FACULTY WEBSITE PROFILE

Name of The Faculty	Dr. M S Vijaya Kumar 
Designation	Associate Professor
Qualification	PhD
E Mail ID	vijayakumarms@jssstuniv.in
LinkedIn ID	www.linkedin.com/in/dr-vijaya-kumar-m-s-b39528325
ORCID	0000-0002-7148-2946
Contact Number	7258366827
Work Experience	
1. Teaching	9 years
2. Industry	-
3. Research	20 Years
4. Other	-
Area of Specialization	Material Science, Chemistry, Polymer Science and Technology
Subjects Taught	
1. Under Graduate Level	• Polymer Chemistry • Blends and Composites • Polymer Recycling and value addition • Waste management • Polymer Preparation Lab • Polymer Chemistry Lab
2. Post Graduate Level	• Material Structure Property Relationships • Research Methodology • Clean Energy Technology • Smart Materials
Research Guidance	
1. Under Graduate Level 2. Post Graduate Level	**BE Projects Guided: 04** **M Tech Project Guided (4 Nos.)** 1. Methodologies for parameterization and validation of injection molding material models By Mr. Shrihari Narasimha Kulkarni 2023-24. 2. Core behaviour of cyanate esters for strategic applications By Mr. Vinay Kumar M, 2024-25.
3. PhD	**PhD Guiding: 4**

Publication Details	
1. Inter National Journal 2. National Journal 3. Conferences Patents Book Published	**International Journals** 1. G.R. Deepak Raj, K.N. Mukunda Murthy, M.S. Sanjana, N. Vidya, **M. S. Vijaya Kumar**, H.S. Nagendra Prasad, M.A. Sangamesha, p-Toluenesulfonic acid functionalized Fe–Zn MOF@MWCNT mesoporous composite as an efficient electrocatalyst for water splitting, Fuel, V430, 141582, pp1-12 (2027) (IF-7.8) – Q1 2. K R Pooja, C Nikhitha, K N Nadeesh, C Udayabhanu, T Gupta, S Kulkarni, J Manjanna, **M.S.Vijaya Kumar**, and G Nagaraju, Structural and phonon modulation in cinnamon-fueled MnV_2O_6 nanoparticles for high-efficiency photocatalysis, Analytical Chemistry Letters, 16, V1, PP53-66 (2026) (IF-1.6) - Q3 3. M. Girish, K R Pooja, D.M Gurudatta, T.K Chaitra, H.M Suresh Kumar, J Manjanna, Srikantamurthy N, **M.S.Vijaya Kumar**, K. B. Naveen, R. Harini and G Nagaraju, Co_2SnO_4 Nanostructures as Bi-functional Materials For Environmental Monitoring and Electrochemical Sensing, Optical Materials, 174, 117990 (2026) (IF-4.8)- Q1 4. M.B. Ravi, M. Anusuya, **M.S.Vijaya Kumar**, A. Anupama and G. D. Vidya, Dental Application-Based Synthesis and Characterization of Crystalline Hydroxyapatite from Egg Shells Using Co-Precipitation Method, Journal of Pharmaceutical Innovation, V20, I5, 262 (2025) (I.F=3.0) – Q2 5. M. Anusuya M, M.B. Ravi and **M S Vijaya Kumar,** Incorporation of naturally obtained Hydroxyapatite nanoparticles in resin luting cements and GIC to evaluate water sorption & solubility-An in vitro study, International Journal of Health and Allied Sciences, (2025) 6. M. Anusuya, M. B. Ravi, A. Anupama, **M.S.Vijaya Kumar**, K. N. Raghavendraswamy, and M. R. Dhakshaini, Incorporation of Naturally Obtained Hydroxyapatite Nanoparticles in Resin Luting Cements and Glass Ionomer Cement to Valuate Water Sorption and Solubility: An In Vitro Study, International Journal of Prosthodontics and Restorative Dentistry, V15, Issue 1, pp 27-35 (2025) (I.F=0.40) - Q3 7. S. H Kameshwari Devi, **M.S.Vijaya Kumar*** and B. V. Kruthika B.V, Preparation and Characterization of Biopolymeric Films Produced from Fruit and Vegetable Waste, Journal of Polymer Research, V32, i1, No.12, pp1-8 (2024) (I.F=2.60) - Q2 8. R. Preetham, **M.S.Vijaya Kumar**, T.R. Swaroop, K.R. Kiran, K.P. Sukrutha and M.P. Sadashiva, A Novel and effective method for the synthesis 1,3,4-Oxadiazoles from carbimidothioates and benzohydrazides: An unexpected cyclization, Synthetic Communications, V53, i7-8, pp568-75 (2023) (I.F=1.93)-Q3 9. R. Preetham, **M.S.Vijaya Kumar**, T.R. Swaroop, S Divyashree, K.R Kiran, M.Y Sreenivasa, M.P Sadashiva, K.S Rangappa, An efficient route for the synthesis of 1,5-disubstituted tetrazoles and their

	anti-microbial activity against Salmonella Paratyphi, ChemistrySelect V7, i-45, pp1-8 (2022) (I.F=2.31)-Q2 10. H. S. Deepak, H.S. Dayananda, **M.S.Vijaya Kumar,** and P.T.Sowmya, By products of steel industry as a complementary material in construction, International Research Journal of Engineering and Technology, V09, i-8 (2022) (I.F=7.529) 11. H.B. Uma, **M.S.Vijaya Kumar,*** and S Ananda, Semiconductor-assisted photodegradation of textile dye, photo-voltaic and antibacterial activity by electrochemically synthesized Sr-doped CuO nano photocatalysts, Journal of Molecular Structure, V1264, 133110, pp1-10 (2022) *(I.F=4.7)-Q2*. 12. H.B. Uma, **M.S.Vijaya Kumar,*** and S Ananda, "Synthesis, characterization, semiconductor-assisted photocatalysis and antibacterial activity of electrochemically synthesized SnS and NiS/SnS nanophotocatalysts", Asian Journal of Chemistry, 34, 1, pp233-239 (2022) *(I.F=0.535)-Q3*. 13. H. B. Uma, **M.S.Vijaya Kumar,*** and S Ananda, Synthesis and characterization of PEO:Sr/CuO polymer nanocomposite films and study of their optical, electrical and viscosity properties, International Journal of Applied Chemistry, V17, 1, pp 33-49 (2021) *(I.F=1.01)*. 14. H. B. Uma, S. Ananda and **M.S.Vijaya Kumar,*** Synthesis and characterization of PEO:CuO/ZnO/SnO polymer nanocomposite films and study of their optical and electrical properties, International Journal of Emerging Technologies and Innovative Research V8, 3, P2056-66 (2021) *(I.F=7.97)*. 15. H. B. Uma, S. Ananda and **M.S.Vijaya Kumar,** Electrochemical synthesis of CuO/ZnO/SnO nano photocatalysts for photodegradation of methylene blue dye, photo-voltaic and antibacterial activity studies, Chemical data Collections 32, 100658, 1-13 (2021) *(I.F=2.22).* 16. H. S. Dayananda, **M. S. Vijaya Kumar**, S. P. Madhu, and P. Girish, Reuse of discarded glass as a partial replacement to Fine Aggregate and Microstructural Analysis of Solidified Matrix, Journal of Construction and Building Materials Engineering (MAT Journals), V6, 2, 32-38 *(2020)* 17. M.P. SanSoucie, J.R. Rogers, **M.S.Vijaya Kumar**, J. Rodriguez, X. Xiao, and D.M. Matson, Effects of environmental oxygen content and dissolved oxygen on the surface tension and viscosity of liquid nickel, *Int. J. Thermophys. 37, 76 1-11 (2016) (I.F=0.794).* 18. K.J Lee, H.G. Kim, S.H. Lim, **M.S.Vijaya Kumar**, S. Yoda and W.S. Cho, Effect of heat treatment on microstructure of $BaTiO_3$ solidified by aerodynamic levitation, *J. Ceram. Proces. Res. 17, 2, 97-102 (2016) (I.F=0.467).* 19. K. Kuribayashi, R. Takahashi, Y. Inatomi, S. Ozawa and **M.S.Vijaya Kumar,** Containerless processing of metastable multiferroic composite in R-Fe-O system (R: Rare-earth element), *Int. J. Microgra. Sci. Appl. 33, 2, 330215 (2016).* 20. K. Sakata, Y. Watanabe, J.T. Okada, **M.S.Vijaya Kumar**, P. F.

	Paradis and T. Ishikawa, FT-IR emissivity measurements of Nb melt using an electrostatic levitation furnace, *J. Chem. Thermody. 91, 116-120 (2015) (I.F=2.888).* 21. K. Kuribayashi, H. Kato, K. Nagayama, Y. Inatomi and **M.S.Vijaya Kumar**, An experimental verification of a criterion for forming metastable phases in containerless solidification, J. *Appl. Phys. 117, 15, 154905 (2015) (I.F=2.546).* 22. H. N. Girish, **M.S.Vijaya Kumar**, K. Byrappa and B. Basavalingu, Hydrothermal synthesis of some of the lanthanide aluminium perovskites – $LnAlO_3$ (Ln=La, Sm & Gd), *Mat. Res. Innov. 19, 4, 270-74 (2015) (I.F=2.42).* 23. **M.S.Vijaya Kumar***, J.T. Okada, T. Ishikawa, P.F. Paradis, and Y. Watanabe, Density measurement of glass and liquid $CaAl_2O_4$ using a pressurized electro-static levitator, *Meas. Sci. Tech. 25, 085301 (2014) (I.F=2.046).* 24. T. Ishikawa, J.T. Okada, P.F. Paradis, Y. Watanabe, **M.S.Vijaya Kumar**, and M. Watanabe, Surface tension measurement using sample rotation combined with electrostatic levitation, *Jap. J. Appl. Phys. 53, 126601, (2014). I.F=1.480)* 25. **M.S.Vijaya Kumar***, J.T. Okada, Y.Watanabe and T. Ishikawa, Fabrication of advanced glass and ceramics by containerless processing, Trans. JSASS Aerospace Tech. Japan, 12, ists29, 25 (2014) 26. T. Ishikawa, J.T. Okada, P.F. Paradis and **M.S.Vijaya Kumar,** Towards microgravity experiments using the electrostatic levitation furnace (ELF) in the international space station (ISS), Trans. JSASS Aerospace Tech. Japan, 12, ists29, 15 (2014). 27. **M.S.Vijaya Kumar***, T. Ishikawa, B. Basavalingu, J.T. Okada and Y. Watanabe, Thermal and optical properties of glass and crystalline phases formed from binary R_2O_3-Al_2O_3 (R=La-Lu and Y) system, *J. Appl. Phys. 113, 19, 193503 (2013). (I.F=2.546)* 28. **M.S.Vijaya Kumar***, K. Kuribayashi, J. Yu, J.T. Okada and T. Ishikawa, Microstructure and magnetic properties of metastable $RFeO_3$ (R: Rare-earth element) formed from undercooled melt, *J. Am. Ceram. Soc. 96, 3, 995-1002 (2013). (I.F=3.78)* 29. B.Basavalingu, **M.S.Vijaya Kumar**, H.N.Girish and S. Yoda, Hydrothermal synthesis and characterization of rare earth doped yttrium aluminium perovskite- R:$YAlO_3$ (R=Nd, Eu & Er), *J. Alloys & Comps. 552, 382-386 (2013). (I.F=5.316)- equal first author and corresponding author* 30. P. Madhusudan, **M.S.Vijaya Kumar**, T. Ishigaki, K. Toda, K. Uematsu, M. Sata, Hydrothermal synthesis of micro-mesoporous $BiVO_4$ hierarchical particles and their photocatalytic degradation properties under visible light irradiation, *Environ. Sci. Pollut. Res. 20, 9, 6638-6645 (2013). (I.F=4.223)* 31. T. Ishikawa, P.F. Paradis, J.T. Okada, **M.S.Vijaya Kumar**, and Y. Watanabe, Viscosity of molten Mo, Ta, Os, Re and W measured by electrostatic levitation, *J. Chem. Therm., 65, 1-6 (2013). (I.F=3.178)*

	32. Ki-Ju Lee, **M.S.Vijaya Kumar,** S.K. Jung, J.H. Jeong, C.H. Lee, M.W. Cho, G.W. Lee, S. Yoda W.S. Cho, Contactless density and volumetric thermal expansion coefficient measurement of undercooled liquid (Ba, Sr)TiO_3 using aerodynamic levitator, *J. Ceram. Proces. Res. 14, 3, 311-14 (2013). (I.F=0.690)* 33. K. Byrappa, B.V. Suresh Kumar, G.V. Narasimha Rao, **M.S.Vijaya Kumar** and C. Ranganathaiah, Synthesis and Characterization of R^{3+}: $AlPO_4$ (where R= Ce, Pr and Nd), *Mat. Res. Innov. 11, 3, 122-126 (2007) (I.F=2.42).* 34. **M.S.Vijaya Kumar***, K. Kuribayashi, K. Nagashio, T. Ishikawa, J.T. Okada, J. Yu, S. Yoda and, Y. Katayama, Real-time X-ray diffraction of metastable phases during solidification from the undercooled $LuFeO_3$ melt by two-dimensional detector at 1 kHz, *App. Phys. Let., 100, 19, 191905 (2012). (I.F=3.791)* 35. S. Yoda, J. Yu, and **M.S.Vijaya Kumar,** Nano-structure formation of an oxide ceramics with unprecedented magnetization by supercooling, *Applied Physics Letters, 100, 10, 102902 (2012) (I.F=3.791)* 36. K.J. Lee, **M.S.Vijaya Kumar**, S.K. Jung, C.H. Lee, C.H. Lee, S. Yoda and W.S. Cho, Density measurement of undercooled liquid $BaTiO_3$ by aerodynamic levitation, *J. Ceram. Proces. Res. 13, 4, 476-479 (2012) (I.F=0.690)* 37. M. Kaneko, J. Yu, A. Masuno, H. Inoue, **M.S.Vijaya Kumar**, O. Odawara, and S. Yoda, Glass formation in $LaO_{3/2}$-TiO_2 binary system, *J. Am. Ceram. Soc., 95, 1, 79-81 (2012) (I.F=3.78).* 38. K. Kuribayashi and **M.S.Vijaya Kumar,** Metastable phase formation from undercooled melt of oxide material, *J. Phys. 327, 012019, 1-10 (2011) (I.F=2.707)* 39. **M.S.Vijaya Kumar***, K. Kuribayashi, J. Yu, M. Kaneko, T. Ishikawa, and S. Yoda, Phase selection in the undercooled melt of $RMnO_3$ (R=rare earth element) using containerless solidification technique, *J. Jap. Soc. Microgravity. Appl. 28, 2, S51-56 (2011).* 40. K. Kuribayashi and **M.S.Vijaya Kumar,** Entropy-undercooling regime criterion for metastable phase formation in compound material, *J. Jap. Soc. Micro. Appl. 28, 2, S68-71 (2011).* 41. **M.S.Vijaya Kumar***, N. Higaki, K. Kuribayashi, T. Hibiya and S. Yoda, Formation of orthorhombic and muliferroic hexagonal phases from an undercooled $RMnO_3$ (R=rare-earth element) melt using containerless technique, *J. Am. Ceram. Soc., 94, 1, 282-289 (2011) (I.F=3.78)* 42. H.P. Shivaraju, C.P. Sajan, T. Rungnappa, **M.S.Vijaya Kumar**, C. Ranganathaiah and K. Byrappa, Photocatalytic treatment of organic pollutants in textile effluent using hydrothermally prepared photocatalytic composite, *Mat. Res. Innov. 14, 1, 80-86 (2010) (I.F=2.42)* 43. H. P. Shivaraju, K.Byrappa, M. B. Shayan, T. Rungnappa, S. Pakamard, **M.S.Vijaya Kumar** and S. Anand, Hydrothermal coating of ZnO onto calcium alumino silicate beads and their application in photodegradation of amaranth dye, *Mat. Res.*

Innov. 14, 1, 73-79 (2010) (I.F=2.42)

44. **M.S.Vijaya Kumar***, K. Kuribayashi, and K. Kitazono, Effect of oxygen partial pressure on the formation of metastable phases from an undercooled $YbFeO_3$ melt using an aerodynamic levitator, *J. Am. Ceram. Soc., 92, 4, 903-910 (2009) (I.F=3.78)*
45. H. N. Girish, **M.S.Vijaya Kumar**, M. K. Devaraju, K. Byrappa, and B. Basavalingu, Hydrothermal synthesis and characterization of neodymium doped yttrium aluminum perovskite (Nd:YAP), *Indian Mineralogist, 44, 1, 65-70 (2009)*
46. **M.S.Vijaya Kumar***, K. Kuribayashi, and K. Kitazono, Formation of $LuFe_2O_4$ phase from an undercooled $LuFeO_3$ melt in reduced oxygen partial pressure, *J. Mat. Res. 23, 11, 2996-3005 (2008) (I.F=3.089)*
47. K. Kuribayashi, K. Nagashio, K. Niwata, **M.S.Vijaya Kumar**, and T. Hibiya, Metastable phase formation from undercooled melt of $REFeO_3$, K(RE: Rare-earth element), Rev. Adv. Mater. Sci. 18, 444-447 (2008) *(I.F=3.364)*
48. **M.S.Vijaya Kumar***, K. Nagashio, T. Hibiya, and K. Kuribayashi, Formation of hexagonal metastable phases from an undercooled $LuFeO_3$ melt in an atmosphere with low oxygen partial pressure, *J. Am. Ceram. Soc., 91, 3, 806-812 (2008) (I.F=3.78)*
49. K.Byrappa, C.P. Sajan, S. Anand, K.M Lokanatha Rai, **M.S.Vijaya Kumar** and K.Soga, Hydrothermal synthesis of doped ZnO and its application in photodegradation of toxic amaranth dye, *Acta Crystall. A. 64, C587 (2008)*- DOI- 10.1107/S0108767308081154 *(I.F=2.290)*
50. K. Kuribayashi, K. Nagashio, K. Niwata, **M.S.Vijaya Kumar**, and T. Hibiya, Novel criterion for formation of metastable phase from undercooled melts, *Mater. Sci. Eng. A, 449-451, 675-679 (2007) (I.F=5.234)*
51. B.V. Suresh Kumar, K.Byrappa, K.M Lokanatha Rai, M.K Devaraju, **M.S.Vijaya Kumar** and C.Rangamathaiah, Synthesis and characterization of $AlPO_4$-zeolites using alanine and glycine as templates, *Ind. J. Chem. A, 46, 86-90 (2007) (I.F=0.491).*
52. K. Nagashio, K. Kuribayashi, **M.S.Vijaya Kumar**, K. Niwata, T. Hibiya, A. Mizuno, M. Watanabe and Y. Katayama, In-situ identification of the metastable phase during solidification from the undercooled $YFeO_3$ melt by fast X-ray diffractometry at 250 Hz, *Appl. Phys. Lett. 89, 24, 241923 (2006) (I.F=3.791)*
53. J.T. Okada, T. Ishikawa, W. Imai, **M.S.Vijaya Kumar** and P.F. Paradis, Development of electrostatic levitator for pressurized atmosphere, Proceeding of the 29th ISTS, pp 1-4, 2013-h-13, June 2-9, *2013,* Nagoya, Aichi Prefecture, *Japan.*
54. **M.S.Vijaya Kumar***, T.Ishikawa, J.T. Okada and Y.Watanabe, Formation of glass and crystalline rare-earth aluminates by aerodynamic levitation, Proceedings of Asian Microgravity Pre-Symposium (AMS-CJK-2012), 9th China-Japan-Korea Workshop on Microgravity Sciences, Guilin, China, Oct. 29-Nov. 2, 2012.
55. K. Kuribayashi and **M.S.Vijaya Kumar**, Crystallographic stability

	of metastable phase formed by containerless processing in $REFeO_3$ (RE: Rare-earth Element), Proceeding of the 141st TMS 2012 Annual Meeting, Materials Research in Microgravity 2012, Session VI, March 11-15, 2012, Orland, Florida (NASA/CP-2012-217466), pp. 128-135. Sept. 2012. 56. **M.S.Vijaya Kumar***, K. Nagashio, T. Hibiya, and K. Kuribayashi, Characterization of metastable phases solidified from an undercooled $LuFeO_3$ melt, 58th International Astronautical Congress (IAC), Hyderabad, India, 24-28 September 2007, v1, pp 524-529, 2007, Hyderabad, 24-28 September 2007. 57. K. Nagashio, K. Kuribayashi, **M.S.Vijaya Kumar**, K. Niwata, T. Hibiya, A. Mizuno, M. Watanabe and Y. Katayama, Rapid-X-ray diffractometry of a metastable phase during solidification from the undercooled $YFeO_3$ melt, 5th decennial International conference on solidification processing, p326-330, 2007, edited by Howard Jones, The University of Sheffield. 58. K. Byrappa, **M.S.Vijaya Kumar**, B.V. Suresh Kumar, S. Ananda and K.M L. Rai, Hydrothermal synthesis, electrical conductivity and catalysis reaction of a luminophosphate zeolite, Crystal Growth of Technologically Important Electronic Materials, p311-317 (2003) edited by K.Byrappa, T. Ohachi, H. Klapper and R. Fornari, Allied Publishers, New Delhi. **Patent:** 1. A System and Method for Extraction of Water from Air Using Renewable Energy; Indian Patent (No. 202541026247 A) applied on 21st March 2025 and published on 28th March 2025. 2. Atmospheric Water Extraction System powered By Renewable Energy; Indian Patent (No. 202541085041 A) applied on 8th September 2025 and published on 6th Feb 2026.
Research Projects / Consultancy Undertaken	
1. Funding Agency	1. **SERB-DST, India:** Utilization of Space Environment for Microgravity Materials Science Experiments (106 Lakhs)
2. Fund Received (In Rs.)	**2. NASA, USA:** Round Robin- Thermophysical Property Measurements (390 Lakhs) **3. NSF, USA:** Molten Oxide Inductolysis (MOI) Feasibility Study (33 Lakhs) **4. JSPS, Japan:** Research on the Metastable Phases and Property of Oxide Materials (70 Lakhs) **5. JAXA, Japan:** Development Research of an Electrostatic Levitator (ESL) (140 Lakhs)

	6. **MEXT, Japan:** Fabrication of Matastable Phases (30 Lakhs) 7. **AIEJ, Japan:** Ceramics and High Temperature Materials (20 Lakhs).
FDP /STTP/Technical Seminar Organised and Participated as a Resource Person	**Participated as a Resource Person (Keynote/Invited / Guest lectures)** 1. Delivered a Guest lecture on **"Space and Aerospace"** organized by the Marvel PU College, Mysore, on September 22nd, 2026. 2. Delivered an Invited talk on **"Science beyond the Earth"** organized by the Department of Chemistry, Maharani's Science College, Mysore, on September 8th, 2026. 3. Chaired a poster presentation session in **Advanced Workshop on Space Simulation and Human Biology – ASTRO-BIO 2026,** organized by JSS College of Pharmacy, Ooty, TN on 27th and 28th August 2026. 4. Delivered an Invited talk on **"Polymers and their Applications in Sensors**" in the 48th series 5 days Faculty Development Program on "Hands on training on Impedance analyser and Sputtering unit for sensor applications", organized by Department of Chemistry and Physics, SIT, Tumkur on August 20th, 2026. 5. Delivered an Invited talk on **"Transforming Polymers Waste into Valuable resources"** in the Five-day Faculty Development Program on "Waste o Wealth: Modern Approaches to Waste Management, organized by Department of Chemistry and Civil Engineering, P.E.S. College of Engineering, Mandya on August 18th, 2026. 6. Invited as a chief guest for the 80th Independence Day Celebration at Gangothri Public School and PU College, Bogadi Road, Mysore on August 15th, 2026. 7. Delivered a special lecture on **"Application of Science in Space Environment",** organized by Science Forum and IQAC, Govt. First Grade College, K R Nagar, Mysore Dist. on August 6th, 2026. 8. Delivered an Invited technical talk on **"Polymers for Daily Need"** in the **"Inauguration of CHEM-CLUB",** organized by Department of PG Studies in Chemistry, Government Science College, Chitradurga, on May 26th, 2026. 9. Delivered Keynote Address at the national conference on "**Role of Technology in Environmental Stainability 2026 (RTES'26)"** organized by Faculty of Engineering, Department of Science and Humanities, Karpagam Academy of Higher Education, Coimbatore, Tamil Nadu on January 30th, 2026. 10. Delivered an Invited technical talk on **"Life in Space"** in the **"Faculty and Students Interaction",** organized by Department of Botany, Kongunadu Arts and Science College, Coimbatore, on July 11th, 2025. 11. Delivered an Invited technical talk on **"Advanced Materials Processing, characterization and their Applications"** in the **"Academic Networking and Interdisciplinary Interaction",** organized by Department of Chemistry, Kongunadu Arts and Science College, Coimbatore, on June 13th, 2025.

	12. Delivered an Invited technical talk on **"Material Processing and their Applications for Space"** to the BE students organized by the Department of Physics, Siddaganga Institute of Technology, Tumkur, on June 6th, 2025. 13. Chaired a session III: Advances in Applied Science: Navigating New Frontiers-I at **"Doctoral Research Conference 1.0"** organized by Dean Research Office, JSSSTU, Mysuru during February 7-8, 2025. 14. Chaired a session III at **"International Young Researchers Symposium"** organized by the Department of Physics, SJCE, JSSSTU, Mysuru during February 19-20, 2025. 15. Delivered an Invited talk on **"Advanced Materials fabrication in Microgravity and their Applications"** in the workshop on Innovations in Chemistry and their Application held from 24th to 30th January 2025, organized by the Department of Studies in Organic Chemistry, University of Mysore, Mysuru on January 25th, 2025. 16. Delivered a special lecture on **"Basic Sciences in Space"** under the activities of Chemical Society, organized by the Postgraduate Department of Chemistry, Govt. Science College, Hassan, on November 8, 2024. 17. Delivered a special lecture on **"Career guidance"** under the activities of Chemical Society, organized by the Postgraduate Department of Chemistry, Maharani's Science College for Women, Mysore, on November 29, 2023. 18. Delivered a guest lecture on **"Importance of Sciences"** on the occasion of **NATIONAL SCIENCE DAY** organized by the Department of Science and Faculty Humanities, JSS Polytechnic for the differently abled (JSS PDA), on February 28, 2023. 19. Delivered an Invited oral presentation on "Advanced Ceramics and High Refractive Index Glasses by Gas Levitation, organized by INOVSCITECH, Global Scientific Guild, Germany, on October 29, 2022. 20. Chaired a session X: Industrial Microbiology and Microbial Nanotechnology at **"62nd International Conference on Microbes and Society"** organized by Vijnana Bhavan University of Mysore, Manasagangothri, Mysuru in association with CFTRI, DFRL, KSTA and AMI, India during Sept 21-23, 2022. 21. Delivered an Invited lecture on "Basic Science in Space Environment" as a part of IQAC and Chemical Society event for Bachelor students at St Philomena's College, Mysuru on May 26, 2022. 22. Delivered an Invited lecture on "Chemical and Physical Sciences in Space Environment" as a part of Chemical Society event for Master students at Sarada Vilas College, Mysuru on May 6, 2022. 23. Delivered a lecture on "Basic Science in Space and its Applications" as a part of UOM, JSS AHER and DST STUTI Training Program organized by Vijnana Bhavan, on May 1st, 2022.

	24. Delivered a lecture on "Environment and its protection" as a part of Eco club-green leaves organized by Government high school, D. Salundi, Mysuru, on February 25, 2022. 25. Delivered a lecture on "General Chemistry and Industrial Chemistry" for Engineering students as a part of induction program at Mysore University School of Engineering, Manasagangothri Campus, University of Mysore, Mysuru, during January 10-14, 2022 (Seven (7) Lectures). 26. Invited talk on "Material Science in Space" at Faculty development program (FDP) on "Recent advances in chemical sciences", organized by Sapthagiri College of Engineering, Bangalore, during October 25-29, 2021 (10:00 am -12:00 pm) – Virtual 27. Two days national webinar on "COVID-19 pandemic and its management strategies" CPAIMS-2021, organized by Department of Studies and Research in Biochemistry, Mangalore University, Jnana Kaveri Post-graduate Centre, Chikka Aluvara, Kodagu, on October 28-29th, 2021. 28. Delivered an Invited lecture for Ph.D students (course work) on "Thermal Methods and Analysis", organized by the Department of Chemistry, Bangalore University, J. B. Campus, Bengaluru, on October 12, 2021 (10:30 to 12:00 pm). 29. Webinar/Virtual meeting "Global Conference on The World Conference on Nanotechnology Research and Applications (WCNR 2021), "Containerless Process: Fabrication of Multiferroics and High Refractive Index Glasses" organized by Hazel group, Prague, Czech Republic, during September 20-22, 2021 (International). 30. Delivered an Invited talk on "Functional Materials Preparation under Reduced Gravity" at 13th Refresher course on "Techniques on Material Synthesis and Characterization", organized by UGC-HRDC, University of Mysore, Mysore on September 20, 2021 (**two sessions** from 10:00 to 11:15 am and 11:45 to 1:00 pm. 31. Webinar on Materials Science & Nanotechnology, "Multiferroics and High Refractive Index Glasses by Levitation Technique" organized by virtual material science and nanotechnology 2021, Inovine meetings LLC, Mississippi, USA, September 17-18, 2021 (International). 32. Delivered an Invited talk on "World of Weightlessness: Space Science and its Applications", on the occasion of teachers training program organized by the Sathyasai Institute, Mandya, India, April 21, 2021-offline. 33. Delivered an Invited talk on "World of Weightlessness: Space Science and its Applications", Organized by the Department of Chemistry, KPR Institute of Engineering and Technology, Tamilnadu, India, March 31, 2021. - **Google meet** 34. **Special lecture and "Science Interaction Program"** at BGS Public School, Nagamangala Taluk, Mandya Dist, Karnataka, Organized

	by **Centre for Science Education in Schools** (CSES), Vijnana Bhavan, Manasagangothri, Mysore, Karnataka, India, March 6th, 2021. 35. **Special Invited lecture** for class VI to X on "World of Weightlessness", Organized by the Excel Public School, Koorgalli, Mysore, Karnataka, India, December 21, 2020. 36. Delivered an Invited talk on "Renewable Energy from Space", at AICTE-STTP Phase II, Organized by the Department of Mechanical Engineering, Malnad College of Engineering, Hassan, Karnataka, on December 18, 2020 –(**Webinar**) Microsoft team 37. Delivered an Invited talk on "Space Science for Renewable Energy", at National Energy Conservation Day webinar Organized by KREDL, Govt. of Karnataka and Veterinary College, Hassan on December 17, 2020 – (**Webinar**) Zoom meeting 38. Delivered an Invited talk on "Fabrication of Functional Materials by Creating and Utilizing Space Environment", at AICTE-STTP Phase 1, Organized by the Department of Mechanical Engineering, Malnad College of Engineering, Hassan, Karnataka, on December 14, 2020 (**two sessions** from 10.00 to 11.30 am and 11.45 to 1:15 pm - **Webinar** (Microsoft team) 39. Delivered an Invited talk on "Material preparation under zero-gravity" at 12th Refresher course in Material Science organized by UGC-HRDC, University of Mysore, Mysore on December 10, 2020 (two sessions from 2:00 to 3:15 am and 3:45 to 5:00 pm- **(Virtual)** Zoom app 40. Delivered an Invited talk on "Space Environment and its Applications in Basic Science" at 12th Refresher course in Material Science organized by UGC-HRDC, University of Mysore, Mysore on December 9, 2020 (**two sessions** from 10:00 to 11:15 am and 11:45 to 1:00 pm- Zoom app 41. Delivered an Invited talk on "Microgravity" organized by Team 2020 helping hands on September 6, 2020 (**Webinar**)- **Live you tube** 42. Delivered an Invited talk on "Basic Science in Zero-gravity", Organized by the Department of Studies and research in Chemistry, University College of Science, Tumkur University, Tumkur, India, July 30, 2020 (**Webinar**)-**Zoom meeting** 43. Delivered an Invited talk on "World of Weightlessness: Scientific Approaches and Applications", Organized by the Department of Chemistry, Sai Vidya Institute of Technology, Bengaluru, Mysore, India, July 27, 2020 (**Webinar**) – **Google meet** 44. Delivered an Invited talk at Ceramic online lecture series on "Materials Synthesis at Zero-Gravity", hosted by Ceramic department of PDA college of Engineering, Kalaburgi, India, July 25, 2020 (**Webinar**)- **Google meet** 45. Delivered an Invited talk on "Chemical and Physical Sciences in Reduced Gravity Environment and its Applications" Organized by the Department of Studies in Chemistry, Bangalore University, Bengaluru, India, July 3, 2020 (**Webinar**)- **Zoom meeting**

	46. Delivered an Invited talk on "Utilization of Space Environment for the Advanced Research" Organized by the Department of Chemistry, Vidya Vardhaka College of Engineering, Mysore, India, June 19, 2020 (**Webinar**)-**Live you tube** 47. **Invited Talk:** Delivered an Invited lecture on the occasion of Science Day on "Space Science: Chemical and Physical Science in Space" organized by Govt First Grade College, Kuvempunagar, Mysore, Karnataka, India, March 07, 2020. 48. Inaugurated Science Exhibition and delivered lecture as a resource person on the occasion of "Science Day" organized by Govt First Grade College, Channapatna, Karnataka, India, February 28, 2020. 49. **Session Chair and Organizing Committee member**: National conference on "Innovations in Chemical Sciences (NCICS-2020), organized by the Department of Studies in Chemistry, University of Mysore, Mysuru and Karnataka Science and Technology Academy, Department of Science and technology, Govt of Karnataka, Bengaluru, during 30-31st January, 2020. 50. Chaired technical session 03 and 10 at an International Conference on Materials For Environment, Sustainable Society And Global Empowerment–2019 (MESSAGE-2019) organised by Visvesvaraya Technological University, Center for Postgraduate Studies, Muddenahalli, Chikkaballapur, India, December 19-20, 2019. 51. Special Lecture for higher primary school students on "Space science", at Govt. higher primary school, Belavadi, Mysore, Karnataka, India, Organized by the Grassroots Research and Advocacy Movement under the theme "Indian Scientists: Role of Science and Technology in Building the Nation" December 18, 2019 52. Special Lecture for higher primary school students on "Space science", at Govt. higher primary school, Koorgalli, Mysore, Karnataka, India, Organized by the Grassroots Research and Advocacy Movement under the theme "Indian Scientists: Role of Science and Technology in Building the Nation" December 18, 2019. 53. Special Lecture for higher primary school students on "Space science", at Govt. higher primary school, Metagalli, Mysore, Karnataka, India, Organized by the Grassroots Research and Advocacy Movement under the theme "Indian Scientists: Role of Science and Technology in Building the Nation" December 17, 2019. 54. Special Lecture for high school students on "Space science", at Govt. High School, Metagalli, Mysore, Karnataka, India, Organized by the Grassroots Research and Advocacy Movement under the theme "Indian Scientists: Role of Science and Technology in Building the Nation" December 17, 2019. 55. Special Lecture for higher primary school students on "Space science", at Govt. higher primary school, Hootagalli, Mysore,

	Karnataka, India, Organized by the Grassroots Research and Advocacy Movement under the theme "Indian Scientists: Role of Science and Technology in Building the Nation" December 17, 2019. 56. Special Invited lecture for class IX to XII on "Space science and its applications", Organized by the National Public School International, Mysore, Karnataka, India, November 21, 2019. 57. Delivered an invited talk on "World of Weightlessness: Chemical and Physical Science in Space and its applications", Organized by the Department of Chemistry, Vidya Vardhaka College of Engineering, Mysore, India, September 20, 2019. 58. Invited talk on "Chemical and Physical Science in Space", Organized by the Department of Chemistry, Delhi University North Campus, New Delhi, India, September 5, 2019. 59. Delivered an invited talk on Impact/Importance of Chemistry to fresh engineering students as a part of induction program, Organized by the SJCE, JSS Science and Technology University, Mysuru, Karnataka, India, August 19, 2019 (**2 sessions**) 60. Chemical and Physical Science in Space Environment and its Scientific Applications, Organized by the Physical Society, Department of Studies in Physics, Manasagangothri, University of Mysore, Mysuru, Karnataka, India, March 27, 2019 (**Invited talk**) 61. World of Weightlessness: Space Environment and its Scientific Applications, Pooja Bagavath Memorial Mahajana PG Centre, Mysore, January 24, 2019. 62. **Invited Talk**: Utilization of Space Environment for the Future, SBRR Mahajana First Grade College, Mysore, January 16, 2019. 63. **Invited Talk**: Microgravity Experiments: Materials Processing Using Space Environment, Indian Space Research Organization (ISRO), Satellite Integration and Testing Establishment (ISITE) (ISITE) Bangalore, December 21st, 2018 64. **Invited Talk**: Containerless Processing: Fabrication of Advanced Materials Using Space Environment, Invited talk organised by the Department of Physics, Indian Institute of Roorkee (IITR), Roorkee, India, October 3, 2018. 65. **Session Chaired:** Chaired a session at an International symposium on Nanomaterials-2018 (Nanomat-2018) with the theme Nanomaterials in Space, Health, Energy and Environmental Applications, organised by Visvesvaraya Technological University Center for Postgraduate Studies, Muddenahalli, Chikkaballapur, India, November 22, 2018. 66. **Invited Talk**: Delivered an invited talk on World of Weightlessness: Fabrication of New Materials Using Space Environment, Two days national level conference on "Recent Advances in Chemistry", Organized by the Department of Chemistry, Karnatak University, Dharwad, Karnataka, India, March 24-25, 2018. 67. **Invited Talk**: Chemistry of Materials and its Applications in

Space, Organized by YUVA CHEMICA SOCIETY, Department of Chemistry, Yuvaraja's College, University of Mysore, Mysore, Karnataka, India, February 28, 2018.

68. **Resource Person:** Chemical and Physical Science in Space and its Scientific Applications, delivered a lecture as a resource person for the 14th Refresher Course in Chemistry on "Recent Advances in Chemistry", organized by UGC-Human Resource Development Centre, University of Mysore, Manasagangothri, Mysore, Karnataka, India, February 14, 2018.
69. **Invited Talk**: Delivered an invited talk on World of Weightlessness: Utilization of Space Environment and Scientific Approaches for Nanomaterials, One day national seminar on "Chemistry of Nanomaterials and their Engineering Applications" Organized by the Department of Chemistry, Adichunchanagiri Institute of Technology (AIT), Chickmagalur, Karnataka, India, February 10, 2018.
70. **Session Chair:** Judge for the oral session at Biodiversity and bioprospecting for sustainable development-2018, organised by Institution of Excellence (IOE) in association with University with potential for excellence (UPE), University of Mysore, Mysuru, India, February 23-24, 2018.
71. **Invited Talk**: Utilization of Space Environment: Fabrication of Advanced Functional Materials, Two days national conference on Recent trends in Geo Science, Material Science and Civil Engineering, organized by ATME college of Engineering, Mysore, Karnataka, India, March 23-24, 2017.
72. **Session Chair:** Chaired two sessions in Two days national conference on recent trends in Geo Science, Material Science and Civil Engineering, organized by ATME college of Engineering, Mysore, Karnataka, India, March 23-24, 2017.
73. **Invited Talk**: Overview and Scientific Applications of Weightlessness (Space Environment), One Day National Level Conference on "Emerging Trends in Nano-Chemistry", organized by Department of Chemistry MMK and SDM Mahila MahaVidyalaya, Mysore, Karnataka, India on February 2, 2017.

Events organized

1. Organizing committee member of 'Three days International Conference on *Advanced Materials for Health, Energy and Environment (AMHEE-2023)'*, 28th February to 2nd March, 2023. Organized by department of chemistry, SJCE, JSS STU, Mysore.
2. Organizing committee member of Technical symposium on Advances in Polymer Technology in the memory of Dr.K.S.Jagadeesh, Dr. G..M.Shashidhara and Dr.Siddaramaiah on 18/11/2023.
3. Organizing committee member of YUDO best polymer Technocrat Award (3rd Edition) and PST's Alumni meet on 8/12/2023.
4. Technical talk on Tire retreading and its compound

	formulations, Shri. Sanatan Kundu, Consultant, Rubber Industries, 15th March 2024 5. Organizing committee member of YUDO best polymer Technocrat Award (4th Edition) and PST's Alumni meet on 16/11/2024. 6. Organizing committee member of Technical symposium on Advances in Polymer Technology in the memory of Dr.K.S.Jagadeesh, Dr.G.M.Shashidhara and Dr.Siddaramaiah on 14/12/2024. 7. Worked as a coordinator for POLYCON 2025, 8th National conference on "Advanced Polymeric Materials and Applications (Energy, Environment and Health)", organized by Department of Polymer Science and Technology in association with IRI, SJCE, JSSSTU, Mysuru, India during May 15-16, 2025. 8. Organizing committee member of YUDO best polymer Technocrat Award (5th Edition) and PST's Alumni meet on 22/11/2025. 9. Organizing committee member of Technical symposium on Advances in Polymer Technology in the memory of Dr.K.S.Jagadeesh, Dr. G.M.Shashidhara and Dr.Siddaramaiah on 24/12/2025.
Achievements	1. Ramanujan Fellowship, SERB-DST, India (Nov 2016) 2. Tufts-NASA Postdoctoral fellowship, USA (2014) 3. Japan Society for the Promotion of Science (JSPS) Fellowship, Japan (2012) 4. JAXA Aerospace Project Research Fellowship, Japan (April 2009) 5. Japan Government MEXT Scholarship (Monbu-kaga-kusho) (October 2005) 6. AIEJ Scholarship: Short-Term Student Exchange Promotion Program (Inbound-Scholarship), Japan Student Service Organization (JASSO), Japan (2004) 7. Invited to attend the Asian Winter School in SOKENDAI, Japan (2006) 8. Potential Reviewer for various international peer reviewed journals like *Alloys and Compounds, Material Science, Materials Transactions, , Chemistry Select, Next Materials etc.*
Professional Membership	Committee on Space research (COSPAR) Japan Society of Microgravity Applications (JASMA) Japan Institute of Metals (JIM) Materials Research Society (MRS) Ceramic Society of Japan (CSJ) The minerals, metals and materials society (TMS) American Society for Gravitational and Space Research (ASGSR) Society for Materials Chemistry (SMC India)