Name of Faculty	Dr. SANTHOSH KUMAR A	
Designation	Assistant Professor	100
Nature of Job/Appointment	Contract	E
Date of Joining	01-07-2019	LINATI
E-mail	asanthoshkumar_physics@cbit.ac.in	
Education Qualifications	Name of the Degree	Class
Ph. D	Doctor of Philosophy (Physics)	Awarded
PG	M, Sc (Physics)	First
UG	B. Sc.	First
Work Experience		
Teaching	6 years	
Research	11 years	
Industry	2 years	
Others	-	
Area of Specialization	Materials Science, Opto-Electronic Nanostructures	
Professional Memberships	-	
Responsibilities held at Institution Level	 Research Coordinator , R&E, Mentor, Student Induction Programme 	
Responsibilities held at Department Level	 Co-Incharge First year Time Table Class in charge Co-Incharge NBA Co-Incharge NAAC ARIIA Co-ordinator 	
Research Guidance		
Awards Received	 SERB-NPDF fellowship DRDO-DIAT Postdoctoral Research Associa DRDO-DIAT Senior Research fellowship MHRD- NITK Research fellowship 	te fellowship
Courses Handled at Under Graduate / Post Graduate Level.	Physics Optics and Semi-conductor Physics Electromagnetic Theory and Quantum Mechanics	
No. of Papers Published	National Journals – - International Journal	s –15
	National Conference – International Confere	ence -14
Projects Carried out	 Noble plasmonic AuPd anchored ZnO/SnO₂ nanoarray heterostructures for an efficient Light Emitting Devices and Sunlight Photocatalytic decomposition of energetic materials funded by DST (SERB/PDF/004095), Grant: 19.2 lakh 	
Patents	-	
Technology Transfer	-	
Invited Speaker	Workshop on "Experimental Physics for High School Teachers" 19 th January 2013 at NITK Surathkal	
No. of Books/Chapter Published with details	Assistant Editor: Proceedings of International e-Conference on Materials processing & characterization. ISSN: 978-81-946476-9-0 1. AICTE QIP sponsored STC/ FDP on Intelligent Photonics	
Details of Short-Term Training Programs/Faculty Development Programs/Seminars/ Workshops. Other Trainings (Attended and/or Organized).	 at NITTTR, Chandigarh from 4-9 October, 20 2. ATAL FDP on Novel Materials from 2 27/08/2021 at SRM Institute of Mar Technology 3. Successfully completed "Physics of silicon online non-credit course authorized)21. 23/08/2021 to agement and solar cells" an by École

Polytechnique and offered through Coursera on 20-08-2021

- 4. FDP-ICT Tools for Effective teaching and learning IQAC, Kamala Nehru Mahavidyalaya, Nagapur, 8-10, june 2021
- National level one week faculty development program on Research Methology, Kamala Nehru Maha Vidyalaya, Nagpur, 26 April 2021 to 1 may 2021
- One Week Online Faculty Development Programme on "Student Induction and Universal Human Values" organized by Department of Physics from 26-08-2020 to 30-08-2020.
- Three days national FDP on "ICT tools for effective teaching learning", Organized by IQAC and Kamala Nehru maha vidyalaya, Nagpur 8 -10 june 2021.
- One Week Online Faculty Development Programme on "Recent Advances in Bio medical applications and communication networks" organized by GMR Institute of technology, Rajam, AP, 13 -18 july 2020.
- One Week Online Faculty Development Programme on "Recent Trends In Advanced Materials Science and Engineering Technology (RTAMSET-21)" organized by De partment of Chemistry, Chaitanya Bharathi Institute of Technology (Autonomous) during 8th to 12th March 2021.
- 10. One week Faculty Development Program on "Nano Hybrid Composite Materials Characterization & Applications" organized by Department of Mechanical Engineering from 24th to 28th August 2020.
- 11. One Week Faculty development program on Recent Advances in Biomedical Applications and Communication Networks, GMRIT, Rajam, During 13 -18 July 2020
- International webinar on Emerging Trends in Materials Science-2020, Department of Physics, maharaja Bhoj Govt PG college, M.P, during 5-7 July 2020
- 13. Five days Faculty Development Program on Renewable Energy Systems, IGEN PIT, during 8th June 2020 to 12th June 2020.
- 14. Learning Physics Through Simple Experiments, IIT Kanpur From 02-04-2020 to 10-06-2020
- One week online Faculty Development Program on Materials: Recent Trends & Engineering Applications, GRIET, Hyderabad, during 2nd June 2020 to 07th June 2020.
- One-Week Online Faculty Development Programme (FDP) on "Outcome Based Education & NBA Accreditation", CBIT, Hyderabad During 28/5/2020 to 1/6/2020
- 17. Understanding Research Methods, University of London (Coursera) -4weeks
- One-week Online Faculty Development Program on "The Use of Virtual Physics Labs - Creating Next Generation Teachers", May 20-24, 2020.
- 19. How Things Work: An Introduction to Physics, University of Virginia (Coursera)- 8 weeks
- 20. One day seminar on "Recent Trends in Materials and Its Applications in Engineering" organized by Dept. of Physics, CBIT, Hyderabad at CBIT on 20.11.2019.
- 21. One day Seminar on"Physics and its applications in Engineering" organized by Dept. of Physics, CBIT, Gandipet, Hyderabad at CBIT on 13.03.2019.
- 22. National workshop on Small and Wide Angle X-Ray Scattering (SWAXS), DIAT, Pune During 12-13 Dec 2018.

International Journal

- 1. Sanjay Sahare, Santhosh kumar A*, T. Bhave, A.C. Abhyankar, "Novel cost-effective and electrocatalytically active intermetallic nickel aluminide counter electrode for dye sensitized solar cells" *Nano Ex.* 2020 1 030029
- PremkumarMurugaiyan , Amitava Mitra, Ashis K Panda, A Santhosh Kumar, Rajat K Roy, Suneel Kumar Srivastava, Electromagnetic interference shielding effectiveness of soft magnetic amorphous ribbons, Physica B: Condensed Matter (2019),568: 13-17 (I.F 2.46)
- Sandesh, Santhosh Kumar A, Amruta Jambhale, P. S. Kulkarni, A. C. Abhyankar "Enhanced photocatalytic activity of magnetic BaFe12O19 nano-platelets than TiO₂ with emphasis on reaction kinetics, mechanism and reusability" ACS: Industrial & Engineering Chemistry Research, 57, 48, 16192-16200 (2018). (I. F 3.8)
- Manoj Oval, Santhosh Kumar A, Manjeet kumar, A. C. Abhyankar "Photoluminescence quenching and enhanced spin relaxation in Fe doped ZnO Nanoparticles" Materials chemistry and physics (2017) 195: 58-66. (I. F 4.0)
- 5. Sushil Kumar, G. Dutt, Santhosh Kumar A, A. C. Abhyankar "Absorption of Microwave Radiations through Flexible Polyvinyl alcohol- Carbon black grafted Magnetic Hexagonal Barium ferrite Nanodiscs" *Journal of Applied Physics* (2016): 120, 164901.
- 6. A. Santhosh Kumar, K. K. Nagraja N.M. Huang, H. S. Nagaraja " Preparation, characterization and photoelectrochemical properties of hydrophilic Sn doped TiO₂ nanostructures" *Materials letters* (2014) 123: 149-152.
- A. Santhosh Kumar, N.M. Huang, H. S. Nagaraja "Influence of Sn on Photoluminoscence and Photoelectrochemical properties of ZnO nanorod arrays" *Electronic materials letters* (2014)10:753-758
- 8. K KNagaraja, S Pramodini, A Santhosh Kumar, HosakoppaNagaraja, P Poornesh "Structural, linear and nonlinear optical properties of RF sputtered Nitrogen doped ZnO thin films studied using z-scan technique" *Laser Physics* (2014) 24(8):085402.
- 9. A. Santhosh Kumar, H. S. Nagaraja " A large-scale-oriented growth of ZnO nanorod array on glass substrate: Growth, Structural and Photoluminoscent properties" *Optoelectronics and Advanced materials* (2014)16:547-553.
- **10.** A. Santhosh Kumar, K. K. Nagaraja, and H. S. Nagaraja" Polymer assisted synthesis and characterization of fine ZnWO₄ "*Advanced Materials Research* 678:22-25 (2013).
- 11. A. Santhosh Kumar, K. K. Nagaraja and H. S. Nagaraja "Effect of Sn doping on structural, optical, electrical and wettability properties of oriented ZnO nanorod arrays" *Journal of Materials Science : Materials in Electronics* (2013)24:3812–3822
- 12. K. K. Nagaraja, S. Pramodini, A. Santhosh Kumar, H. S. Nagaraja, P. Poornesh and DhananjayaKekuda "Third-order nonlinear optical properties of Mn doped ZnO thin films under CW laser illumination", *Optical Materials* 35:431-439 (2012).
- 13. A. Santhosh Kumar, K. K. Nagaraja, and H. S. Nagaraja," Growth and temperature dependent electrical properties of ZnO nanostructures" *Recent Advances in Materials Science AIP Conf. Proc.*, 1536:263-264 (2013).
- 14. K. K. Nagaraja, A. Santhosh kumar, H. S. Nagaraja, (2011), "Aluminum doped ZnO thin films by RF sputtering of coaxial ZnO and Al targets", *AIP ConferenceProceedings*, 1391:743-745
- 15. A. Santhosh kumar, Nagaraja K.K, Nagaraja H.S "Polymer assisted preparation and characterization of ZnO and Sn doped ZnO nanostructures", *IOP : Materials Science and Engineering* 73, 012077 (2015)
- 16. K. K. Nagaraja, A. Santhosh Kumar, H. S. Nagaraja, "Fabrication and characterization of ZnO-Al-ZnO multilayers by simultaneous DC and RF magnetron sputtering", *IOP: Materials Science and Engineering* 73, 012071 (2015).
- Santhosh Kumar A, Natraj G, Y. S. Reddy, B. Linga Reddy "Recent Advances in the Fabrication of ZnOBased Nanostructures for Opto-Electronic Devices, Proceeding of ICMP&C 2020, 978-81-946476-9-0, 2020, 210.

International /National Conferences

- Santhosh Kumar A, A C Abhyankar, Hydrophilic ZnO nanorod array-reduced graphene oxide hybrid nanocomposites for photoelectrochemical studies, ICONN-21, 1-2 Feb 2021, SRMIST, Chennai, Tamilnadu, India
- 2. Santhosh Kumar A, Natraj G, Y. S. Reddy, B. Linga Reddy "Recent Advances in the Fabrication of ZnO Based Nanostructures for Opto-Electronic Devices, ICMP&C- 2020, CBIT, Hyderabad.
- 3. Santhosh Kumar A , Y Srinivasa Reddy, Raja Gopal K, Ashutosh C Abhyankar, Growth of Hydrophobic Al doped ZnO nanoarrays and their Raman Scattering, Photoluminescence and Photo detection properties, "International Conference on Purification and Recycling of Electronic Materials (ICPREM-2020)" organized by C-MET Hyderabad during 8-10 March 2020.

- Santhosh Kumar A, Rama Krishna Reddy B.S., Naresh Chinta, A. C. Abhyankar "Enhanced Photoluminoscence and Photosensing properties of Al doped ZnO nanoarrays" 18-20, December 2017, IIIT (RGUJKT)-Basar. (Oral)
- 5. Santhosh Kumar A, Manoj Ovhal, B.V. Bhaskara Rao, S.N. Kale and A.C. Abhyankar "Sputter deposited Intermetallic Ni 3 Al nanocrystalline thin films: An efficient microwave shielding application", ICMAGMA-2017, 1-3 Feb 2017, DMRL, Hyderabad. (Poster)
- Santhosh kumar A, Nagaraja K K, Nagaraja H S " Temperature dependent electrical properties of ZnO nanostructures" International Conference on Recent trends in Applied Physics and Material Science (RAM 2013), 01-02 Feb 2013, Govt. college of Engineering and Technology, Bikaner, Rajastan. (Poster)
- Santhosh kumar A, Nagaraja K K, Nagaraja H S "Preparation and characterization of porous anatase TiO₂ nanostructures" Nano India 2013, 19-20 Feb 2013, CSIR-NIIST, Trivandrum, Kerala. (Poster)
- Santhosh kumar A, Nagaraja K.K, Nagaraja H.S "Preparation and characterization of TiO₂ and Sn doped TiO₂ thin films." International Conference on Thin Films & amp; Applications (ICTFA-2012),15-17 March 2012 SASTRA University, Thanjavur, India. (Oral)
- Santhosh kumar A, Nagaraja K.K, Nagaraja H.S "Polymer assisted preparation and characterization of ZnO and Sn doped ZnO nanostructures." International Conference on Material Science and Technology (ICMST-2012), 10-14 June 2012, St.Thomas College Pala, Kottayam, Kerala (Oral)
- K. K. Nagaraja, A. Santhosh Kumar and H. S. Nagaraja 'Aluminum doped ZnO thin films by RF sputtering of coaxial ZnO and Al targets', Optics-11 'A conference on light', May 23-25, 2011, NIT-Calicut, Kerala (Poster)
- K. K. Nagaraja, A. Santhosh kumar and H. S. Nagaraja "Fabrication and characterization of ZnO/Al/ZnO multilayers by simultaneous DC and RF magnetron sputtering" International Conference on Material Science and Technology (ICMST-2012), 10-14 June 2012 St. Thomas College Pala, Kottayam, Kerala.(Oral)
- Santhosh kumar A, Nagaraja K.K, Nagaraja H.S "Preparation and characterization of ZnWO₄ particles and thin films" Third International Conference on Frontiers in Nanoscience and Technology (Cochin Nano-2011) 14-17 August 2011, Cochin, India. (Poster)
- AmrutaJambhale, Santhosh Kumar A, Sushil Kumar, A. C. Abhyankar" Morphology Dependent Properties of Barium Hexaferrite Nanostructures for Photocatalysis of Highly Explosive Materials" 7th Bangalore India Nano, 5-6 December 2014, Bangalore, India. (Poster)
- Santhosh Kumar A, Nagaraja H S "Polymer Assisted Synthesis and Characterization of fine ZnWO₄ International Conference on Nanoscience and Nanotechnology (ICNN-2011), 6-8 July 2011, Coimbatore Institute of Technology, Coimbatore (Oral)