



(DEEMED TO BE UNIVERSITY)

KL

**CATEGORY 1
UNIVERSITY**
BY MHRD, Govt. of India

**KL ACCREDITED BY
NAAC WITH A++
GRADE**

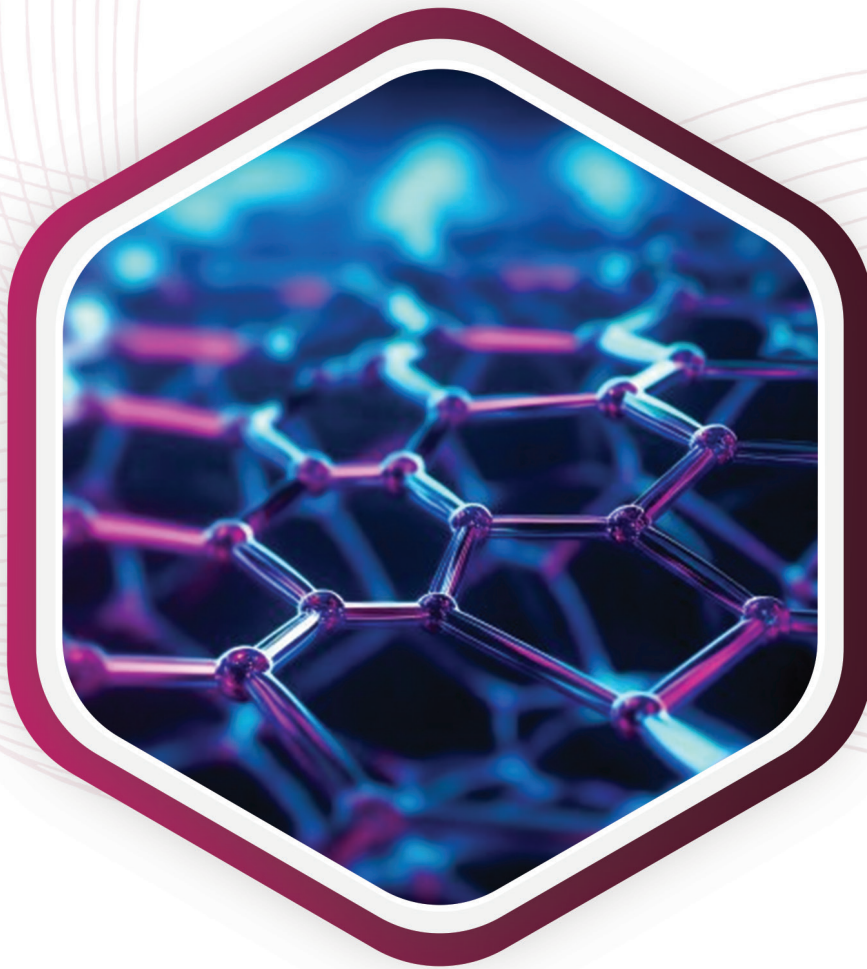
nirf
2024

NATIONAL
INSTITUTIONAL
RANKING
FRAMEWORK

**RANKED 22
AMONG ALL
UNIVERSITIES**

**45 YEARS OF
EDUCATIONAL
LEADERSHIP**

DEPARTMENT OF PHYSICS



EMERGING MATERIALS RESEARCH CENTRE

EMERGING MATERIALS CENTRE



ABOUT THE RESEARCH CENTRE

Emerging Materials Research Center was established in the year 2019 by the Department of Physics with the support of Department of Science and Technology under DST-FIST Level - 1 project with File No. SR/FST/PS-1/2018/35(C), worth of Rs. 107 Lakhs. In this project we procured the instruments multipurpose X-Ray Diffractometer (P-XRD-Malvern PANalytical) and Fourier Transform Infrared Spectroscopy (JASCO FT/ IR-4700). The main objective is to carry out quality research to deepen the understanding of emerging materials for potential applications, also to maintain state-of-the-art research facilities and technologies to support high-quality research. X-Ray Diffractometer is used for basic characterization of materials to know the material is amorphous or Crystalline, crystalline size, and morphology of materials. FTIR is a powerful analytical technique used to identify and analyze the chemical composition and molecular structure of substances by measuring the absorption of infrared light.



VISION

To drive forward globally the frontiers of materials science and contribute to technological and societal advancements through advanced research.



MISSION

- To carry out quality research to deepen the understanding of new and emerging materials, including their properties and potential applications.
- To develop novel materials for functionalities that address future challenges in various industries, such as energy, electronics, healthcare.
- To bridge the gap between theoretical research and practical applications by working on projects that can be implemented in real-world applications.
- To maintain state-of-the-art research facilities and technologies to support high-quality research.



OBJECTIVES

- To analyze the samples received from academicians, researchers, and other organizations.
- To provide instrumentation facility for researchers who are working in material science area.
- To maintain state-of-the-art research facilities and technologies to support high-quality research.

IMPLEMENTATION GROUP MEMBERS



Dr. N. S. M. P. Latha Devi

Project Coordinator &
Associate Professor



Dr. G. Sunita Sundari

Associate Professor



Dr. K. Swapna

Head of the Department
Associate Professor



Dr. A. Venkateswara Rao

Assistant Professor



Dr. Sk. Mahamuda

RPAC
Associate Professor

COLLABORATORS

Prof. A.S.Rao
Delhi Technological University,
New Delhi

Prof. G.V. Prakash
IIT, New Delhi

Prof. Haranadh
NIT Warangal, A.P

Dr. D. Ramachari
Duy Tan University, Vietnam

Prof. Al. Buraihi
Sakarya University, Turkey

Dr. B.Kishore babu,
Andhra University,
Visakhapatnam

Prof. K.S.Ramesh,
Dept. of ECE, K L E F

Prof. P.S.Brahmanandam
Shri Vishnu Engineering College
for Women, Bhimavaram, A.P

Prof. D Pamu
IIT, Guwahati

Dr. D.Thangaraju
PSG Institute of Research & Technology,
Neelambur, Coimbatore, Tamilnadu

Prof. B.Rajinikanth,
T.K.R. College of Engineering &
Technology, LB Nagar, Hyderabad

Dr. K. Raghavendra Kumar
Department of Physics, KLEF

Dr. Ravi Kumar Sonwani,
Indian Institute of Petroleum & Energy
(IIPE), Vizag

Dr. C.V.S.Brahmananda Rao
Indira Gandhi Center for Atomic
Research (IGCAR),
Kalpakkam,Tamilnadu

SCHOLARS INFORMATION



N. Abhiram
Regd. No.173220010



B. Himabindu
Regd. No.173220007



Ch. Pravallika
Regd. No.2102520001



G. Dedeepya
Regd. No.2202520001



D. Naga Prasuna
Regd. No.2302520101



G.V.R. Lakshmi Prasad
Regd. No.2302520001

HIGHLIGHTS OF RESEARCH CENTRE

78

Scopus/SCI
Papers Published

13

Workshops &
webinars Organized

04

International and National
Conferences Organized

45

PG Students and Ph.D scholars
trained & benefited

11

Ph.D's awarded
(during 2019-2024)

1

Patent
Doc No. 202341080126

Consultancy:

- Generating consultancy with minimum charges.
- Amount generated RS. 1.5L

- XRD samples: 950
- Inhouse : 811
- Outside :139
- FTIR samples: 850
- Inhouse : 829
- Outside :21

HIGHLIGHTS OF RESEARCH CENTRE

Sri. Rohit Kumar, DST member visited DST - FIST Lab on 5th March 2022

Expert Talk on “Semiconductor Nanostructures for Optoelectronic Applications” by Prof. Chennupati Jagadish garu,



Dr.T.S.Rao, Fr.Sr.Advisor, Department of Bio-Technology, Government of India, visited on 11-03-2023



Workshop on FTIR Research and Data Analysis. FTIR is an effective analytical instrument for detecting functional groups and characterizing covalent bonding information. III year Bio-Technology students visited on 05-03-2024 to Emerging Materials Research centre.

FACILITY UTILIZED DEPARTMENTS

01 PHYSICS

05 ELECTRONICS &
COMMUNICATION
ENGINEERING

02 CHEMISTRY

06 MECHANICAL

03 PHARMACY

07 BIO-TECHNOLOGY

04 CIVIL

08 INSTRUMENTATION

Facility utilized Institutions: 8

- Andhra University, Visakhapatnam,
- GITAM University, Visakhapatnam,
- Acharya Nagarjuna University, Guntur,
- Delhi Technological University, New Delhi.
- Vijayawada Thermal Power Station, Ibrahimpatnam,
- Gudlavalleru Engineering. College, Gudlavalleru, Krishna Dt.
- SRM University, Amaravathi
- P.B.Siddartha college of Engineering, Vijayawada.
- Satya Sai university, Gulberg
- Muthaiah college, Tamilnadu

LIST OF PUBLICATION (SCI, SCIE, WOS)

2024

- Himabindu, B., N. S. M. P. Latha Devi, P. Nagaraju, and B.RajiniKanth "Synthesis and Characterization of Flower-Like Cobalt-Doped ZnO Nanostructures for Ammonia Sensing Applications." ECS Journal of Solid State Science and Technology 13, no. 2 (2024): 027006. IF=2.2(SCI)
- P. Sailaja, Sk. Mahamuda, G. Dedeepya, Jamila S. Alzahrani, K. Swapna, M. Venkateswarlu, A.S. Rao, Z.A. Alrowaili, I.O. Olarinoye, M.S. Al-Buriah Effect of Eu^{3+} ions concentration on visible red luminescence and radiative shielding properties of $\text{SrO-Al}_2\text{O}_3\text{-BaCl}_2\text{-B}_2\text{O}_3\text{-TeO}_2$ glasses, Radiation Physics and Chemistry 216 (2024) 111467, I.F=2.776 (SCI).
- P. Rekha Rani, M. Venkateswarlu, K. Swapna, Sk. Mahamuda, A.S. Rao, Colour tunable photoluminescence studies of $\text{Dy}^{3+}/\text{Eu}^{3+}$ co-doped BaPbAlFB glasses for epoxy-free w-LED applications, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 320 (2024) 124438.
- C. Sumalatha, Ramachari Doddaji, M. Venkateswarlu, K. Swapna, Sk Mahamuda, A.S. Rao, Visible emission studies by UV light conversion in ($\text{Dy}^{3+}/\text{Tb}^{3+}$) ions pair activated zinc-bismuth-barium borotellurite glasses for achieving intense green and white light, Optical Materials 152 (2024) 115451.
- M. Nyasulu, M.M. Haque, K. R. Kumar, et al., The implication of atmospheric aerosols on rainfall over Malawi, Southeast Africa, Climatic Change 177 (2024), 1-26, IF=4.8 (SCI).
- S. Hu, W. Huo, K. R. Kumar, Global spatiotemporal distributions of the fraction of precipitating and non-precipitating clouds during 2007-2016: Insights from the decadal observations of the CloudSat, Theoretical and Applied Climatology 155 (2024), 3423-3436, IF=3.4 (SCI).
- H. Pan, G. Ren, M. Wang. J. Wang, K. R. Kumar, Investigation on the spatiotemporal and vertical structure of ice cloud an aerosol parameter from multi-source satellite datasets (2007-2021) over the Tarim Basin, China, Journal of Atmospheric and Solar Terrestrial Physics 256 (2024), 106185, IF=1.9 (SCI).

LIST OF PUBLICATION (SCI, SCIE, WOS)

2023

- R Anitha Reddy, A Venkateswara Rao, B Rajesh Babu, K Rama Rao and V Raghavendra, Structural, magnetic and antibacterial studies of gadolinium doped cobalt ferrite nanoparticles synthesized at low temperature, Adv. Nat. Sci.: Nanosci. Nanotechnol. 14 (2023) 015005, IF= 1.7 (SCI).
- R. Anitha Reddy, A. Venkateswara Rao, B. Rajesh Babu, B. Sridhar, K. Sreelatha, Facile Route for the Synthesis of Er Doped Nanoferrites: An Investigation on Structural, Magnetic, and Electrical Properties, Journal of Inorganic and Organometallic Polymers and Materials, 33 (2023) 1562-1568, IF= 3.9 (SCI).
- Himabindu B., Latha Devi N.S.M.P, Sandhya G, Naveen Reddy T, Saha, Tusar; Rajini Kanth B. "Structure based photocatalytic efficiency and optical properties of ZnO nanoparticles modified by annealing including Williamson-Hall microstructural investigation" in Materials Science and Engineering B, Volume 296, April, (2023) 116666. IF=3.6 (SCI).
- Himabindu, Bantikatla; Latha Devi N.S.M.P. Nagaraju, Pothukanuri; Rajini Kanth, Bhogoju, A nanostructured Al-doped ZnO as an ultra-sensitive room-temperature ammonia gas sensor, J Mater Sci: Mater Electron (2023) 34:1014. IF=2.97 (SCI).
- C. Sumalatha, Ramachari Doddaji, M. Venkateswarlu, K. Swapna, Sk Mahamuda, A.S. Rao, Luminescence and photometric activity of an intense green emitting ZnBiBaBFTe:Tb³⁺ glasses, Radiation Physics and Chemistry 208 (2023) 110894.
- G. W. Khamala, J. W. Makokha, R. Boiyo, K. R. Kumar, Spatiotemporal analysis of absorbing aerosols and radiative forcing over environmentally different stations in East Africa during 2001-2018, Science of the Total Environment 864 (2023), 161041, IF=8.9 (SCI).
- B. Pan, D. Liu, Y. Du, D. Zhao, Kang hu, Shuo Ding, C. Yu, Ping Tian, Y. Wu, S. Li, K. R. Kumar, Intercomparisons on the vertical profiles of cloud microphysical properties from CloudSat retrievals over the North China Plain, Journal of Geophysical Res.-Atmospheres, 128 (2023), e2023JD039093, IF=3.8 (SCI).

LIST OF PUBLICATION (SCI, SCIE, WOS)

2022

- R Near-IR luminescence in Nd^{3+} ions doped $\text{Na}_2\text{O}-\text{BaF}_2-\text{CaF}_2-\text{B}_2\text{O}_3-\text{TeO}_2$ glasses for 1064 nm laser and fiber amplifier applications, V. Murali Krishna, Sk. Mahamuda, P. Sailaja, K. Swapna, M. Venkateswarlu, Ch.B. Annapurna Devi, A.S. Rao, Journal of Non-Crystalline Solids 590 (2022) 121671.
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- Near-infrared photoluminescence studies of neodymium ions doped $\text{SrO}-\text{Al}_2\text{O}_3-\text{BaCl}_2-\text{B}_2\text{O}_3-\text{TeO}_2$ glasses for laser and fiber amplifier applications, P.Sailaja, Sk. Mahamuda, K. Swapna, M.Venkateswarlu, A.S.Rao, Optics and Laser Technology, 156 (2022)108569.
- D.Amer, K.Swapna, J.V.Shanmukh Kumar, Sk.Mahamuda, M.Venkateswarulu, P.Sruthi, D.Shanmukh Sai, A.S.Rao, Influence of Sm^{3+} ion concentration on the photoluminescence behavior of antimony lead oxy fluoro borate glasses, Materials Research Bulletin, 146, (2022) 111597
- R. Rajasekar, M. SenthilKumar, S. Shanmugan, M. Nagarajan, The influence of $\text{Cu}_2\text{ZnSnS}_4$ thin films with characteristics of treatment conditions on spray pyrolysis technique for solar cells applications, Indian Journal of Physics, 10.1007/s12648-020-01999-7
- Physical and spectroscopic studies of Sm^{3+} ions doped Alumino Tungsten Borate glasses for photonic applications, V.R.L.Murthy, M.Venkateswarlu, K.Swapna, Sk.Mahamuda, P.Rekha rani, A.S.Rao, Radiation Physics and chemistry, 190 (2022), 109806.
- Analysis of weather condition on thermal behavior utilization in solar devices, N.S.M.P.Latha Devi, S.Shanmugan, Materials today proceedings, 7th Feb 2022, Vol.51, Part 1, Pages:1079-1086.
- An approach of renewable energy based on spatial patterns of radiation flux for solar thermal applications, N.S.M.P. Latha Devi, S. Shanmugan, Materials Today: Proceedings, V Vol. 51, part 1, (2022) Pages 1151-1156.

LIST OF PUBLICATION (SCI, SCIE, WOS)

2021

- S. Varadarajan, M.S. Kumar, S. Shanmugan, A. Arputhalatha, V. Chithambaram, G. Palani, A new class single crystal L-lysine hydrogen chloride (LLHC) for optoelectronic applications, *Journal of Materials Science: Materials in Electronics*, 32, 22, (2021), 26351-26358, 10.1007/s10854-021-06987-z.
- T. Kalaiarasi, M. Senthilkumar, S. Shanmugan, T. Jarin, V. Chithambaram, K.K. Sadasivuni, M. Nagarajan, Synthesis and characterization of L-threonine ammonium bromide: grown on single crystal with experimental studies on NLO, *Bulletin of Materials Science*, 44, 3, (2021), 175, 10.1007/s12034-021-02421-6.
- S. Bhavani, S. Shanmugan, V. Chithambaram, F.A. Essa, A.E. Kabeel, P. Selvaraju, Simulation study on thermal performance of a Solar box Cooker using nanocomposite for natural Food invention, *Environmental Science and Pollution Research*, 28, 36, (2021), 50649-50667, 10.1007/s11356-021-14194-w.
- P. Saminathan, M. SenthilKumar, S. Shanmugan, V. Chithambaram, Influence of L-Lysine-doped Tartaric Acid-Potassium Bromide single crystals: growth and characterization of photonic applications, *Indian Journal of Physics*, 95,7, (2021) 1325-1331, 10.1007/s12648-020-01806-3.
- C. Pravallika, S. Shanmugan, K. Swapna, A.V. Rao, G. Palani, V. Chithambaram, Crystal growth, spectroscopic and antimicrobial investigations on glycine-doped $\text{ZnSO}_4\text{-(NH}_4)_2\text{SO}_4$ single crystal, *Journal of Materials Science: Materials in Electronics*, 32, 32, (2021),13917-13925, 10.1007/s10854-021-05967-7.
- A.M. Gandhi, S. Shanmugan, S. Gorjian, C.I. Pruncu, S. Sivakumar, A.H. Elsheikh, F.A. Essa, Z.M. Omara, H. Panchal, Performance enhancement of stepped basin solar still based on OSELM with traversal tree for higher energy adaptive control, *Desalination*, 502, (2021), 114926, 10.1016/j.desal.2020.114926.
- P. Thamizharasu, S. Shanmugan, S. Sivakumar, C.I. Pruncu, A.E. Kabeel, J. Nagaraj, L.S. Videla, K. Vijai Anand, L. Lamberti, M. Laad, Revealing an OSELM based on traversal tree for higher energy adaptive control using an efficient solar box cooker, *Solar Energy*, 218, (2021), 320 –336, 10.1016/j.solener.2021.02.043.
- S. Shanmugan, S. Gorjian, A.H. Elsheikh, F.A. Essa, Z.M. Omara, A.V. Raghu, Investigation into the effects of $\text{SiO}_2/\text{TiO}_2$ nanolayer on the thermal performance of solar box type cooker, *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 43, 21, (2021), 2724-2737, 10.1080/15567036.2020.1859018.
- Microstructural parameters from Xray peak profile analysis by Williamson-Hall models: A review, B.Himabindu, N.S.M.P.Latha Devi, B.Rajanikanth, *Materials today proceedings*, 01 July 2021, Vol 47, Part 14, Pages:4891-4896.

LIST OF PUBLICATION (SCI, SCIE, WOS)

2021

- Broadband NIR emission at 1.53 Qm in trivalent erbium ions doped $\text{SrO-Al}_2\text{O}_3\text{-B}_2\text{O}_3\text{-BaCl}_2\text{-10TeO}_2$ glasses for optical fiber and NIR laser applications, P. Sailaja, Sk. Mahamuda, K. Swapna, M. Venkateswarlu, Mohini Gupta, A.S. Rao, Journal of Non-Crystalline Solids, 567 (2021) 120937.
- Optical properties of Sm^{3+} ions doped $10\text{SrO-(10-x) Al}_2\text{O}_3\text{-10BaCl}_2\text{-60B}_2\text{O}_3\text{-10TeO}_2$ glasses for reddish orange laser applications, P. Sailaja, Sk. Mahamuda, K. Swapna, M. Venkateswarlu, A.S. Rao, Materials Science and Engineering B 270 (2021) 115198.
- Spectroscopic studies of Dy^{3+} ions doped Phosphate glasses for visible photonic device applications, Sk. Mahamuda, S. Farooq, Ch. B. Annapurna Devi, K. Swapna, M. Venkaeswarlu, M V V K S Prasad, A.S. Rao, Journal of Non-Crystalline Solids 555(2021)120538.
- P.Sruthi, K.Swapna,J.V.Shanmukh Kumar, Sk.Mahamuda, M.Venkateswarulu, D.Amer, D.Shanmukh Sai, A.S.Rao, Dysprosium concentration-dependent fluorescent properties of antimony lead Oxyfluoroborate glasses, Chemical Physics Letter, 2021, 139210 (I.F.2.328).
- Effective sensitization of Yb^{3+} ions on $\text{Yb}^{3+}/\text{Nd}^{3+}$ co-doped fluoroborate glasses for NIR luminescence applications ,K. Sriramulu , K. Swapna , M. Venkateswarlu , Sk. Mahamuda, A.S. Rao, Optical Materials 121 111592 (2021).
- Photoluminescence properties of Sm^{3+} ions doped Bismuth Boro tellurite glasses, Ananthalakshmi, Y., Swapna, K., Mahamuda, S., Venkateswarlu, M., Rao, A.S., Solid State Sciences, (2021), 116, 106609
- N. Abhiram, D. Thangaraju, R. Marnadu, S. Gunasekaran, V. Santhana, J. Chandra sekaran, N.S.M.P.Latha Devi, Mohd. Shkir, S. AlFaify, Development of morphology tuned SnS hierarchical structures for enhanced photosensitive photodiode fabrication, Inorganic Chemistry Communications, 129, (2021), 108623.
- Structural, vibrational, morphological, optical and electrical properties of NiS and fabrication of SnS/NiS nanocomposite for photodetector applications N. Abhiram, D. Thangaraju , R. Marnadu , G. Johnsy Arputhavalli , S. Gunasekaran, P. Vetrivelan, N.S.M.P. Latha Devi, Mohd. Shkir , H. Algarni, Inorganic Chemistry Communications 133 (2021) 108882.
- The CALIPSO retrieved vertical structures of AOD and extinction coefficient for different aerosol types during 2007-2019 – A perspective over global and regional scales, Honglin Pan, Jianping Huang, Kaniike Raghavendra Kumar, Lin Li An, et al. Atmospheric Environment, 274 (2022), 118986.

LIST OF PUBLICATION (SCI, SCIE, WOS)

2021

- Electrochemical and AC Conductivity Studies of PVA based Gel Polymer Electrolytes for Silver Ion Batteries V. Parthiban, G. Sunita Sundari, C.V.S. Brahmananda Rao, and Harikrishna Erothu, Asian J. Chem 34(5) (2022) 1303-1309
- Conducting Polymer Nanocomposite for Energy Storage and Energy Harvesting Systems, Advances in Materials Science and Engineering, Sonali Biswas, Hindawi (2022) 2266899
- Synthesis, Physical Properties and Biomedical Applications of Magnetic Nanoparticles: A Review, Sonali Biswas, Progress in Biomaterials, Just accepted (2022).
- Dyes prepared from leaf extract of siriyangai (Andrographis paniculata) with the effect of TiO_2 based DSSCs, Gottipati Dedeepya, S. Shanmugan, G. Sunita Sundari, N.S.M.P. Latha Devi M. Meenachi, M. Gnana Kiran, P. Selvaraju, Materials Today: Proceedings 66, Part 8, (2022) 3644-3650.
- Optical and spectroscopic studies of Dy^{3+} ions doped Alumino tungsten borate glasses for w-LEDs applications, V.R.L. Murty, M. Venkateswarlu, K. Swapna, Sk. Mahamuda, P. Rekha Rani, A.S. Rao, Polyhedron 227 (2022) 116137.
- Rupesh A. Talewar, Sk. Mahamud, A.S. Rao, S.V. Moharil, Journal of Luminescence, Intense infrared emission of Er^{3+} in ZnB_2O_4 phosphors from energy transfer of Bi^{3+} by broadband UV excitation, 244 (2022) 118706, I.F=2.776 (SCI)
- V. Murali Krishna, Sk. Mahamuda, P. Sailaja, K. Swapna, M. Venkateswarlu, Ch.B. Annapurna Devi, A.S. Rao, Near-IR luminescence in Nd^{3+} ions doped $\text{Na}_2\text{O}-\text{BaF}_2-\text{CaF}_2-\text{B}_2\text{O}_3-\text{TeO}_2$ glasses for 1064 nm laser and fiber amplifier applications, Journal of Non-Crystalline Solids 590 (2022) 121671, I.F=3.2 (SCI)
- P.Sailaja, Sk. Mahamuda, K. Swapna, M.Venkateswarlu, A.S.Rao, Near-infrared photoluminescence studies of neodymium ions doped $\text{SrO}-\text{Al}_2\text{O}_3-\text{BaCl}_2-\text{B}_2\text{O}_3-\text{TeO}_2$ glasses for laser and fiber amplifier applications, Optics and Laser Technology, 156 (2022)108569, I.F= 3.6 (SCI) .
- A. Heera Durga Prakash, Sk. Mahamuda, Jamila S. Alzahrani, P. Sailaja, K. Swapna, M. Venkateswarlu, A.S. Rao, Z.A. Alrowaili, I.O. Olarinoye, M.S. Al-Buriah, Synthesis and characterization of $\text{B}_2\text{O}_3-\text{Bi}_2\text{O}_3-\text{SrO}-\text{Al}_2\text{O}_3-\text{PbO}-\text{Dy}_2\text{O}_3$ glass system: The role of $\text{Bi}_2\text{O}_3/\text{Dy}_2\text{O}_3$ on the optical, structural, and radiation absorption parameters, Materials Research Bulletin 155 (2022) 111952, I.F=5.3 (SCI).
- G. Palani, A.H.S. Shanmugan, V. Chithambaram, Growth, characterisation and anti-bacterial activity of LHCdBr single crystal, Materials Research Innovations, 25, 6, (2021), 331-337, 10.1080/14328917.2020.1814028.

LIST OF PUBLICATION (SCI, SCIE, WOS)

2021

- Hema Chandra Rao Bitra, A. Venkateswara Rao, K. Suresh Babu & G. Narsinga Rao, Low temperature investigation on dielectric properties of carbon doped copper oxide, *Ferroelectrics Letters Section*, 48 (2021) 46.
- H.C. Rao Bitra, A.V. Rao A.G.S. Kumarb, G.N. Rao, Investigation of low temperature dielectric properties of manganese doped-copper oxide nanoparticles by coprecipitation method, 16 (2021)1173.
- Evidence of Superparamagnetism in nano phased copper doped nickel zinc ferrites synthesized by Hydrothermal Method, V. Lakshmi Savithri Vatsalya , G. Sunita Sundari, Ch.S.L.N. Sridhar, Ch. S. Lakshmi, *OPTIK*
- Optical And Ionic Conductivity Studies Of Gel Polymer Electrolytes Based On PVDF:CH₃COOLi, G. Sunita Sundari, K. Sravanthi and Harikrishna Erothu, *International journal of scientific & technology research*.
- Development of bio-degradable based polymer electrolytes for EDLC application, K.Sravanthi, G. Sunita Sundari, Harikrishna Erothu, *OPTIK - International Journal for Light and Electron Optics* 241 (2021) 166229
- Experimental Investigation on the Performance of a Solar Still Using SiO₂ Nano-particles /Jatropha curcas L, T. Rajesh Kumar & S. Shanmugan & G. Sunita Sundari & N. S. M. P Latha Devi & N. Abhiram & G. Palanikumar, *Silicon*
- B. Pan, D. Liu, K. R. Kumar, M. Wang, NSMP Latha Devi, Global distribution of maritime low clouds with an emphasis on different aerosol types and meteorological parameters inferred from multi-satellite and reanalysis data during 2007-2016, *Atmospheric Environment* 246, (2021), 118082.
- NIR photoluminescence studies of Nd³⁺ doped B₂O₃-BaF₂-PbF₂-Al₂O₃ glasses for 1.063 Qm laser applications P. Rekha Rani, M. Venkateswarlu, K. Swapna, Sk Mahamuda, Rupesh A. Talewar, Ch. B. Annapurna Devi, A.S. Rao, *Journal of Luminescence* 229 (2021) 117701.
- R. Khan, K. R. Kumar, T. Zhao, The impact of lockdown on air quality in Pakistan during the COVID-19 pandemic inferred from the multisensory remote sensed data, *Aerosol and Air Quality Research*, 21, (2021), 200597, doi:10.4209/aaqr.200597.
- Seasonal change in the recent decline of dual high PM_{2.5} and O₃ pollution and associated chemical and meteorological drivers in the Beijing-Tianjin-Hebei region, China, Yuehan Luo, Tianliang Zhao, Yuanjian Yang, Lian Zong, Kanike Raghavendra Kumar, Hong Wang, et al., *Science of the Total Environment* 838 (2022), 156312.
- Y. Luo, T. Zhao, Y. Yang, L. Zong, K. R. Kumar, et al., Seasonal change in the recent decline of dual high PM_{2.5} and O₃ pollution and associated chemical and meteorological drivers in the Beijing-Tianjin-Hebei region, China, *Science of the Total Environment* 838 (2022), 156312, IF= 8.9 (SCI).

LIST OF PUBLICATION (SCI, SCIE, WOS)

2021

- H. Pan, J. Huang, K. R. Kumar, L. An, et al., The CALIPSO retrieved vertical structures of AOD and extinction coefficient for different aerosol types during 2007-2019 – A perspective over global and regional scales, *Atmospheric Environment*, 274 (2022), 118986, IF=4.2 (SCI).
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FACULTY ACHIEVEMENTS

- Early Career Research Awards (DST-SERB, Govt. of India)
- Young Scientist Award (DST, Govt. of India)
- Core Research Grant (DST, Govt. of India)
- Woman Scientists (DST, Govt. of India)
- Best Researcher Awards from various agencies
- Best Teacher awards
- AP Academy of Sciences- Associate Fellow

FACULTY NAME	PUBLICATIONS	PROJECTS	PATENTS	PH.D AWARDED	CITATIONS	H- INDEX	I10- INDEX
Dr.N.S.M.P. Latha Devi	30	1	6	2	523	13	14
Dr.K.Swapna	78	5	3	4	3092	30	50
Dr.Sk.Mahamuda	81	5	6	3	3128	31	58
Dr.G.Sunita Sundari	40	1	4	3	478	15	18
Dr.A.Venkateswara Rao	32	2	6	4	441	11	13

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PUBLICATIONS MEET 12 SDG's



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