

## Dr. KARTHIK KUMARA

### Address for correspondence

#### Dr. Karthik Kumara

Assistant Professor  
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### Career Objective:

- Intend to utilize my skills and abilities into practice for mutual growth and benefit and make endeavours towards the way which is innovative, creative and excel in my field.

### Personal Details:

- Nationality: Indian, Date of Birth: 06-03-1992, Sex: Male, Marital Status: Married

### Software Expertise:

- Latex, Platon, Shelx, CrystalExplorer, Mercury, Olex2, Gaussian, Gaussview, Crystal, AutoDock Vina, Gromax, Origin.

### Hobbies:

- Reading books, Listen to music, Column and poetry writing

### Language Proficiency:

- Kannada, English, Hindi

### Behavioural competencies:

- Adaptability, Good learner, Good listener, Flexible, Passionate for Teaching and Research

### Academic Qualification:

Degree/ Course	University / Board	Year of Passing	Subject	Class Secured
B.Sc.	University of Mysore	2012	PCM	Distinction
M.Sc.	University of Mysore	2014	Physics	First
KSET	Department of Higher Education-Karnataka	2017	Physics	First
Ph.D.	University of Mysore	2018	Physics	Awarded

### Area of Specialization:

- Solid State Physics, X-ray Crystallography, Atomic and Molecular Physics, Materials Science

### Research Interest:

- Small molecule and protein crystallography, metal organic frameworks, chemical crystallography, molecular interactions, DFT studies and structural chemistry

### Scientific Instruments Handled:

- Rigaku and Bruker single crystal X-ray diffractometers
- Powder XRD, FT-IR, UV-Vis, TGA and DSC instruments

### Teaching and Research Experience:

Sl. no.	Positions held	Name of the Institute	From	To
1	Assistant Professor in Physics	Department of Physics B.M.S. College of Engineering, Bengaluru	26-11-2021	Till date
2.	Assistant Professor in Physics	Department of Physics, School of Sciences, Jain University, Bengaluru	03-08-2020	25-11-2021
3.	Assistant Professor in Physics	Department of Studies in Physics, University of Mysore, Manasagangotri, Mysuru	18-09-2019	30-05-2020
4.	Assistant Professor in Physics	Regional Institute of Education (NCERT), Mysuru	06-07-2018	30-04-2019
5.	Project fellow	Institution of Excellence University of Mysore, Mysuru	23-01-2015	31-03-2018

### Details of Research Guidance:

- M.Sc. students guided - **05**
- Ph.D. students – **01** (pursuing)

### Details of the Students Research Projects Guided

Sl. no.	Title of the Project	Year
1.	“Synthesis, spectroscopic characterization, crystal structure studies and theoretical calculations of carbonylhydrazone Schiff base derivative” by Arya Viswanath M. and Sumana S.	2021
2.	“Synthesis, spectral studies, crystal structure and theoretical computations of sulfonylhydrazone Schiff base derivative” by Harshitha R. and M. Shivani Nithu	2021
3.	“Verification of law of conservation of energy via electronic model” by Jiniit P. Bavishi	2021

## Details of Research Papers Published in National and International Journals

Sl.no.	Research publications in referred journals	Impact factor
1.	<p>“Hydrothermal synthesis of Bi<sub>2</sub>S<sub>3</sub> nanoparticle as a prospective electrode for supercapacitor” M. Rizan, Vishal Samaje, <b>Karthik Kumara</b>, K.N. Ravindra, A.S. Giresha and S. Thiyagaraj Next Materials, 2, 100081, 2024.</p>	-
2.	<p>“Regioselective benzylation of imidazo[1,5-a]pyridines and indoles via iodine catalyzed reaction using alcohols - An approach to crystal structure prediction, DFT studies and Hirshfeld surface analysis” Nagaraju Chaithra, Hassan A Swarup, S Chandrasekhar, BK Jayanna, <b>Karthik Kumara</b>, Kempegowda Mantelingu, NK Lokanath Journal of Molecular Structure, 1295, 136591, 2024</p>	3.841
3.	<p>“Microwave-Assisted Synthesis and Characterization of Some Aldehyde Derivatives of Imidazo[2,1-b][1,3,4]thiadiazole: Crystal Structure Insights, In-Silico and Biological Studies” Kunigal S Sagar, <b>Karthik Kumara</b>, Banu SH, Neratur K Lokanath, Manikyanahalli N Kumara and Kempegowda Mantelingu ChemistrySelect, 8(47), e202302877, 2023.</p>	2.307
4.	<p>“Jahn-Teller distortion in SP-like [Cu(bipy)(triamine)].2BF<sub>4</sub> complexes with novel N-H...F/C-H...F synthon: XRD/HSA-interactions, physicochemical, electrochemical, DFT, docking and COX/LOX inhibition” Anas AlAli, Mousa Al-Noaimi, Abeer AlObaid, Hussien Ahmed Khamees, Abdelkader Zarrouk, <b>Karthik Kumara</b>, Ismail Warad and Shaukath Ara Khanum Journal of Molecular Liquids, 387, 122689, 2023</p>	6.0
5.	<p>“Synthesis, characterization, E/Z-isomerization, DFT, optical and 1BNA docking of new Schiff base derived from naphthalene-2-sulfonohydrazide” A Abu-Rayyan, M Suleiman, A Daraghme, A Al Ali, A Zarrouk, <b>Karthik Kumara</b>, A Sawafta, I Warad Moroccan Journal of Chemistry, 11-3, 613-622, 2023.</p>	1.406
6.	<p>“Structural elucidation of 1:4:4 stoichiometric form of thymine – gallic acid cocrystal hydrate: Hirshfeld surface analysis, 3D energy framework, DFT calculations, and SARS CoV-2 docking studies” K.L. Jyothi, M.K. Hema, <b>Karthik Kumara</b>, T.N. Guru Row and N.K. Lokanath Journal of Molecular Structure, 1280, 135072, 2023.</p>	3.841
7.	<p>“One-pot reproducible Sonosynthesis of trans-[Br(N∩N')Cu(μBr)2Cu(N∩N')Br] dimer:[H...Br S(9)] synthons, spectral, DFT/XRD/HSA, thermal, docking and novel LOX/COX enzyme inhibition” Anas AlAli, Hussien, Ahmed Khamees, Mahendra Madegowda, Abdelkader Zarrouk, <b>Karthik Kumara</b>, Nasseem El-khatatneh, Ismail Warad and Shaukath Ara Khanum Journal of Molecular Structure, 1275, 134626, 2023.</p>	3.841
8.	<p>“Structural investigations and theoretical insights of a polymethoxy chalcone derivative: Synthesis, crystal structure, 3D energy frameworks and SARS CoV-2 docking studies”</p>	3.841

	<b>Karthik Kumara</b> , Mahima Jyothi, Salma Kouser, A.H. Uday Kumar, Ismail Warad, Shaukath Ara Khanum and N.K. Lokanath Journal of Molecular Structure, 1272, 134226, 2023.	
9.	“Influence of counter ions on supramolecular structures of copper(II) complexes derived from 1,8-naphthalimide tecton” Sabiha A. Shaikh, Satish S. Bhat, Pooja Lokesh Hegde, Vidyanand K. Revankar, Naveen S., <b>Karthik Kumara</b> , N.K. Lokanath and Ray J. Butcher Journal of Molecular Structure, 1271, 134086, 2022.	3.841
10.	“2,6-disubstituted imidazothiadiazole 5-carbaldehyde: Synthesis, crystal structure elucidation and <i>in-silico</i> studies” K.S. Sagar, S. Shamanth, <b>Karthik Kumara</b> , N.K. Lokanath, K. Mantelingu and M.N. Kumara Chemical Data Collections, 42, 100962, 2022.	0.98
11.	“Structural-property relationship in halogen-bonded Schiff base derivative: Crystal structure, computational and SARS-CoV-2 docking studies” A. H. Udaya Kumar, Mahesha, K.J. Pampa, <b>Karthik Kumara</b> , M.K. Hema, Nanishankar V. Harohally and N.K. Lokanath Journal of Molecular Structure, 1265, 133409, 2022.	3.841
12.	“Syntheses, structural characterization and evaluation of the anti-tubercular activity of copper (II) complexes containing 3-methoxysalicylaldehyde-4-methylthiosemicarbazone” Pooja Lokesh Hegde, Satish S. Bhat, Vidyanand K. Revankar, Sabiha A. Shaikh, <b>Karthik Kumara</b> , Lokanath N. K. Journal of Molecular Structure, 1257, 132589, 2022.	3.841
13.	“Gallic acid-butynamide monohydrate cocrystal: Crystal growth, Structural insights, Theoretical calculations and Molecular docking studies against COVID-19 main protease” K.L. Jyothi, Hema M. K., <b>Karthik Kumara</b> and N. K. Lokanath Current Chemistry Letters, 12(1), 235-248, 2023.	1.02
14.	“Copper(I) complexes with quinolone appended 1,8-naphthalimide conjugates: structural characterization, DNA and protein binding and cytotoxicity studies” Sabiha A. Shaikh, Satish S. Bhat, Vidyanand K. Revankar, Naveen S., <b>Karthik Kumara</b> , N. K. Lokanath, Ray J. Butcher, Vijay Kumbar and Kishore Bhat New Journal of Chemistry, <b>46 (35)</b> , 16801-16812, 2022.	3.925
15.	“Fluorophore Tagged Mixed Ligand Copper (II) Complexes: Synthesis, Structural Characterization, Protein Binding, DNA Cleavage and Anticancer Activity” Sabiha A S., Satish S Bhat, Vidyanand K Revankar, Badarinath D K., <b>Karthik Kumara</b> , Lokanath N. K., Vijay Kumbar, Kishore Bhat, Ray J Butcher Chemistry Select, 6(45), 12666-12676, 2021.	2.109
16.	“Design, synthesis of coumarin tethered 1, 2, 3-triazoles analogues, evaluation of their antimicrobial and $\alpha$ -amylase inhibition activities” Vagish C. B., <b>Karthik Kumara</b> and Ajay Kumar K. Journal of Chemical Sciences, 133 (4), 1-8, 2021.	1.573

17.	<p>“Sulfuric acid-mediated synthesis of 2,5-disubstituted 1,3,4-thiadiazole via intramolecular cyclization reaction from dithioesters: An approach to crystal structure prediction, DFT studies and Hirshfeld surface analysis”</p> <p>Swarup H. A., Chandrasekhar S., Jayanna B. K., <b>Karthik Kumara</b>, Lokanath N. K., Sridhar B T. and Mantelingu K.</p> <p>Journal of Molecular Structure, 1251, 131970, 2021.</p>	3.196
18.	<p>“Design, synthesis, characterization, crystal structure, Hirshfeld surface analysis, DFT calculations, anticancer, angiogenic properties of new pyrazole carboxamide derivatives”</p> <p>Dileep A. K., Vivek H. K., Bharath Srinivasan, Naveen S., <b>Karthik Kumara</b>, Lokanath N. K., Byrappa K. and Ajay Kumar K.</p> <p>Journal of Molecular Structure, 1235, 130271, 2021.</p>	3.196
19.	<p>“Design, synthesis, characterization, and antioxidant activity studies of novel thienyl-pyrazoles”</p> <p><b>Karthik Kumara</b>, Prabhudeva M. G., Vagish C. B., Vivek H. K., Lokanatha Rai K. M., Lokanath N. K. and Ajay Kumar K.</p> <p>Heliyon, 7(7), e07592, 2021.</p>	2.85
20.	<p>“8-Hydroxyquinoline derived p-halo N4-phenyl substituted thiosemicarbazones: Crystal structures, spectral characterization and <i>in vitro</i> cytotoxic studies of their Co(III), Ni(II) and Cu(II) complexes”</p> <p>Avinash Kotian, Vinayak K., Krishna Naik, Dhoolesh G K., <b>Karthik Kumara</b>, Lokanath N. K., Vijay Kumbar, Kishore Bhat and Vidyanand K Revankar</p> <p>Bioorganic Chemistry, 112, 104962, 2021.</p>	5.275
21.	<p>“Square Planar <i>trans</i>-N<sub>2</sub>O<sub>2</sub> Cu(II) Complex: Synthesis, Crystal Structure, Hirshfeld Surface, DFT, Antimicrobial and Docking Studies”</p> <p>Udaya Kumar A. H., <b>Karthik Kumara</b>, Nanishankar V H., Kudigana J Pampa and Lokanath N. K.</p> <p>ChemistrySelect, 6 (24), 6240-6255, 2021.</p>	2.109
22.	<p>“Coumarin-triazole hybrids: Design, microwave-assisted synthesis, crystal and molecular structure, theoretical and computational studies and screening for their anticancer potentials against PC-3 and DU-145”</p> <p>Vagish C. B., <b>Karthik Kumara</b>, Vivek H. K., Srinivasan Bharath, Lokanath N. K. and Ajay Kumar K.</p> <p>Journal of Molecular Structure, 1230, 129899, 2021.</p>	3.196
23.	<p>“Molecular structure, Hirshfeld surface and density functional theoretical analysis of a NLO active chalcone derivative single crystal—A quantum chemical approach”</p> <p>Shruthi C., Ravindrachary V., Guruswamy B., Jagadeesh Prasad D. Janet Goveas, <b>Karthik Kumara</b> and Lokanath N. K.</p> <p>Journal of Molecular Structure, 1228, 129739, 2021.</p>	3.196
24.	<p>“Synthesis, Characterization, Crystal Structure and Hirshfeld Surface Studies of Schiff Base Derivatives”</p>	-

	Madan N., Sunil K., Yamuna I. K., <b>Karthik Kumara</b> and Lokanath N. K. Eurasian Journal of Analytical Chemistry, 16(1),11-23, 2021.	
25.	“Synthesis, characterization, crystal structure, Hirshfeld surface analysis, antioxidant properties and DFT calculations of a novel pyrazole derivative: Ethyl 1-(2,4-dimethylphenyl)-3-methyl-5-phenyl-1 <i>H</i> -pyrazole-4-carboxylate” Naveen S., <b>Karthik Kumara</b> , Dileep K. A., Ajay Kumar K, Abdelkader Zarrouk, Ismail Warad and Lokanath N. K. Journal of Molecular Structure, 1226, 129350, 2021.	3.196
26.	“Environmentally benign synthesis of substituted pyrazoles as potent antioxidant agents, characterization and docking studies” Vagish C. B., Dileep K. A., <b>Karthik Kumara</b> , Vivek H. K., Renuka N., Lokanath N. K. and Ajay Kumar K. Journal of the Iranian Chemical Society, 18(2), 479-493, 2021.	2.019
27.	“Thermal, optical, etching, structural studies and theoretical calculations of [1-(2, 5-Dichloro-benzenesulfonyl)-piperidin-4-yl]-(2, 4-difluoro-phenyl)-methanone oxime” Karthik C. S., <b>Karthik Kumara</b> , Naveen S., Mallesha L., Mallu P., Deepa Urs M. V. and Lokanath N. K. Journal of Molecular Structure, 1224, 129077, 2021.	3.196
28.	“Hydroxyacetone derived N4-methyl substituted thiosemicarbazone: Syntheses, crystal structures and spectroscopic characterization of later first-row transition metal complexes” Avinash Kotian, Vinayak Kamat, Krishna Naik, Dhoolesh G Kokare, <b>Karthik Kumara</b> , Lokanath N. K. and Vidyanand K Revankar Journal of Molecular Structure, 1224, 129055, 2021.	3.196
29.	“Design and synthesis of coumarin-triazole hybrids: biocompatible anti-diabetic agents, in silico molecular docking and ADME screening” Vagish C. B., Vivek H. K., <b>Karthik Kumara</b> , Dileep K. A., Lokanath N. K. and Ajay Kumar K. Heliyon, 6(10), e05290, 2020.	2.85
30.	“Synthesis, Characterization, Crystallographic Studies of 5-Acetyl-8-hydroxyquinoline and Their Chalcone Derivatives” Vagish C. B., <b>Karthik Kumara</b> , Lokanath N. K., Ajay Kumar K. and Chandrasherkar P. G. Asian Journal of Chemistry-unify, 32 (7), 1609-1613, 2020.	-
31.	“XRD/DFT/HSA-interactions in Cu (II) Cl/phen/ $\beta$ -diketonato complex: Physicochemical, solvatochromism, thermal and DNA-binding analysis” Hema M. K., Ismail Warad, Karthik C. S., Abdelkader Zarrouk, <b>Karthik Kumara</b> , Pampa K. J., Mallu P., Lokanath N. K. Journal of Molecular Structure, 1210, 128000, 2020.	3.196
32.	“Structural elucidation, theoretical insights and thermal properties of three novel multicomponent molecular forms of gallic acid with hydroxypyridines” Jyothi, K. L., <b>Karthik Kumara</b> , Hema, M. K., Gautam, R., Row, T. G., and Lokanath, N. K.	2.48

	Journal of Molecular Structure, 1207, 127828, 2020.	
33.	<p>“Synthesis, characterization and hydrogen bonding attributes of halogen bonded O-hydroxy Schiff bases: Crystal structure, Hirshfeld surface analysis and DFT studies”</p> <p>Kala, A. A., <b>Karthik Kumara</b>, Harohally, N. V., and Lokanath, N. K. Journal of Molecular Structure, 1202, 127238, 2020.</p>	2.48
34.	<p>“Exo<math>\rightleftharpoons</math> Endo Isomerism, MEP/DFT, XRD/HSA-Interactions of 2, 5-Dimethoxybenzaldehyde: Thermal, 1BNA-Docking, Optical, and TD-DFT Studies”</p> <p>Nabil Al-Zaqri, Mohammed S., Anas Al-Ali, Khaled Alkanad, <b>Karthik Kumara</b>, Lokanath N. K., Abdelkader Zarrouk, Ali A., Fahad A A., Afnan Al-T., Amjad A., Ismail Warad. Molecules, 25 (24), 5970, 2020.</p>	4.411
35.	<p>“Design, structural, C–H... H–C supramolecular interactions and computational investigations of Cd (N<math>\cap</math> N ") X2 complexes based on an asymmetrical 1, 2-diamine ligand: physicochemical and thermal analysis”</p> <p>Warad, I., Alkanad, K., Suleiman, M., <b>Karthik Kumara</b>, Al-Ali, A., Mohammed, Y. H., and Zarrouk, A. Journal of Coordination Chemistry, 1-13, 2019.</p>	1.751
36.	<p>“Synthesis, characterization crystal and molecular structure studies of 5-(3-Methylbenzoyl)-4-methyl-1, 3, 4, 5-tetrahydro-2H-1, 5-benzodiazepin-2-one: Hirshfeld surface analysis and DFT calculations”</p> <p>Naveen, S., <b>Karthik Kumara</b>, Al-Maqtari, H. M., Urs, M. D., Jamalis, J., Reddy, K. R., and Lokanath, N. K. Chemical Data Collections, 24, 100292, 2019.</p>	0.98
37.	<p>“Synthesis, XRD, DFT-optimization, MEP and Hirshfeld surface analysis of di-Chloro-bis [chloro (1, 10-phenanthroline) Cd (II) dimer”</p> <p>Amereih S., Al Ali A., Zarrouk A., Chetouni A., <b>Karthik Kumara</b>, Lokanath N. K. and Warad I. Moroccan Journal of Chemistry, 7(2), 392-400, 2019.</p>	0.552
38.	<p>“Growth and Characterization of (E)-1-(5-Chlorothiophene-2-yl)-3-(4-Dimethylamino)Phenyl)Prop-2-en-1-one, Novel NLO Single Crystal”</p> <p>Shruthi C., Ravindrachary V., Byrappa K., Guruswamy B., Jagadeesh Prasad D., <b>Karthik Kumara</b> and Lokanath N. K. Materials Science Forum, 962, 3-9, 2019.</p>	-
39.	<p>“Synthesis, Optical and Thermal Properties of 1-(4-Methoxyphenyl)-2- ((5-(1-(Naphthalene-1-Yloxy)Ethyl)-[1,3,4]-Oxadiazol-2-yl)Sulfanyl) Ethanoic -A Novel Heterocyclic Compound”</p> <p>Shruthi C., Ravindrachary V., Byrappa K., Guruswamy B., Janet Goveas, <b>Karthik Kumara</b> and Lokanath N. K. Materials Science Forum, 962, 10-16, 2019.</p>	-
40.	<p>“Synthesis, crystal structure and 3D energy frameworks of ethyl 2-[5-nitro-2-oxopyridine-1 (2H)-yl] acetate: Hirshfeld surface analysis and DFT calculations”</p>	0.98



	<b>Karthik Kumara</b> , Al-Ostoot, F. H., Mohammed, Y. H. E., Khanum, S. A., and Lokanath, N. K. Chemical Data Collections, 20, 100195, 2019.	
41.	“Synthesis and structural studies of 1-phenyl-1, 3-butanedione copper (II) complexes as an excellent antimicrobial agent against methicillin-resistant Staphylococcus aureus” Hema M. K., Karthik C. S., Manukumar M. H., <b>Karthik Kumara</b> , Pampa K. J., Lingappa M. and Lokanath N. K. Inorganica Chimica Acta, 484, 227-236, 2019.	2.545
42.	“Crystal interactions, computational, spectral and thermal analysis of (E)-N'-(thiophen-2-ylmethylene) isonicotinohydrazide as ONS-tridentate schiff base ligand” Warad I., Bsharat O., Tabti S., Djedouani A., Al-Nuri M., Al- N., <b>Karthik Kumara</b> , Lokanth N. K. and Abu-Reidah I. M.,Mat Journal of Molecular Structure, 1185, 290-299, 2019.	3.196
43.	“Crystal structure and Hirshfeld surface analysis of bis (2-(2-(1H-benzo [d]imidazol-2-yl) hydrazono) propan-1-ol) nickel (II) chloride” Vinayak K., <b>Karthik Kumara</b> , Shaikh S., Naveen S., Lokanath N. K., and Revankar V. Chemical Data Collections, 17, 251-262, 2018.	0.98
44.	“Design and Amberlyst-15 mediated synthesis of novel thienyl-pyrazole carboxamides that potently inhibit Phospholipase A2 by binding to an allosteric site on the enzyme” Dileep Kumar A., Prabhudeva M. G., Bharath S., <b>Karthik Kumara</b> , Lokanath N. K. and Ajay Kumar K. Bioorganic chemistry, 80, 444-452, 2018.	5.275
45.	“Amberlyst-15 catalyzed synthesis of novel thiophene–pyrazoline derivatives: spectral and crystallographic characterization and anti-inflammatory and antimicrobial evaluation” Prabhudeva, M. G., <b>Karthik Kumara</b> , Dileep Kumar, A., Ningappa M. B., Lokanath N. K. and Ajay Kumar K. Research on Chemical Intermediates, 44(11), 6453-6468, 2018.	2.064
46.	“Synthesis, spectral characterization and X-ray crystal structure studies of 3-(benzo[d][1,3]dioxol-5-yl)-5-(3-methylthiophen-2-yl)-4,5-dihydro-1H-pyrazole-1-carboxamide: Hirshfeld surface, DFT and thermal analysis” <b>Karthik Kumara</b> , Dileep Kumar A., Naveen S., Ajay Kumar K. and Lokanath N. K. Journal of Molecular Structure, 1161, 285-298, 2018.	3.196
47.	“p-halo N4-phenyl substituted thiosemicarbazones: Crystal structure, supramolecular architecture, characterization and bio-assay of their Co (III) and Ni (II) complexes” Avinash K., <b>Karthik Kumara</b> , Vinayak Kamat, Krishna Naik, Dhoolesh G. K., Anupama N., Lokanath N. K. and Vidyanand K. R. Journal of Molecular Structure, 1156, 115-126, 2018.	3.196

48.	<p>“Crystal Structure Studies and Hirshfeld Surface Analysis of 5-(4-methoxyphenyl)-3-(thiophen-2-yl)-4,5-dihydro-1H-pyrazole-1-carbothioamide”</p> <p><b>Karthik Kumara</b>, Dileep Kumar A., Ajay Kumar K. and Lokanath N. K. Chemical Data Collections, 13-14, 40-59, 2018.</p>	0.98
49.	<p>“Synthesis, crystal structure studies and Hirshfeld surface analysis of 6-chloro-7-hydroxy-4-methyl-2H-chromene”</p> <p>Vagish C.B., <b>Karthik Kumara</b>, Lokanath N. K. and Ajay Kumar K. Chemical Data Collections, 15-16, 134-142, 2018.</p>	0.98
50.	<p>“Structural elucidation and Hirshfeld surface analysis of a novel pyrazole derivative: 3-(Benzo [d][1, 3] dioxol-5-yl)-1-(3-chlorophenyl)-5-(2, 4-dichlorophenyl)-4, 5-dihydro-1H-pyrazole”</p> <p>Naveen S., <b>Karthik Kumara</b>, Ajay Kumar K. and Lokanath N. K. Chemical Data Collections, 15-16, 89-96, 2018.</p>	0.98
51.	<p>“Synthesis, crystal structure, NLO and Hirshfeld surface analysis of 1, 2, 3-triazolyl chalcone single crystal”</p> <p>Shruthi C., Ravindrachary V., Guruswamy B. Lokanath N.K., <b>Karthik Kumara</b> and Goveas J. AIP Conference Proceedings, 1953(1), 070027, 2018.</p>	-
52.	<p>“Synthesis, structural, thermal and Hirshfeld surface analysis of novel [1, 2, 4] triazolo [3, 4-b][1,3, 4] thiadiazine carrying 1, 4-benzothiazine-3-one moiety”</p> <p>Shruthi C., Ravindrachary V., Guruswamy B., Lokanath N.K., <b>Karthik Kumara</b> and Goveas J. AIP Conference Proceedings, 1953(1), 070026, 2018.</p>	-
53.	<p>“Para Hydroxy Benzaldehyde Linked via Two Carbon Linker: An Insight in to X-Ray Crystallographic, DFT -Optimization and Hirshfeld Analysis”</p> <p>Naveen S., Prashantha Kumar B. R., <b>Karthik Kumara</b>, Santhosh Kumar, Nanjan M. J., Lokanath N. K., Abdelkader Zarrouk and Ismail Warad Journal of Materials and Environmental Sciences, 9(7), 1950-1956, 2018.</p>	-
54.	<p>“Synthesis, physicochemical, thermal, computationand DNA binding evaluation of trans-[CuBr 2 (Me 2 NCH 2 CH 2 NH 2 ) 2 ] complex”</p> <p>Muneer A., Reeta E., Ashraf S., Mohammed A. N., Aminah A. L., Anas A.A., Nabil A. Z., <b>Karthik Kumara</b>, Abdelkader Z. and Ismail Warad Journal of Materials and Environmental Sciences, 9(3), 994-1002, 2018.</p>	-
55.	<p>“Synthesis, Characterization, Crystal Structure and Hirshfeld Surface Analysis of 4-(1-(4-methoxyphenyl)-4,5-diphenyl-1H-imidazole-2-yl) Phenyl Carboxylic acid Monohydrate”</p> <p>Ravindra M. K., <b>Karthik Kumara</b>, Mahadevan K. M., Bhojyanaik H. S., Reddy K. R., Lokanath N. K. and Naveen S. Journal of Applicable Chemistry, 7(3), 513-520, 2018.</p>	0.7
56.	<p>“Regular square planer bis-(4, 4, 4-trifluoro-1-(thiophen-2-yl) butane-1, 3-dione) copper (II) complex: Trans/cis-DFT isomerization, crystal structure, thermal, solvatochromism, hirshfeld surface and DNA-binding analysis”</p>	3.196

	Hema M. K., Karthik C. S., Ismail Warad, Lokanath N. K., Abdelkader Zarrouk, <b>Karthik Kumara</b> , Pampa K. J. and Mallu P. Journal of Molecular Structure, 1157, 69-77, 2018.	
57.	“Synthesis, spectra and X-ray crystallography of dipyridin-2-ylmethanone oxime and its CuX <sub>2</sub> (oxime) <sub>2</sub> complexes: Thermal, Hirshfeld surface and DFT analysis” Warad Ismail, Muneer Abdoh, Anas Al Ali, Naveen S., <b>Karthik Kumara</b> , Abdelkader Zarrouk, and Lokanath N. K. Journal of Molecular Structure, 1154, 619-625, 2018.	3.196
58.	“Crystal structure studies, Hirshfeld surface analysis and DFT calculations of novel 1-[5-(4-methoxy-phenyl)-[1, 3, 4] oxadiazol-2-yl]- piperazine derivatives” <b>Karthik Kumara</b> , Harish K. P., Naveen S., Harmesh C. Tandon, Mohana K. N. and Lokanath N. K. Chemical Data Collections, 11, 40-58, 2017.	0.98
59.	“Synthesis, characterization, crystal structure and Hirshfeld surface analysis of 1-(4-ethoxyphenyl)-3-(4-methylphenyl) prop-2-en-1-one” <b>Karthik Kumara</b> , Mahima Jyothi, Naveen S., Shaikath A. K. and Lokanath N. K. Chemical Data Collections, 9, 152-163, 2017.	0.98
60.	“[Dichlorido 2-(2-(1H-benzo [d] thiazol-2-yl) hydrazono) propan-1-ol) Cu (II)]: Crystal structure, Hirshfeld surface analysis and correlation of its ESI-MS behavior with [Dichlorido 3-(hydroxyimino)-2- butanone-2-(1H-benzo [d] thiazol-2-yl) hydrazone Cu (II)]” Kamat Vinayak, <b>Karthik Kumara</b> , Krishna Naik, Avinash K., Priya Netalkar, Naveen S., Lokanath N. K. and Vidyanand K. R. Journal of Molecular Structure, 1149, 357-366, 2017.	3.196
61.	“Crystal structure of SAM-dependent methyltransferase from Pyrococcus horikoshii” Pampa K. J., Madan Kumar S., Hema M. K., <b>Karthik Kumara</b> , Naveen S., Naokin Kunishima and Lokanath N. K. Acta Crystallographica Section F: Structural Biology Communications, F73, 706-712, 2017.	1.056
62.	“Synthesis, Characterization, Thermal, Optical, Crystal Structure and Hirshfeld Surface Analysis of 2-((Pyridin-4-yl) methyl) isoindoline-1, 3-dione” Chethan Prathap K. N., Karthik C. S., Naveen S., <b>Karthik Kumara</b> , Mallesha L., Mallu P. and Lokanath N. K. Chemical Data Collections, 9-10, 164-174, 2017.	0.98
63.	“(E)-1-(5-Chlorothiophen-2-yl)-3-(p-tolyl)-prop-2-en-1-one” <b>Karthik Kumara</b> , Naveen S., Prabhudeva M. G., Ajay Kumar K., Lokanath N. K. and Ismail Warad IUCrData, 1, x170038, 2017.	-
64.	“(E)-1-(1, 3-Benzodioxol-5-yl)-3-[4-(dimethylamino) phenyl] prop-2-en-1-one”	-

	<b>Karthik Kumara</b> , Naveen S., Dileep Kumar A., Ajay Kumar K., Lokanath N. K., and Ismail Warad IUCrData, 1, x162029, 2017.	
65.	“Crystal Structure and Hirshfeld Surface Analysis of 4-Nitrophenyl Isocyanate” Hema M. K., Karthik C. S., <b>Karthik Kumara</b> , Mallesha L., Mallu P. and Lokanath N. K. Der Pharma Chemica, 9(7), 8-12, 2017.	0.54
66.	“Crystal Structure and Hirshfeld Surface Analysis of (E)-1-(2,3-Dichlorobenzylidene)-2-Phenylhydrazine” Amrutha Kala A. L., <b>Karthik Kumara</b> , Lokeshwari D. M., Ajay Kumar K. and Lokanath N. K. Der Pharma Chemica, 9(9), 122-129, 2017.	0.54
67.	“1-(3-Chlorophenyl)-5-(4-chlorophenyl)-3-(5-chloro-thiophen-2-yl)-4,5-dihydro-1H-pyrazole” Prabhudeva M. G., Naveen S., Raghavendra K. R., Dileep Kumar A., <b>Karthik Kumara</b> , Lokanath N. K. and Ajay Kumar K. IUCrData, 2, x162048, 2017.	-
68.	“Synthesis of ethyl 5-(4-chlorophenyl)-3-methyl-1-phenyl-1 H -pyrazole-4-carboxylate by an unusual protocol: Crystal and molecular structure, Hirshfeld surface analysis” Dileep Kumar A., <b>Karthik Kumara</b> , Naveen S., Lokanath N. K. and Ajay Kumar K. Chemical Data Collections, 9-10, 89-97, 2017.	0.98
69.	“Crystal Structure Studies and Hirshfeld Surface Analysis of 5-(4-methoxyphenyl)-3-(thiophen-2-yl)-4,5-dihydro-1H-pyrazole-1-carbothioamide” <b>Karthik Kumara</b> , Naveen S., Lokeshwari D. M., Ajay Kumar K. and Lokanath N. K. Chemical Data Collections, 9-10, 251-262, 2017.	0.98
70.	“Crystal structure and Hirshfeld surface analysis of (E)-2-(1-(2-phenylhydrazono) ethyl) naphtholen-1-ol” Amrutha Kala A. L., <b>Karthik Kumara</b> , Pavithra G., Ajay Kumar K. and Lokanath N. K. Chemical Data Collections, 7, 107-115, 2017.	0.98
71.	“Synthesis, Characterization, Crystal Structure and Hirshfeld Surface Analysis of 2-[1-(4-butylphenyl)-4,5-diphenyl-1H-imidazol-yl]phenol” Anil Kumar, Naveen S., <b>Karthik Kumara</b> , Mahadevan K. M., Bhojyanaik H. S. and Lokanath N. K. Der Pharma Chemica, 9(23), 29-37, 2017	0.54
72.	“Crystal structure and hirshfeld surface analysis of novel pyrazole derivatives” <b>Karthik Kumara</b> , Naveen S. and Lokanath N. K. Acta Crystallographica A-Foundation and Advances, 73, C663-C663, 2017.	2.290
73.	“Ethyl 3-methyl-1-phenyl-5-(p-tolyl)-1H-pyrazole-4-carboxylate”	-

	Naveen S., Dileep Kumar A., <b>Karthik Kumara</b> , Ajay Kumar K., Lokanath N. K. and Ismail Warad IUCrData, 1, x161972, 2016.	
74.	“Ethyl 2-(4-fluorobenzylidene)-3-oxobutanoate: Synthesis, crystal structure and antimicrobial activities” Dileep Kumar A., <b>Karthik Kumara</b> , Lokanath N. K., Ajay Kumar K. and Prabhuswamy M. Chemical Data Collections, 5, 68-78, 2016.	0.98
75.	“Synthesis, crystal structure and Hirshfeld surface analysis of 5-(3, 4-dimethoxyphenyl)-3-(thiophen-2-yl)-4,5-dihydro-1H-pyrazole-1-carboxamide” Prabhuswamy, M., <b>Karthik Kumara</b> , Pavithra G., Ajay Kumar K. and Lokanath N. K. Chemical Data Collections, 3, 26-35, 2016.	0.98
76.	“Crystal structure and Hirshfeld surface analysis of (E)-2-(1-(2-(4-chlorophenyl) hydrozono) ethyl) naphtholen-1-ol” Amrutha Kala A. L., <b>Karthik Kumara</b> , Pavithra G., Prabhuswamy M., Ajay Kumar K. and Lokanath N. K. Der Pharma Chemica, 8(19), 328-333, 2016.	0.54
77.	“Hydrogen bonded supramolecular framework in a monoclinic polymorph of (E)-2-(1-(2-phenylhydrazono) ethyl) phenol” Amrutha Kala A. L., <b>Karthik Kumara</b> , Prabhuswamy M., Pavithra G., Ajay Kumar K. and Lokanath N. K. Der Pharma Chemica, 8(12), 286-291, 2016.	0.54
78.	“Synthesis, Crystal and Molecular Structure Studies and Hirshfeld Surface Analysis of a 6-amino-1,4-dihydro-3-methyl-4-(5,7-dimethyl-2-oxo-2H-chromen-4-yl) pyrano[2,3-c] pyrazole-5-carbonitrile” Bahubali M. Chougala, <b>Karthik Kumara</b> , Samundeeswari S., Megharaja Holiyachi, Lokanath N. K. and Lokesh A. S. Der Pharma Chemica, 8(10), 205-215, 2016.	0.54
79.	“Ethyl 2-(3,5-difluorophenyl) quinoline-4-carboxylate: a second triclinic polymorph” Shashidhar Bharadwaj S., <b>Karthik Kumara</b> , Boja Poojary, Yathirajan H. S., Byrappa K., Lokanath N. K. and Madan Kumar S. IUCrData, 1, x160739, 2016.	-
80.	“Synthesis, spectral characterization, crystal and molecular structure studies of 4-(5-bromo-2-thienyl)-1-(4-fluorophenyl)-3-phenyl-2-pyrazoline” Noor Aisyah Ahmad, Naveen S., <b>Karthik Kumara</b> , Joazaizulfazli Jamalis and Lokanath N. K. Der Pharma Chemica, 8(2), 49-53, 2016.	0.54

### Details of Conferences/Symposia/Workshop/Seminar/Webinar Organized

Sl. no.	Conferences/ Workshops organized	Role
1.	One day orientation program for VTU affiliated college teachers on “Revised Physics Syllabus - 2022”, held on 24 <sup>th</sup> November, 2022 at BMS College of Engineering, Bengaluru	Member, organizing committee
2.	One week FDP on “Current Trends in Material Physics for Engineering Applications” from 15 <sup>th</sup> May – 19 <sup>th</sup> May, 2023, organized by Department of Physics, B.M.S. College of Engineering, Bengaluru.	Member, organizing committee
3.	A webinar titled “Multiferroic Materials for Solid-State Refrigeration” under Physics webinar series sponsored by the PG-Department of Physics, Jain University, Bengaluru on 24 <sup>th</sup> September 2021.	Member, organizing committee
4.	A webinar titled “Structural Colours” under Physics webinar series sponsored by the PG-Department of Physics, Jain University, Bengaluru on 28 <sup>th</sup> September 2020.	Member, organizing committee

### Details of Conferences/Symposia/Workshop/Seminar/Webinar Participated

Sl. no.	Conferences/ Workshops participated	Remarks
1.	One day orientation program for VTU affiliated college teachers on “Revised Physics Syllabus - 2022”, held on 24 <sup>th</sup> November, 2022 at BMS College of Engineering, Bengaluru	Participated
2.	International webinar on “Rheometry and its applications in exploring materials and technological potentials” on 11 <sup>th</sup> February 2022, organized by Centre for Research and Innovation School of Natural Sciences, Adi Chunchanagiri University, Karnataka.	Participated
3.	Indo-Japan Workshop on “Silicon Crystal Growth for Photovoltaic Applications” on 07 <sup>th</sup> January 2022, jointly organized by SSN Research Centre, SSN Institutions, Chennai and Nagoya University, Japan.	Participated
4.	International webinar on “Recent Developments of thermoplastic elastomers as potential alternatives to conventional rubbers” on 06 <sup>th</sup> January 2022, organized by Centre for Research and Innovation School of Natural Sciences, Adi Chunchanagiri University, Karnataka.	Participated

5.	International webinar on “Two-Dimensional Nano Structures for Energy Conversion and Storage Applications” on 24 <sup>th</sup> December 2021, organized by Centre for Research and Innovation School of Natural Sciences, Adi Chunchanagiri University, Karnataka.	Participated
6.	One day national webinar on “The universal concept of emergence ranging from bird flocks to quantum materials” organized by the Department of Studies in Physics, Karnataka State Open University, Mukthagangothri, Mysuru on 21 <sup>st</sup> December 2021.	Participated
7.	International webinar on “Research and Clinical Applications of Flowcytometry” on 17 <sup>th</sup> December 2021, organized by Centre for Research and Innovation School of Natural Sciences, Adi Chunchanagiri University, Karnataka.	Participated
8.	Chemistry World Webinars titled “Efficient Modelling of Polymers for Industrial Applications Using Molecular Dynamics” on 09 <sup>th</sup> December 2021.	Participated
9.	International webinar on “Emerging Challenges in the advanced Phytochemicals Against the Antibiotic Resistance” on 03 <sup>rd</sup> December 2021, organized by Centre for Research and Innovation School of Natural Sciences, Adi Chunchanagiri University, Karnataka.	Participated
10.	Presented a paper in the international conference of <b>IUCr 2021 25<sup>th</sup> General Assemble and Congress organized by Czech and Slovak Crystallographic Association in coordination</b> with International Union of Crystallography held on 14 <sup>th</sup> to 22 <sup>nd</sup> August <b>2021</b> at <b>Prague Congress Centre, Prague, Czech Republic.</b>	Participated
11.	“RSC IISER Desktop Seminar with CrystEngComm” organized by RSC Publishing Webinars on 22 <sup>nd</sup> September 2021.	Participated
12.	A webinar on “Anticancer Drug Discovery for Future” organized by Department of Studies in Physics, University of Mysore, Mysuru on 06 <sup>th</sup> August 2021.	Participated
13.	Five Days e-Workshop on LaTeX, organized by the Department of Mathematics, School of Science, GITAM, Bengaluru, India, held from 05 <sup>th</sup> to 09 <sup>th</sup> August 2021.	Participated

14.	Two days international Conference on “Advanced Materials” organized by JSS Science and Technology University, Mysuru held during 06 <sup>th</sup> – 07 <sup>th</sup> July 2021.	Participated
15.	Presented a paper in the 2 <sup>nd</sup> International Symposium on “Modelling of Crystal Growth Processes and Devices” during 05 <sup>th</sup> - 08 <sup>th</sup> July 2021 and attended the lectures Organized by SSN Research Centre, SSN Institutions, Kalavakkam, Chennai.	Participated
16.	One day National Webinars on “Role of Teacher in NEP” organized by School of Sciences, JAIN University, Bengaluru on 04 <sup>th</sup> September 2020.	Participated
17.	National webinar on "FUTURE OF CRYSTALLOGRAPHY IN DRUG DISCOVERY" Organized by DEPARTMENT OF BASIC SCIENCE, SVCE, Bengaluru on 14 <sup>th</sup> December 2020.	Participated
18.	“An Introductory Workshop on Virtual Physics Lab” organized by Department of Physics, National Institute of Engineering, Mysuru on 28 <sup>th</sup> December, 2020.	Participated
19.	Three-day workshop on “Rietveld Refinement Method” organized by UGC-DAE Consortium for Scientific Research, Mumbai centre in association with Indore centre during 22 <sup>nd</sup> – 24 <sup>th</sup> September 2020.	Participated
20.	A webinar on “Computer Assisted New Chemical Structure Elucidation – From ACD Labs” organized by Department of Studies in Organic Chemistry, University of Mysore, Mysuru on 21 <sup>st</sup> December 2020.	Participated
21.	A webinar on “Exploratory Analysis and Visualization of Text Data for Research Using Open-Source Tools” held on 21 <sup>st</sup> September 2020 organised by Manipur University Library.	Participated
22.	A national webinar on “Smart Materials in Health Sciences” organized by IQAC and UG Department of Chemistry, JSS College for Women, Mysuru on 18 <sup>th</sup> August 2020.	Participated
23.	A national webinar on “Chemistry Behind Biocomposting and Biogasification”-A Sustainable Way of Managing Organic Waste” organized by IQAC and UG Department of Chemistry, JSS College for Women, Mysuru on 10 <sup>th</sup> August 2020.	Participated



24.	International Symposium on Advanced Research in Physics organized by the Department of Physics, Bangalore University, Bengaluru in association with Sir M Visvesvaraya – ISRO Chair, Bangalore University, Bengaluru, India during 27 <sup>th</sup> -31 <sup>st</sup> July 2020.	Participated
25.	The Rigaku School for Practical Crystallography workshop from 06 <sup>th</sup> - 17 <sup>th</sup> July 2020 organized by Rigaku Organization of Crystallography, Japan.	Participated
26.	One Day National Webinar on “Shock Waves and Their Applications” organized by Department of Physics in association with IQAC, GFGC and PG Centre, Chintamani on 08 <sup>th</sup> June 2020.	Participated
27.	Presented a paper in the 16 <sup>th</sup> international conference of the <b>Asian Crystallography Association</b> held on 17 <sup>th</sup> - 20 <sup>th</sup> December 2019 at <b>National University of Singapore, Singapore.</b>	Participated
28.	Participated in the <b>TOPAS workshop</b> held on 15 <sup>th</sup> - 16 <sup>th</sup> December-2019 at Department of Physics, <b>National University of Singapore, Singapore.</b>	Participated
29.	Presented a paper in two days national conference on advanced materials for health, energy and environment, held on 06 <sup>th</sup> - 07 <sup>th</sup> September 2019, organized by JSS Science and Technology University at SJCE college, Mysuru.	Participated
30.	Presented a paper in the three-day international conference on advanced functional materials for Energy, Environment and Health care organized by University of Mysore under University Potential for Excellence, during 18 <sup>th</sup> - 20 <sup>th</sup> March 2019 at University of Mysore, Mysuru.	Participated
31.	Presented a paper in the two-day international conference on nanomaterials and their applications, challenges and solutions, organized by University of Mysore under the centre of potential for excellence in particular area Excellence, during 01 <sup>st</sup> - 02 <sup>nd</sup> March 2018 at University of Mysore, Mysuru.	Participated
32.	Presented a paper in two days national conference on advanced materials for health, energy and environment, held on 23 <sup>rd</sup> - 24 <sup>th</sup> March 2018, organized by JSS Science and Technology University at SJCE college, Mysuru.	Participated

33.	Presented a paper in one day international symposium on advanced materials, held on 27 <sup>th</sup> December 2017, organized by JSS Science and Technology University at SJCE college, Mysuru.	Participated
34.	Presented a paper in the international <b>24<sup>th</sup> congress and general assembly of the International Union of Crystallography</b> , held during 21 <sup>st</sup> -28 <sup>th</sup> August 2017 at Hyderabad.	Participated
35.	Presented a paper in the 03 <sup>rd</sup> international Festival of Science, technology, Engineering and Mathematics (STEM-FEST), held at University of Mysore, Mysuru, India during 17 <sup>th</sup> – 20 <sup>th</sup> October 2016.	Participated
36.	Presented a paper in the two-day international conference on science and technology: future challenges and solutions, organized by Indian JSPS alumni association in association with University of Mysore during 08 <sup>th</sup> - 09 <sup>th</sup> August 2016 at Institution of Excellence, Vijnanabhavan, University of Mysore, Mysuru.	Participated
37.	One day national seminar on “Radiation Physics” held on 14 <sup>th</sup> May 2016 organized by the Department of Studies in Physics, University of Mysore, Mysuru, India.	Participated
38.	A three-day national workshop on “Theory and practice of Molecular Structure Determination using X-ray Crystallography” organized by DST-PURSE laboratory, during 03 <sup>rd</sup> - 05 <sup>th</sup> March 2016 at Mangalore University, Mangaluru.	Participated
39.	Three-day lecture workshop in “Quantum Mechanics” held at Regional Institute of Education (NCERT), Mysuru during 28 <sup>th</sup> – 30 <sup>th</sup> January 2016.	Participated
40.	Presented a paper in the national 103 <sup>rd</sup> Indian science congress meet hosted by University of Mysore, held from 03 <sup>rd</sup> - 07 <sup>th</sup> January 2016 at University of Mysore, Mysuru.	Participated
41.	Special lecture series in “Physical Sciences” held at the Department of Studies in Physics, University of Mysore, Mysuru, India during 07 <sup>th</sup> – 09 <sup>th</sup> December 2015.	Participated
42.	One-day workshop on X-ray Crystallography held on 10 <sup>th</sup> November 2014 at the Department of Studies in Physics, University of Mysore, Mysuru, India.	Participated

43.	Three-day national seminar on “Space Science and Engineering” organized jointly by St. Philomena’s College of Arts and Science, Mysuru and ISRO, held during 26 <sup>th</sup> - 28 <sup>th</sup> February 2012 on the occasion of national science day celebration.	Participated
44.	Two-day national seminar on “Space Science and applications” organized jointly by JSS College for Arts and Science, Mysuru and ISRO held during 27 <sup>th</sup> - 28 <sup>th</sup> February 2011 on the occasion of national science day celebration.	Participated
45.	Three-day national seminar organized by the Department of Studies in Physics, University of Mysore, Mysuru, India during 26 <sup>th</sup> - 28 <sup>th</sup> February 2010 on the occasion of national science day celebration.	Participated

### Details of Faculty Development Program Participated

Sl. no.	FDP program participated	Remarks
1.	One week FDP on “Quantum Computing” from 11 <sup>th</sup> March – 15 <sup>th</sup> March, 2024 organized by Department of Computer Science, B.M.S. College of Engineering, Bengaluru.	Participated
2.	One week FDP on “Rietveld Refinement of X-Ray Diffraction Data” through online mode from 14 <sup>th</sup> February – 20 <sup>th</sup> February, 2024 organized by Center for Advanced Computational Studies, New Delhi, India.	Participated
3.	One week FDP on “DFT Modelling of Materials [DFT-M]: Nanoparticles, Thin films, Unit cells” through online mode from 4 <sup>th</sup> February – 10 <sup>th</sup> February, 2024 organized by Center for Advanced Computational Studies, New Delhi, India.	Participated
4.	One week FDP on “Pedagogical Innovations” from 29 <sup>th</sup> May – 2 <sup>nd</sup> June, 2023 at B.M.S. College of Engineering, Bengaluru.	Participated
5.	One week FDP on “Polymer Composites for Engineering Applications” from 22 <sup>nd</sup> May – 26 <sup>th</sup> May, 2023 organized by Department of Chemistry, B.M.S. College of Engineering, Bengaluru.	Participated
6.	One week FDP on “Current Trends in Material Physics for Engineering Applications” from 15 <sup>th</sup> May – 19 <sup>th</sup> May, 2023, organized by Department of Physics, B.M.S. College of Engineering, Bengaluru.	Participated

7.	One week FDP on “Universal Human Values” from 07 <sup>th</sup> November – 12 <sup>th</sup> November, 2022 at B.M.S. College of Engineering, Bengaluru.	Participated
8.	One week ATAL FDP on “Carbon Balance and Environmental Sustainability” from 07 <sup>th</sup> – 11 <sup>th</sup> February, 2022 at B.M.S. College of Engineering, Bengaluru.	Participated
9.	One week faculty development programme on “Engineering Mathematics Using Python” during 20 <sup>th</sup> - 21 <sup>st</sup> and 27 <sup>th</sup> – 29 <sup>th</sup> , October 2022 organized by Department of Mathematics, B.M.S. College of Engineering, Bengaluru.	Participated
10.	AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “Research Challenges in Atmospheric Sciences with a Computing Edge” from 20 <sup>th</sup> – 24 <sup>th</sup> December 2021 at M. S. Ramaiah Institute of Technology, Bengaluru.	Participated
11.	FDP on “MOOC on MOOCs: A digital learning playbook” an online course of study offered by IIMB Bangalore through IIMBx during July-September 2021.	Participated
12.	One-week FDP on “Recent Trends in Advanced Materials and Applications” from 19 <sup>th</sup> – 23 <sup>rd</sup> October 2020 organized by Department of Physics, National Institute of Engineering, Mysuru.	Participated
13.	Three-day FDP on “Physics of Materials” from 28 <sup>th</sup> - 30 <sup>th</sup> May 2020, organized by Department of Physics, Faculty of Engineering and Technology, JAIN University, Bengaluru.	Participated

### Details of Participation as Resource Person in Academic/ Research Activities

Sl. no.	Academic/Research activities participated	Role
1.	Delivered two guest lectures on “Opportunities in Basic Sciences” and “Structural Diversity in Materials” at Government First Grade College and PG center, Chintamani on the occasion of National Science Day-28-02-2023.	Resource Person
2.	Delivered a talk titled “Role of Materials in Today’s Research (Materials and their Characterizations)” in the PhD skill development workshop organized by Research and Development Cell, Jain University on 11 <sup>th</sup>	Resource Person

	September, 2021 at Centre for Postgraduates Studies, Jain University, Bengaluru.	
3.	Delivered a talk titled “Symmetry in Nature” and interaction with UG students of Government First Grade College, Bannuru on the special occasion of National Science Day celebration (29 <sup>th</sup> February 2021).	Resource Person
4.	Delivered a talk titled “Learning Science with activities” and interaction with School children of BGS Institute of Education, Bannuru, Mysuru District on the occasion of School Day function (07 <sup>th</sup> March 2020).	Chief Guest and Resource Person
5.	Delivered a talk titled “Life without Science” and interaction with School children of Government Pre-University College, Krishnarajasagara, Mandya District on the occasion of School Day function (14 <sup>th</sup> February 2020).	Chief Guest and Resource Person
6.	Teaching M.Sc. students, the subject: “Condensed Matter Physics 1 and 2” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
7.	Teaching M.Sc. students, the subject: “Mathematical Methods of Physics” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
8.	Teaching M.Sc. students, the subject: “Numerical Computational Physics” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
9.	Teaching M.Sc. students, the subject: “Thermal Physics and Statistical Mechanics” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
10.	Teaching M.Sc. students, the subject: “Atomic and Molecular Physics” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
11.	Teaching M.Sc. students, the subject: “Solid State Physics and Electronic Devices” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
12.	Teaching M.Sc. students, the subject: “Spectroscopy” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person
13.	Teaching M.Sc. students, the subject: “Advanced Condensed Matter Physics: X-ray Crystallography and Thin Films” at Department of Physics, Karnataka State Open University, Mysuru.	Resource Person

14.	A five-day training programme titled “Content-cum-Pedagogy Enrichment Programme for Science Teachers” organized from 26 <sup>th</sup> – 30 <sup>th</sup> October 2018 at Regional Institute of Education (NCERT), Mysuru.	Resource Person
15.	A three-day workshop titled “Updating and digitalization of the resource materials in Science for secondary school teachers-Stage II” organized from 12 <sup>th</sup> – 14 <sup>th</sup> November 2018 at Regional Institute of Education (NCERT), Mysuru.	Resource Person
16.	A five-day training programme titled “Training higher secondary teachers in content and methodology of teaching Physics (Telangana teachers)” organized from 01 <sup>st</sup> – 05 <sup>th</sup> October 2018 at Regional Institute of Education (NCERT), Mysuru.	Resource Person

### Details of Membership in Professional Organizations

Sl. no.	Organization/Society
1.	Member, Indian Science Congress Association, Kolkata
2.	Member, Indian Crystallographic Association, Bengaluru
3.	Member, Asian Crystallographic Association, India

### Details of Journals Reviewed

Sl. no.	Journals	Recognised reviewer since
1.	Journal of Molecular Structure	2019
2.	Materials Research Express	2019
3.	Chemical Data Collections	2019
4.	MDPI - Molecules	2021

## Awards and Honours:

1.	<b><u>Sir C.V. Raman</u></b> fellowship during B.Sc. (June 2009 – June 2012).
2.	<b><u>Student Travel Grant</u></b> to attend the 24 <sup>th</sup> International Conference (Congress) and General Assembly organized by International Union of Crystallography, held in Hyderabad, India on 21 <sup>st</sup> - 28 <sup>th</sup> August 2017.
3.	Final round participant of <b><u>Dragon's Den Young Researcher's Competition</u></b> organized by International Union of Crystallography during 24 <sup>th</sup> International Conference (Congress) and General Assembly on 22 <sup>nd</sup> August 2017 at Hyderabad, India.
4.	<b><u>International Travel Grant by DST-SERB</u></b> to attend the International conference at National University of Singapore, Singapore. (Grant no. <u>ITS/2019/005798</u> ).
5.	<b><u>IUCr Young Scientist Award</u></b> for the year 2019 at AsCA-2019 (16 <sup>th</sup> international conference of Asian Crystallographic association at National University of Singapore, Singapore).
6.	Honoured and interviewed in <b><u>Yuvavani Radio Program</u></b> on the National Science day celebration, 28 <sup>th</sup> February 2020 at Akashavani, Mysuru.
7.	<b><u>Honoured in the annual day function</u></b> of government pre-university college, Krishnarajasagara, Mandya District on 14 <sup>th</sup> February 2020 for the contribution in the field of science and for the young scientist award.
8.	<b><u>Honoured in the annual day function</u></b> of BGS institute of education, Bannuru, Mysuru District on 07 <sup>th</sup> March 2020 for the contribution in the field of science and for the young scientist award.
9.	<b><u>Certificate of Achievement</u></b> from Rigaku School for Practical Crystallography (Attended the Rigaku School for Practical Crystallography workshop from 06 <sup>th</sup> - 17 <sup>th</sup> July 2020 and passed the exam with honours)
10.	<b><u>CSD Leader Board honour</u></b> for the significant contribution to the Crystal Structure Data Base during the 16 <sup>th</sup> international conference of the Asian Crystallography Association held at National University of Singapore, Singapore in 2019.

  
Dr. Karthik Kumara