydrogen energy production. He has supervised 16 PhD's, 93 post graduate students and currently supervising 12 Ph.D. students. Prof. Ahmad has been instrumental to receive ten research projects from MHRD-SPARC, SERB, CSIR, UGC, JMI innovative programme and one international project from Saudi Arabia. Dr. Ahmad has published 251 research papers in peer-reviewed journals of international repute, one patent and authored three books on Nanotechnology to his credit. His current research citation is more than 12000 with an h-index of 65 and i10-index of 206. Dr. Ahmad has delivered 250 Invited/keynote/plenary talks, evaluated 80 external doctoral theses and presented 141 conference research papers at National and International platforms. Prof. Ahmad has been the active member of various National and International academic societies such as CRSI, MRSI, ISCAS, SMC BARC, ACT Mumbai, CSI, ICS, ACS, American Nano-society etc. He is serving as an editorial board member for several journals like NPG's Scientific Reports, Frontiers in Chemistry, Frontiers in Catalysis, Future Trends in Nanotechnology, etc. He has been active reviewer of 230 different international journals. Dr. Ahmad has organized MHRDGIAN Program (2016) and Science Academies Lecture Workshop (2013) as Coordinator and instrumental in organizing several conferences and symposia at JMI. He also served Jamia as Coordinator, Swachh Bharat Mission of Govt of India. Dr. Ahmad has received DST-DFG award from Govt. of India (2009), ISCAS Medal (2011) for the significant contribution in Nanotechnology and prestigious Inspired Teacher's recognition from Hon'ble President of India in 2015. Prof. Ahmad has received the "Distinguished Scientist Award" for the year 2019 from the Indian Association of Solid State Chemists and Allied Scientists due to outstanding contribution in chemical sciences and also elected as Member of prestigious National Academy of Sciences India (NASI). Prof. Ahmad has been figured in World Top 2% Scientists in both coveted lists including career long by Stanford University, USA for consecutive years 2020, 2021, 2022, 2023, 2024, 2025 and has been conferred the Maulana Abul Kalam Azad Excellence Award of Education for the outstanding contribution in the field of education. Prof. Ahmad has been conferred by SMC Bronze Medal (2022) from Society of Materials Chemistry, BARC Mumbai, Teachers' Excellence Award-2022 from Teachers' Welfare Foundation, Delhi, Springer Nature Editor of Distinction Award, IIT Delhi Alumni Faculty Award, Dr. S. S. Deshpande National Award, MRSI Medal-2023 from Materials Research Society of India and CRSI Medal-2025 from Chemical Research Society of India. Prof. Ahmad has also been admitted as Fellow of Royal Society of Chemistry (FRSC), UK.

Prof. Tokeer Ahmad
Department of Chemistry, Jamia Millia Islamia, Jamia Nagar, New Delhi, India.

PL – 02

Dr. SHAIL UPADYAY

Shail Upadyay completed both B.Sc. and M.Sc. degrees in Physics from Banaras Hindu University and subsequently obtained M.Tech. and Ph.D. degrees in Materials Science and Technology from Indian Institute of Technology (BHU). With more than two decades of teaching and research experience, she has established herself in the fields of materials science, thermal analysis, magnetic materials, and applied physics. Her academic and research activities have focused on developing advanced materials and understanding their structural, thermal, and functional properties for scientific and technological applications.

Over the course of her career, Dr. Upadyay has made significant contributions to research and higher education through the supervision of numerous postgraduate and doctoral scholars. Under her guidance, six Ph.D. thesis, sixteen M.Tech. dissertations, and five M.Sc. projects have been successfully completed, while several research scholars are currently pursuing their doctoral and postgraduate work under her supervision. She has published around one hundred research papers in reputed international journals, along with review articles and book chapters, reflecting her active engagement in contemporary scientific research and scholarly dissemination.

Dr. Upadyay has also received research funding amounting to nearly one crore rupees from various funding agencies for carrying out scientific and technological projects. She is an active member of several prestigious professional bodies, including the Materials Research Society of India, Indian Science Congress Association, Indian Society for Technical Education, and Institute of Electrical and Electronics Engineers, among others. Her continued contributions to teaching, research, and academic mentorship have played an important role in advancing materials science and physics education in India.

Shail Upadhyay
Associate Professor
Department of Physics
Indian Institute of Technology (BHU)
Varanasi, India

PL – 03

Dr. PRAVEEN CHENNA

Dr. Praveen Chenna is a seasoned semiconductor professional with over two decades of experience in the VLSI industry. He is currently working as a Principal Technical Staff Member at AMD, where he contributes to the design and optimization of advanced computing systems. His career includes key technical roles at leading companies such as AMD and Intel, along with an early industrial start as a Silicon Design Engineer at eInfochips, Pune. He has worked across diverse product domains, including Accelerated Processing Units (APUs), gaming consoles, and high-performance computing (HPC) platforms. His core expertise lies in system performance analysis and workload benchmarking, supporting data-driven design decisions for complex SoC architectures. Before entering the industry, he worked as a Research Assistant at CSIR-NGRI and later received a fellowship at ISRO-NRSC, gaining experience in airborne electronics. He holds a Ph.D. from NIT Goa. Along with his industrial contributions, he maintains a strong interest in academic research and innovation. His research interests include microwave absorption materials, photonics, and emerging memory technologies, reflecting his strong connection between semiconductor engineering and materials research.

Praveen Chenna
Principal Technical Staff
Atomic Minerals Directorate
Hyderabad, India

PL – 04

Prof. V. SUBRAMANIAN

Dr. V. Subramanian is a senior physicist and Professor in the Department of Physics at the Indian Institute of Technology Madras with several decades of experience in the field of microwave physics, dielectric materials, semiconductors, and multifunctional materials research. He obtained his Ph.D. from IIT Madras and has since established an active research program focused on microwave materials and devices, photonic crystals, metamaterials, multiferroics, magnetoelectric materials, electromagnetic interference shielding, and near-field microwave microscopy. His work significantly contributes to the understanding and development of advanced functional materials for electronic and photonic applications. He has authored numerous research papers in reputed international peer-reviewed journals and has guided several Ph.D. scholars in the areas of condensed matter and microwave materials physics. He is also actively involved in collaborative research and academic mentoring within the Indian materials and applied physics research community.

Prof. V. Subramanian
Department of Physics
Indian Institute of Technology-Madras
Chennai, India

IL – 01

Dr B. V. SARADA

Dr. B. V. Sarada is a senior scientist (Scientist 'G') and Head, Centre for Advanced Materials and Batteries at International Advanced Research centre for Powder Metallurgy and New Materials (ARCI), Hyderabad, an autonomous Research Institute under Department of Science and technology (DST). She has obtained her Ph. D. from The University of Tokyo, where she has worked on Conducting Diamond thin-films and microelectrodes for biosensor and water treatment applications. She has received the prestigious JSPS Fellowship both during her Ph. D. and post-doctoral programme. She has also worked at The University of Tokyo as a JST Fellow under a pre-venture project for a technology-oriented programme. She joined as a scientist at ARCI in 2006. She is also the convener at ARCI for Biomedical Materials Research Group.

Her research interests include synthesis of Nanostructured Materials & Graphene-based Nanocomposites for energy conversion and energy storage applications including thin-film solar cells, Li ion, Na ion, Li-S batteries and supercapacitors, conducting boron-doped diamond Thin-films and microelectrodes, design, synthesis and surface modification of materials for Biomedical Applications etc. Her team at ARCI has established a pouch cell facility at ARCI to fabricate 10Ah pouch cells. Her Research group has transferred a technology on battery cathode materials to an Indian industry for commercialization. She has also developed UVC based disinfection systems for use at homes, research labs, offices, commercial establishments and airports during pandemic and transferred the technologies to industry. She was also nominated as Nodal Officer by Indian Council for Medical Research (ICMR) for validation of UVC equipment during this time. She has more than 80 publications, 7 book chapters, 17 patents and 3 technology transfers to her credit.

She is an editorial board member of 'Scientific Reports". She is a member of 'The Electrochemical Society of India', 'MRSI, India', Battery Research Society of India and Indian Institute of Metals. She has been elected as "Fellow of Telangana Academy of Sciences" for the year 2020. She has also received Silver Medal Award from Chemical Research Society (Chirantan Rasayan Sanstha) in 2026. In addition, she also gives inspirational lectures to school and college students at villages and towns to inspire them towards research.

B. V. Sarada
Scientist "G"; Head, Centre for Advanced Materials and Batteries
International Advanced Research Centre for Powder Metallurgy and New Materials
Hyderabad, India

IL – 02

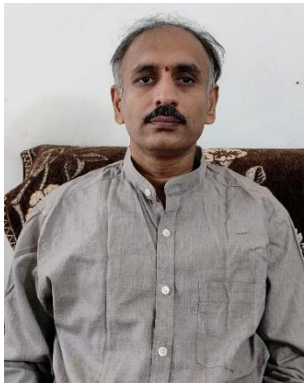
Dr. Y. ASHOK KUMAR REDDY

Dr. Ashok Kumar Reddy serves as an Assistant Professor (Level-12) at IIITDM Kancheepuram, Chennai. A prolific researcher, he has authored over 65 SCI publications and two books, amassing more than 4,100 citations with an h-index of 31 and an i-index of 51. His distinguished career includes prestigious honors such as the Brain Korea Postdoctoral Fellowship (BK21+), the DST-INSPIRE Faculty Award, and the INSA Visiting Scientist Fellowship. Beyond his research, Dr. Reddy is an IEEE Senior Member and an Editorial Board Member for Discover Nano (Springer Nature). He was recognized by Stanford University as among the "Top 2% of Scientists" globally in the field of Materials in 2025. He has secured over INR 2 Crores in research funding from agencies like DRDO and DST/ANRF. Currently, he supervises a diverse team of PhD and postgraduate students, focusing his expertise on semiconductor-based materials for photodetectors, IR bolometers, and gas sensors.

Y. Ashok Kumar Reddy
Assistant Professor
Department of S&H-Physics,
IIITDM Kancheepuram
Chennai, Tamil Nadu, India

IL – 03

Dr. K V S RANGANATH



Dr. Ranganath completed his doctoral studies at the Indian Institute of Chemical Technology (IICT) in 2005. Later, he pursued his postdoctoral studies in Japan at Kyushu University, followed by postdoctoral studies in Germany at the University of Muenster. He was awarded highly prestigious JSPS and AvH fellowships. He was awarded the Ramanujam Fellowship from the DST in 2012. Now he is a professor working at Banaras Hindu University, Dept. of Chemistry, Varanasi. His research interests are heterogeneous catalysis, the development of chiral catalysts, and the synthesis of functionalized materials for the upgradation of chemicals and biofuels.

Ranganath
Professor
Department of Chemistry
Banaras Hindu University
Varanasi, India

IL-04

Dr N. ANGULAKHSMI

Dr. Natarajan Angulakshmi is currently working as a Research Professor at the Jeonbuk National University, South Korea. Dr. Anglulakshmi obtained her Ph.D degree from Madurai Kamaraj University, Madurai in the year 2012.

She also served as a Brain-Pool Research Professor at the Department of Chemical Engineering, Gyeongsang National University, South Korea, and Scientific Researcher at Wuhan University of Science and Technology, Wuhan, P. R. China. She was a visiting researcher at the Department of Applied Science and Technology, Politecnico di Torino, Italy, and at the Department of Chemistry, Ariel University, Israel. Her area of interests includes lithium-sulfur batteries and polymer electrolytes for lithium batteries.

N. Angulakhsmi
Professor
School of Energy Sciences
Jeonbuk National University
Jeonju, South Korea

IL – 05

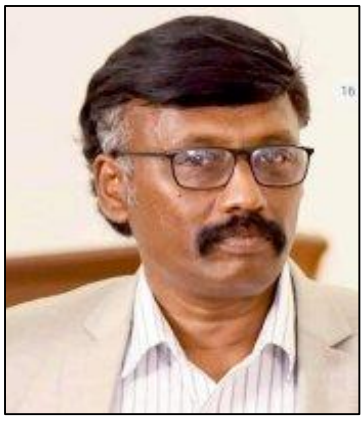
Dr. CHINMOY RANJAN

Dr. Chinmoy Ranjan currently working as Assistant Professor at IISc Bengaluru. He obtained his Integrated Master of Science from IIT Kanpur and his Ph.D. from Cornell University, USA. He has worked on the area of electrochemical energy conversion and storage for ~2 decades at several places that include Intel Corporation, The Fritz Haber Institute and Max Planck Institute for Chemical Energy Conversion. At the Indian Institute of Science, Bengaluru, he has a research program that develops operando investigative methods to understand and mitigate critical technological bottlenecks.

Chinmoy Ranjan
Assistant Professor
Indian Institute of Science
Bengaluru, India

IL – 06

Dr. A. MANUEL STEPHAN



Dr. A. Manuel Stephan is a distinguished scientist and researcher currently serving as Chief Scientist in the Electrochemical Power Systems Division at CSIR-Central Electrochemical Research Institute. He has made significant contributions to the field of electrochemical energy storage, particularly in lithium–sulfur batteries, polymeric electrolytes, bifunctional binders, and silicon-based anode materials for advanced battery systems.

Dr. Stephan has received several prestigious international fellowships and recognitions throughout his career. These include the Japan Science and Technology Agency (STA) Fellowship at Osaka National Research Institute, Japan; a Postdoctoral Fellowship at the University of Tulsa, USA; the Brain Pool Visiting Scientist Fellowship in South Korea; and the Raman Research Fellowship in Italy. He is also the recipient of the Most Cited Article Award from the *European Polymer Journal* and the Best Paper Award from *Energy Storage Materials* published by Elsevier during 2015–2016.

He has published more than 140 research papers and holds 2 patents. Dr. Stephan has successfully guided 4 Ph.D. scholars and continues to supervise research in advanced energy materials. His outstanding scientific impact is reflected by over 10,640 citations and an h-index of 53, highlighting his major contributions to battery and energy storage research.

A. Manuel Stephan
Chief Scientist
Electrochemical Power Systems Division
Central Electrochemical Research Institute (CSIR-CECRI),
Karaikudi 630 006, India.

IL – 07

Dr. SUBRATA DAS

Dr. Subrata Das is a distinguished and young materials scientist in India. He received his Ph.D. from the Indian School of Mines, Dhanbad (presently known as IIT-ISM Dhanbad) in 2010 on the research topic of thermally stimulated luminescence of transition metal ion doped alkaline earth sulphates.

In mid-2011, he joined the National Taiwan University as a postdoc. He was selected for the National Science Council post-doctoral fellowship in Taiwan in 2013. He started his independent academic career as a Senior Scientist at CSIR – National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram, in mid-2017. Presently, he is working as a Principal Scientist of CSIR-NIIST and Associate Professor in Physical Science in AcSIR. His research experience and interests lie in the phosphors for lighting, display applications, sensors, agriculture, imaging, and energy-saving display and night vision applications.

In 2018, his research proposal on developing single white light-emitting phosphors was selected for the Early Career Research Award Program funded by the Science and Engineering Research Board, India. In 2019 his research proposal on nanophosphors for flexible lighting applications was selected by the prestigious Indo-French Centre for the Promotion of Advanced Research for funding. In 2022, this project was rated excellent by CEFIPRA. In 2024, he received a prestigious Scientific High-Level Visiting Fellowship from Campus France.So far, he has published 114 research articles in reputed international SCI journals on materials and composites with more than 2700 citations and h-index of 29.

Subrata Das
Scientist E
Materials Science and Technology Division
CSIR – National Institute for Interdisciplinary Science and Technology
Thiruvananthapuram, India

IL – 08

Dr. RAKESH KUMAR RAI

Dr. Rakesh Kumar Rai is a distinguished academician and researcher currently serving as Professor and Head of the Department of Physics at Ujjain Engineering College. He completed his M.Sc. with specialization in Solid State Physics and earned his Ph.D. in Physics. With nearly 28 years of teaching experience at undergraduate and postgraduate levels, he has contributed significantly to physics education, research, and academic administration.

Dr. Rai's research interests include solid-state physics, luminescence materials, radiation effects, and advanced spectroscopic techniques. He has published several research papers in national and international journals and presented more than 22 papers at reputed conferences across India and abroad. He is also an innovator with multiple design patents, including "A Yoga Chair for Parkinson's Disease," "LED Based Garbage Bin," "Impact Loading Device with Universal Load Head," "Hybrid Spectroscopic Machine," and "Hybrid Toilet Seat," reflecting his interdisciplinary contributions toward healthcare, instrumentation, and engineering applications.

He serves as a reviewer for reputed international journals published by Wiley, Elsevier, Taylor & Francis, and Inderscience. Dr. Rai has also acted as an external examiner for Ph.D. thesis evaluations at several Indian universities. He is a life member of various professional scientific societies and has delivered invited talks and presented research papers at international conferences in Singapore, Turkey, and Australia, demonstrating his active involvement in global scientific research and academic collaboration.

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Rakesh Kumar Rai
Professor and HOD
Physics Department
Ujjain Engineering College
Ujjain, Madhya Pradesh, India

IL – 09

Dr. INDRAJIT SHOWN

Dr. Indrajit Shown is a Professor of Chemistry at Hindustan Institute of Technology and Science and currently serves as the Head of the Centre for Hydrogen Technology and Carbon Utilisation. With over 18 years of experience in teaching, research, and international collaboration, he has established himself as a leading researcher in nanomaterials, catalysis, and sustainable energy technologies. His research expertise spans photocatalysis, electrocatalysis, artificial photosynthesis, green hydrogen production, CO_2 conversion, energy storage systems, and advanced functional nanomaterials.

Dr. Shown obtained his Ph.D. in Applied Chemistry from The Maharaja Sayajirao University of Baroda in 2008, followed by advanced research appointments in Japan and Taiwan, where he worked on cutting-edge materials for energy conversion and storage applications. His academic expertise includes chemical thermodynamics, electrochemistry, catalysis, photochemistry, quantum chemistry, nanomaterials, and energy materials. He actively teaches both undergraduate and postgraduate courses in these areas and has played an important role in developing interdisciplinary research and teaching programs. His current research focuses on the design and development of non-precious nanostructured catalysts and hybrid semiconductor materials for sustainable energy applications, including photocatalytic CO_2 reduction to solar fuels, hydrogen evolution reactions (HER), oxygen reduction reactions (ORR) for fuel cells, lithium-ion batteries, and flexible supercapacitors. His work particularly emphasizes 2D materials, semiconductor heterostructures, and interfacial charge-transfer engineering for improving catalytic performance and energy conversion efficiency.

Dr. Shown has published over 50 peer-reviewed research articles in leading journals such as Nature Communications, Nano Energy, and Advanced Energy Materials etc., with a total citation over 4300 and an h-index of 26. He also holds six patents and has contributed two international book chapters on sustainable energy materials. Over the last five years, he has successfully secured research funding exceeding ₹2.5 crore from national and international agencies. He currently serves as an Editorial Board Member of Scientific Reports (Springer Nature). Dr. Shown continues to contribute significantly to sustainable energy innovation, advanced catalytic materials, and global decarbonization strategies for a cleaner, lower-carbon future**.**

Indrajit Shown
Professor
Department of Chemistry, Centre for Hydrogen Technology and Carbon Utilization (CeHy)
Hindustan Institute of Technology and Science (HITS)
Chennai, India

IL – 10

Dr. JHUMA SANNIGRAHI

Dr. Jhuma Sannigrahi is currently a Ramanujan Fellow at the School of Physical Sciences, Indian Institute of Technology Goa, where she conducts research in experimental condensed-matter physics with a focus on quantum materials. She obtained her PhD in Physics from the Indian Association for the Cultivation of Science, where she investigated the magnetic and dielectric properties of transition-metal oxides. Prior to joining IIT Goa, she worked at several internationally renowned research institutes, including the ISIS Neutron and Muon Facility as a Marie Skłodowska-Curie Fellow, the Max Planck Institute for Chemical Physics of Solids, and Loughborough University as a postdoctoral research scientist. Her research interests broadly include magnetism, correlated electron systems, low-dimensional quantum materials, and structure–property relationships explored through advanced experimental techniques.

Her research combines neutron scattering, muon spin relaxation (μSR), synchrotron X-ray techniques, ultrafast spectroscopy, and crystal growth to understand the microscopic magnetic, structural, and electronic behaviour of quantum materials. She has authored more than 45 peer-reviewed publications in leading international journals, including Physical Review B, Physical Review Materials, Advanced Materials, and Journal of Physics: Condensed Matter. She has been awarded prestigious fellowships, including the Ramanujan Fellowship from SERB, India, and the Marie Skłodowska-Curie Fellowship under the European Union framework. At IIT Goa, she is building research programs on quantum and multifunctional materials with potential applications in sensing and energy technologies, while actively contributing to teaching, mentoring, scientific outreach, and international collaborations.

Jhuma Sannigrahi
Ramanujan Fellow
School of Physical Sciences
Indian Institute of Technology Goa
Goa, India

IL – 11

Dr. S. N. KARTHICK

Dr. S. N. Karthick is an accomplished chemist currently serving as Assistant Professor in the Department of Chemistry at Bharathiar University, Coimbatore, Tamil Nadu, India, with a strong academic, research, and teaching background in physical chemistry, especially electrochemistry and advanced energy materials. He obtained his B.Sc. (2001), M.Sc. (2003), and M.Phil. (2004) in Chemistry from A.N.J.A. College, affiliated to Madurai Kamaraj University, Madurai, followed by his Ph.D. in Chemistry (2008) from Alagappa University, Karaikudi. His research career spans several prestigious international and national institutions, including postdoctoral research at the Indian Institute of Science under the D.S. Kothari Fellowship and extensive work as a Postdoctoral Research Associate under the Brain Korea 21 (BK-21) program and the National Research Foundation (NRF) at Pusan National University. He also served as a Project Assistant at the Central Electrochemical Research Institute. Since 2016, he has been making significant contributions to teaching and research at Bharathiar University, Coimbatore. His research interests include supercapacitors, batteries, dye-sensitized, quantum-sensitized, and perovskite solar cells, catalysis, photoelectrochemical water splitting, and chemical sensor development, with a strong emphasis on sustainable energy conversion and storage technologies. He has successfully led and participated in multiple funded research projects supported by agencies such as DST-SERB-SURE, MHRD-RUSA, UGC-BSR, and the National Research Foundation of Korea, with a total research funding portfolio spanning 1.5 crores across India and abroad. He is an active reviewer for leading international journals published by the American Chemical Society, including ACS Catalysis and ACS Applied Energy Materials, as well as journals published by the Royal Society of Chemistry, such as Dalton Transactions and New Journal of Chemistry, and numerous Elsevier, Wiley, and Springer publications. He also holds editorial responsibilities, including serving as a guest editor for the Journal of Nanomaterials (Hindawi) and serving on the editorial board of academic conference proceedings published by Macmillan Publishers. He is a life member and fellow of several prestigious scientific societies, including the Materials Research Society of India, SAEST, the Chemical Research Society of India, the Indian Science Congress Association, the Indian Chemical Society, and the Academy of Sciences, Chennai, reflecting his strong engagement with the scientific community. His contributions have been recognized with multiple awards, including the Best Scientist Award (2018–2019) and several Best Paper Awards in national and international conferences. He has an active record of academic mentorship, supervising Ph.D. scholars and MSc project students, and contributing extensively to research training. With over 60 peer-reviewed journal publications, an H-index of 30, more than 2500 citations, and significant invited lectures and conference presentations, he has established a strong international research profile in materials chemistry and electrochemical energy systems. His work continues to focus on advancing next-generation energy materials for sustainable technological applications.

S. N. Karthick
Department of Chemistry, Bharathiar University, Tamil Nadu, India

IL – 12

Dr. Akhila Kumar Sahu

Dr. Akhila Kumar Sahu is a distinguished scientist and researcher currently serving as Senior Principal Scientist at the CSIR-Central Electrochemical Research Institute (CECRI), Madras Unit, Chennai. He completed his M.Sc. in Chemistry from Berhampur University in 1999, M.Tech. in Surface Science and Engineering from National Institute of Technology Jamshedpur in 2002, and Ph.D. in Chemistry from CECRI in association with the University of Madras in 2009. He also worked as a Postdoctoral Researcher at DGIST, South Korea.

Dr. Sahu has built an outstanding scientific career at CECRI, progressing through several prestigious positions including Scientist, Senior Scientist, Principal Scientist, and presently Senior Principal Scientist since 2023. His research expertise includes materials science, electrochemistry, surface engineering, and interfacial electrochemistry, with major contributions in nanoporous carbon materials, electrocatalysts for ORR and OER reactions, hybrid membranes for fuel cells, and metal-air battery technologies. He has published over 120 research papers in international peer-reviewed journals, holds 5 patents, contributed a book chapter, and successfully guided 8 Ph.D. scholars. He has handled 25 R&D projects and delivered more than 70 invited lectures at national and international conferences. His research impact is reflected by more than 4,840 citations, an h-index of 42, and an i10-index of 93, highlighting his significant contributions to electrochemical energy research and advanced materials science.

Akhila Kumar Sahu
Senior Principal Scientist
Central Electrochemical Research Institute (CECRI)
CECRI – Madras Unit, CSIR Complex, Taramani
Chennai - 600113, India.

IL – 13

Dr. G. SHANKER

Dr. G. Shanker is an accomplished organic chemist and academician currently serving as a UGC-Assistant Professor in the Department of Chemistry at Bangalore University. His research expertise spans liquid crystals, hybrid nanomaterials, organic dye synthesis, ionic liquids, self-assembly, and advanced materials characterization. He completed his Ph.D. in Chemistry from the Centre for Nano and Soft Matter Sciences during 2004–2008 and earned his M.Sc. in Organic Chemistry from Bangalore University.

Dr. Shanker has over a decade of teaching and research experience in both academia and industry. Before joining Bangalore University in 2014, he worked as an Assistant Professor at BMS College of Engineering and held prestigious international research positions, including Research Fellow at the International Iberian Nanotechnology Laboratory and Postdoctoral Research Associate at Martin Luther University Halle-Wittenberg. He also gained industrial research experience through roles at AstraZeneca, Jubilant Biosys, and Tetragon Chemie.

An active researcher, Dr. Shanker has published numerous papers in reputed international journals such as *Advanced Functional Materials*, *NPG Asia Materials*, and *Journal of Materials Chemistry*. His scholarly contributions have earned more than 1,500 citations with an h-index of 24. He has successfully guided three Ph.D. scholars and several M.Sc. dissertations.

Dr. Shanker has received several research grants from agencies including UGC, SERB, DST, VGST, and ANRF, and has been honored with multiple medals and recognitions for his scientific contributions. He is also the co-author of four books and holds an Indian patent related to chiral nematic compounds.

G. Shanker
Assistant Professor
Department of Chemistry
Bangalore University
Bangalore, India

IL – 14

Dr. AJITHA

Dr. Ajitha is an Assistant Professor (Senior Grade-1) at the Vellore Institute of Technology (VIT), Chennai. A highly decorated researcher, she has been recognized by Stanford University as being among the "Top 2% of Scientists" globally in the field of Materials for four consecutive years (2021–2025). To date, Dr. Ajitha has authored over 50 research publications and 2 books, holds 1 granted patent, and has amassed more than 3,650 citations with an h-index of 27 and i-10 index of 36. Her contributions to the field earned her the VIT Faculty Research Award for six successive years (2021-2026). Currently, she leads a dynamic research group focused on developing nanostructured materials for photocatalysis, photodetectors, and biomedical applications.

Ajitha
Assistant Professor
Vellore Institute of Technology (VIT)
Chennai, India

IL – 15

Dr. ALOK SHUKLA

Dr. Alok Shukla is a Professor of Physics at National Institute of Technology Mizoram, Aizawl. He taught Engineering Physics and Materials Science at NIT Mizoram for more than 15 years and undertook research in materials science. He has guided 08 students for Ph.D. degree and 07 students are working under his guidance. Dr. Shukla has more than 80 research papers in national and international journals of repute. He visited various countries for research work. Presently, he is working on the development of nano -size multiferroic materials for device applications. He worked as a Head of the department, Faculty incharge (Academics), Dean (Student Welfare) and Dean (Research & Consultancy) at NIT Mizoram.

Alok Shukla
Professor
Department of Physics
National Institute of Technology Mizoram
Aizawl-796012, India.

IL – 16

Dr. B. HARIHARA VENKATARAMAN

Dr B. Harihara Venkataraman is a Professor at the Department of Physics, BITS- Pilani, Hyderabad. He was awarded PhD in Materials Science by the Indian Institute of Science, Bangalore, 2006. He was a postdoctoral researcher at Nagaoka University of Technology, Nagaoka, Japan, from June 2006 to September 2008. He was awarded the "Centre of Excellence Fellowship" for his postdoctoral programme in Japan in 2006. He received the "Young Scientist Fast Track Project" from the Department of Science and Technology, India, 2010. He was a visiting professor in the Department of Materials Science and Engineering at Rensselaer Polytechnic Institute in Troy, New York, from May to July 2024. His research interests include glass/polymer nanocomposites, laser writing in glass, and structure-property correlation studies of layered ferroelectric, piezoelectric, and multiferroic ceramics for memory, sensor, and optical device applications. He has handled sponsored projects from the Department of Science and Technology, India. He has guided various undergraduate projects & M.Sc. theses, as well as PhD scholars at BITS-Pilani, Hyderabad. He has published over 90 articles in peer-reviewed journals, conference proceedings at reputed national and international conferences, and a book chapter on multifarious transparent glass nanocrystal composites. He was granted two international and one Indian patent for the system for synthesising pure-phase bismuth ferrite ceramics and thin films for practical device applications. He has delivered invited talks in India and abroad, served as session chair, and been a member of the advisory committee at various refereed international conferences. He serves as an external examiner for MTech and PhD theses, and is an expert reviewer for peer-reviewed international journals. He is also keen to implement the pedagogical method in the classroom while teaching physics and materials science courses at the undergraduate and postgraduate levels. He is a member of the Institute of Electrical and Electronics Engineers (IEEE), the Magnetic Society of India (MSI), the Indian Carbon Society (ICS), and the Materials Research Society - Singapore (MRS-S).

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IL – 17

Dr. ETHIRAJULU SENTHAMARAI KANNAN

Prof. Kannan is a professor of Physics and EEE in BITS-Pilani K K Birla Goa Campus. He did his Master's in Physics from Bharathiar University and PhD in Nanotechnology from Sungkyunkwan University South Korea. He was awarded CNRS postdoctoral fellowship to work in II-VI heterostructure in Grenoble high magnetic field laboratory. He joined BITS Pilani Goa campus in 2012 and currently working there as a professor. His research interest is in 2D TMDC materials for optoelectronic and memory applications

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IL – 18

Dr. YOGENDRA KUMAR GAUTAM

Dr. Yogendra Kumar Gautam is currently working as a Senior Assistant Professor in the Department of Physics at Chaudhary Charan University, Meerut, Uttar Pradesh since March 2015, and has also worked at Jaypee University of Engineering and Technology (JUET) Guna, Madhya Pradesh, India, 2013-2015.

Dr. Gautam completed his M.Sc. (Physics) from Chaudhary Charan University, Campus Meerut in 2004. MTech. in Solid State Materials at Indian Institute of Technology (IIT) Delhi in 2007 and earned his Ph.D. in Materials Science from Indian Institute of Technology (IIT) Roorkee in 2013. His academic contributions include 70 SCI publications in reputed journals and 20 book chapters, along with 5 national patents granted. He has successfully supervised 4 Ph.D. students and 15 M.Phil. Currently; He is guiding 5 Ph.D. and 10 UG/PG students. He is Project investigator as PI/Co-PI of seven research projects of cost 2 Crore funded by various funding agencies such as Anusandhan National Research Foundation (ANRF)- DST, Department of Scientific and Industrial Research (DSIR), UGC Start-up Grant, Govt. of India, Council of Higher Education, Govt. of Uttar Pradesh and CCS University, Meerut.

He is a member of the Royal Society of Chemistry (RSC) and Indian Association for Hydrogen Energy and Advanced Materials (IAHEAM). Dr. Gautam serves as a reviewer for several national and international reputed journals. He is actively engaged in several University's Assignment and administration like, member of Directorate of Research, Committee for all University Rankings, Proctorial Borad, Hostel Warden and Member of Sahityik Sanskritik Parishad, etc

He received "Certificate of Honor" from Chaudhary Charan Singh University, Meerut India for Patents and quality of research in academic year 2022-23. In August 2022, He received "Van-Mitra Research Excellence Award" from Environment, Forest and Climate Change Department, Gov. of Uttar Pradesh. He has delivered several invited talk/lectures in India and, visited abroad including Institute for energy and technology (IFE), Norway, Institute of Solid-State Physics, RAS, Chernogolovka, and Moscow State University Moscow, Russia, University of Milano-Bicocca, Milan, Italy.

His research interests includes gas sensors, hydrogen storage, hydrogen production, energy storage devices, and environment remediation.

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IL – 19

Dr. BAKIYARAJ GANESAMOORTHY

Dr. Bakiyaraj Ganesamoorhty, Associate Professor, Department of Physics and Nanotechnology, SRM Institute of Science and Technology, Chennai. He received his M.Phil and Ph.D degrees in Physics from Crystal Growth Centre, Anna Unviersity Chennai. His research interests include 2D Nanomaterials, DSSC, Nano-remediation and thin films. He has published more than 45 research articles in reputed peer-reviewed international journals such as Surfaces and Interfaces, Applied Nanoscience, Journal of environmental chemical engineering and Materials Science in Semiconductor Processing and has been recognized as an Inter University Accelerator Centre Research Fellow member during tenure of his PhD. He is also the author of several books chapter and serves as a life member of various national and international professional bodies and scientific societies.

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Dr. PUTHA KISHORE

Dr. Putha Kishore has been working as an assistant professor of Physics in the department of sciences, IIITDM KURNOOL since May 2023. He completed his schooling to Undergraduate at Kadapa, Andhra Pradesh. He pursued his M. Sc. Physics with specialization of Electronics from Sri Venkateswar University Tirupati in the year 2008. He qualified GATE2009 and CSIR NET 2012. In 2015, he completed Doctor of Philosophy in the discipline of Physics in Photonics. He had 10 years of teaching experience, and he taught both UG and PG courses in Physics, Electronics and Photonics. He serves various academic responsibilities at department level and institute level, currently he is the FIC -Examinations. Dr. Kishore is an active member of internationally recognized professional bodies, including: The Optical Society of India, Optica and SPIE (the international society for optics and photonics). He is also acting as a faculty advisor of Optics Student chapter IIITDM Kurnool.

His area of research is interdisciplinary which includes Photonics, Fiber optic sensors, Optoelectronics materials, Photonic Crystal Fibers, Hydrogen sensing and allied areas. His research endeavours have resulted in significant contributions to the research field, including:

- Published 32 research papers in reputed international journals.
- The presentation of 44 papers in various conference proceedings.
- The securing of one granted Intellectual Property Right (IPR) related to fiber optic sensors for petroleum tank level monitoring, and another IPR which is currently submitted.
- The authoring of a book on solar photovoltaics modelling, and contributions to three book chapters focused on fiber optic sensors.

As Principal Investigator, He is currently leading two research projects:

1. UGC-DAE CSR funded project (CRS/2024-25/1713) focused on the "Development of Highly Sensitive Cryogenic Magnetic Field FBG sensors for Accelerometer Applications,"
2. ISRG, IIITDM Kurnool funded project, with a budget of ₹1,500,000, titled "Design and Development of Metal Oxide Coated Etched FBG based Hydrogen Sensor."
3. ISRO RESPOND 2024 funded Project entitled “Design and Development of Fibre optic-based Vibration Measurement Structural Health monitoring system with signal conditioner” with a budget of ₹24,56,800.
4. SwaYaan POC 2026: Integration and Validation of Fiber Optic Gyroscope-Based Navigation for UAS, with a worth of 2,50,000/-.

Currently, he is supervising 4 Ph.D. students in research focusing on photodetectors and FBG sensors and Modeling of PCF sensors.

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Prof. VENKATRAM REDDY BYRU

Prof. Venkatram Reddy Byru is a distinguished academician, researcher, and administrator in the Department of Physics at Kakatiya University with more than 36 years of teaching and research experience in Molecular Spectroscopy, Material Science, and Density Functional Theory (DFT) computations. His research primarily focuses on combining advanced spectroscopic techniques such as FTIR, FT-Raman, UV-Visible, and NMR spectroscopy with theoretical DFT investigations for studying molecular structure, intermolecular interactions, nonlinear optical properties, and biomolecular characteristics.

Prof. Byru has published more than 60 research papers in reputed international journals including Journal of Molecular Structure, Polycyclic Aromatic Compounds, Spectrochimica Acta A, Molecular Simulation, and Chemical Physics Impact. His research contributions extensively involve computational molecular physics, vibrational spectroscopy, quantum chemical analysis, and DFT-based investigations of molecular and material systems. He has successfully guided six Ph.D. scholars and continues to mentor research scholars in spectroscopy and computational material science.

He has received several prestigious recognitions for his academic and research excellence, including the State Best Teacher Award – 2024 from the Government of Telangana, the ISPA Life Time Achievement Award – 2022, and the ISPA Dr. Gunasekaran Award – 2020 from the Indian Spectro Physics Association (ISPA), Chennai. He was also elected as a Fellow of the Telangana Academy of Sciences (FTAS) in 2022 and was recognized as an Outstanding Reviewer by Elsevier Publishers for the Journal of Molecular Structure. In 2024, he secured Rank 1 in Physics and Rank 3 in Natural Sciences at Kakatiya University in the AD Scientific Rankings.

Apart from his scientific contributions, Prof. Byru has served in several important academic and administrative positions and continues to contribute significantly to the advancement of research, higher education, and scientific development at Kakatiya University.

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Dr. VATTIKONDALA GANESH

Dr. Vattikondala Ganesh is an accomplished researcher and academician in the fields of Physics and Materials Science, with specialized expertise in III-nitride semiconductors, metal oxide/oxynitride materials, 2D nanocomposites, and photoelectrochemical energy harvesting applications. He currently serves as an Assistant Professor at SRM Institute of Science and Technology and has over 13 years of combined teaching and research experience, including postdoctoral research at the University of Malaya. He has published 58 international research papers in reputed journals, with significant contributions in photocatalysis, hydrogen generation, semiconductor nanostructures, electrochemical water splitting, and sustainable energy materials. His research work has earned strong academic recognition, reflected by over 1400 citations on Google Scholar and an h-index of 20. He has also presented 15 papers at national and international conferences and delivered invited and keynote lectures in advanced functional materials and renewable energy technologies. Dr. Ganesh has successfully secured major competitive research funding, including a DST-SERB Young Scientist project worth over ₹42 lakhs and an ANRF-funded green ammonia and sustainable energy project worth nearly ₹91 lakhs as Co-Principal Investigator. He has also authored multiple book chapters with international publishers such as CRC Press, Wiley, and Springer. His research excellence was recognized with the Best Researcher Award from SRMIST for publishing in a Nature-indexed journal

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Dr. PRATAP KOLLU

Prof. Pratap Kollu is an Assistant Professor at the Centre for Advanced Studies in Electronics Science and Technology, School of Physics, University of Hyderabad, Hyderabad. He holds a Ph.D. in Materials Engineering from Chungnam National University, South Korea, along with M.Phil., M.Sc., and B.Sc. degrees from Andhra University, India. He has also worked as a Newton International Fellow at the Cavendish Laboratory, University of Cambridge, UK, and as a DST Inspire Faculty Fellow at IIT Bombay.

His research interests include Na-ion and Al-ion batteries, smart magnetic sensors and materials, multiferroics, lab-on-chip biosensors for healthcare, exchange-biased magnetic multilayer thin films, and 2D materials. He has published 108 research papers, received 6814 citations, and has an h-index of 44, along with 7 book chapters. He has supervised Ph.D., M.Tech., M.Sc. students and several summer interns.

Prof. Kollu has received several recognitions, including the Chancellor Award 2024 for teaching and research at the University of Hyderabad, the Young Scientist Award in China, the Iketani Science Foundation Award in Japan, and the Royal Society Research Fellowship. He has also been invited as a keynote and invited speaker at 55 international conferences. His contributions span advanced materials, nanoelectronics, energy storage, magnetic sensors, and device technologies.

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Dr. K. M. NISSAMUDEEN

Dr. K. M. Nissamudeen is a dedicated academic and optoelectronics and materials science researcher with over 15 years of teaching experience. He earned his Ph.D. in Optoelectronics from the University of Kerala in 2010, focusing on nanocrystalline thin-film phosphors.

Dr. Nissamudeen's research interests encompass the development of nanophosphors for white light LEDs and luminescent materials for advanced applications, such as anti-counterfeiting and photonic devices. He has completed multiple funded research projects, including those sponsored by UGC and the Government of Kerala. He has guided six Ph.D. theses to completion, with additional scholars under his mentorship.

With a remarkable record of 70 publications in prestigious journals, a high citation count, and an h-index of 13 and an i10 index of 22, Dr. Nissamudeen has made significant contributions to the scientific community. He is a life member of several professional bodies, including the Materials Research Society of India and the Indian Laser Association.

Dr. Nissamudeen has also been recognized for his work with awards, including the Best Presentation Award at PHOTONICS 2006. He has delivered more than 15 at national and international conferences, sharing his expertise and advancing collaborative research. He is an active reviewer of many international journals like APL, ACS, Elsevier, Springer, etc

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Dr. RAMESH K. GUDURU

Dr. Ramesh K. Guduru is an accomplished scientist, innovator, and entrepreneur with over 22 years of experience in research and development, more than 18 years of international experience in the USA, and more than 6 years of industrial expertise in advanced energy technologies and sustainable materials. His research interests span energy storage, green hydrogen production, circular economy technologies, and advanced electrochemical systems. He is widely recognized for inventing a green hydrogen technology currently under commercialization with a Technology Readiness Level (TRL) of 9 and for developing a seawater-based electrolyzer technology with TRL 6.

Dr. Guduru also developed India's first direct air capture pilot plant (TRL 8) and successfully commercialized an environmentally friendly anti-corrosive cutting fluid for aviation and automotive industries. In addition, he is the co-founder of a Li-ion battery technology startup in the USA.

Throughout his career, he has received several prestigious international recognitions, including the Larry Norwood Faculty Fellow Award (USA), Presidential Faculty Fellow (USA), National Research Council Fellow (USA), and the Overseas Research Student Award (UK). He was also selected for the renowned "100 Talent Program" in China. Dr. Guduru holds multiple US and international process patents, has secured significant research funding, and has actively served scientific agencies including NSF (USA), SBIR-STTR (USA), SNSF (Switzerland), and QNRF (Qatar).

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Dr. BENJAMIN HUDSON BABY

Dr. Benjamin Hudson Baby is currently serving as Assistant Professor in the Department of Physics at Kristu Jayanti (Deemed to be University), Bengaluru. He previously worked as a Project Scientist at the National Centre for Flexible Electronics, IIT Kanpur, and has been associated with several premier research institutions, including Incheon National University, South Korea, IIT Madras, and NIT Warangal. Complementing his academic experience, he has also worked in industry at the Centre for Innovation and Technology Excellence, Titan Jewellery Division, Jaipur.

Dr. Benjamin earned his Ph.D. in Physics from Pondicherry University with specialization in semiconductor nanostructures and thin-film solar cells. His research is centred on metal chalcogenide-based thin-film photovoltaics, band structure engineering, advanced material synthesis, and next-generation optoelectronic devices for sustainable energy applications. His expertise encompasses wet chemical synthesis, RF/DC magnetron sputtering, thin-film fabrication, and sophisticated characterization techniques including XRD, Raman spectroscopy, SEM, TEM, AFM, and XPS.

He is a recipient of the prestigious Korean Research Fellowship (KRF-2020) conferred by the National Research Foundation of Korea. Dr. Benjamin has authored 14 international journal publications, in addition to several conference proceedings and book chapters published by internationally reputed journals and publishers. His scholarly contributions have garnered more than 330 citations with an h-index of 11.

An accomplished academic and dedicated researcher, Dr. Benjamin has guided numerous postgraduate dissertations and has presented his research at several national and international conferences. His continuing work significantly contributes to the advancement of materials science, nanotechnology, thin-film photovoltaics, and sustainable optoelectronic technologies for future energy solutions.

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