


Faculty profile

Personal Details

Name	Dr. D. Nagaraja			
Qualification	MSc	1990	Mysore University	
	M Phil	2004	Annamalai University	
	Ph.D.	2014	Visvesvaraya Technological University	
Designation	Professor and HOD			
Department	Physics			
Organization	Bangalore Institute of Technology			
Address	Dept. Of Physics K.R. Road, V.V. Pura. Bengaluru - 04, KARNATAKA			
Experience	<ol style="list-style-type: none"> 1. Teaching: 28 years 2. Research: 10 Years 			
Field of research	Photophysical properties and Fluorescence studies of hetero cyclic molecules			
Google Scholar data	No. Of Citations: 136 h-Index: 8 i10-index: 7			
	<ol style="list-style-type: none"> 1. UV-VIS spectroscopy 2. Fluorescence spectroscopy 3. Solid State Physics 4. Thin films 5. Nano science and Technology 6. Material Science 7. Shock Waves 			
Contact Details	Ph: 080 26613237 Mobile: 9844303001, 8277082201 Email ID: nagarajdd86@gmail.com dnagaraja@bit-bangalore.edu.in			
Google Scholar and Research Gate links	https://scholar.google.com/citations?user=e7Dap70AAAAJ&hl=en https://www.researchgate.net/profile/Dr_Nagaraja			

Subjects Taught

1. Engineering Physics
2. Engineering Physics Laboratory
3. Laser Physics and Non Linear Optics
4. Material Science

Research Guidance for Ph.D.

Sl. No	Name of the Student	Year of Registration	University	Title of the Research work	Status
1	BHAVYA. P	2013	VTU		Thesis Submitted for the final evaluation
2	RAJU.P	2017	VTU		Course Work completed
3	NAGASREE.P	2017	VTU	Charecterization of biologically active molecules using absorption and fluorecence spectroscopy	Course Work completed
4	GAOTHAM ANAND	2017	VTU	Nuclear Fallout Mapping using UAVs	Writing Course Work

Sanctioned Project

Received a project grant from the Department of Science and Technology, State Government of Karnataka under VGST scheme headed by **Bharat Ratna Prof. CNR Rao**.

Sanctioned amount: Rs 20 lakh
Duration: 2017-2019 (2 years)
Title of the Project: *Measurement of shock induced fluorecence enhancement of Coumarin derived fluorescent chemosensoros for metal ions and fluorides and hence their improvisation*

Sponsorship/Fellowship received

1. Received Rs 10,000/- from KSTA, DST, Govt. of Karnataka to organize a conference on **Laser Physics and NLO** (Oct-2017)

2. Received Rs 88,000/- from the **Indian Academy of Sciences** to organize Lecture work shop on **Shock waves in Science, Engineering and Medicine** (March-2017)
3. Received **Summer Research Fellowship (SRF)** from **Indian Academy of Sciences** and worked at Dept. of IPC, IISc under the guidance of Prof.E. Arunan (July 2012)

Professional Responsibilities

1. Member, Board of Studies for Basic Sciences, VTU, Belagavi (2016-Till Date)
2. VTU nominated Member, Board of Studies for Basic Sciences, DSCE, An autonomous institution, Bengaluru (2017-Till Date)
3. Member, Doctoral committee, department of Physics, BNMIT and RNSIT, Bengaluru
4. Member, Scrutinizing committee to interview and scrutinize PhD candidates, VTU
5. Main Coordinator, First year academics and audit committee(AAC) and Humanities, BIT, Bengaluru
6. Main Coordinator, Induction Program for First year UG students, BIT, Bengaluru

Other Academic Responsibilities

1. Actively involved in framing the New Syllabus for Engineering Physics (both theory and lab) for the academic year 2018-19 as per the AICTE New Model Curriculum and VTU guidelines
2. Actively involved in framing the syllabus of 2 Open Elective Papers in Physics namely **Laser Physics and NLO & Advanced Physics for Engineers** for V and VI Semesters for 2015 scheme
3. Actively involved in framing the syllabus of 2 Open Elective Papers in Physics namely **Laser Physics and NLO & Advanced Physics for Engineers** for VI and VII Semesters for 2018 scheme
4. Examiner - Comprehensive viva of a PhD student RNSIT, Bengaluru (VTU)
5. Examiner - Comprehensive viva of a PhD student BVBCE, Hubli (VTU)
6. Set Question paper for SIT, Tumakuru, MSRIT, DSCE and NHCE, Bengaluru (All Autonomous Institutions)
7. Set Question Paper for 1st Year B Tech students of JNTU, Andra Pradesh
8. Prepared doctoral committee for VTU Ph.D students in Physics for both Bengaluru and Belagavi regions

Special Honor

1. Invited to attend 82nd annual meeting of the Indian Academy of Sciences as **teacher invitee** held at IISER, Bhopal from 04-11-2016 to 06-11-2016 and took part in the scientific program of lectures and an interaction meeting with the Education Panel of the Academy on 3rd Nov-2016

- Invited to 29th Mid-year meeting of Indian Academy of Sciences on 29th and 30th Jun-2018 at Infosys Limited, Mysore Development Center, Mysore

Events Organized at BIT

- Successfully organized 2 weeks of Induction Program for First year UG students (Aug-2018)
- Two day workshop on AICTE- Model Curriculum 2018-19 (May-2018)
- One day **conference on Laser Physics and NLO** - sponsored by RVS and KSTA, DST, Govt. of Karnataka (Oct-2017)
- 2 days Lecture workshop on **Shock waves in Science, Engineering and Medicine** - sponsored by RVS and Indian Academy of Sciences (March-2017)
- 2 days program on **100th year celebration of Einstein's work** – sponsored by RVS (April-2016)
- Centenary celebration of popular Kannada Poet KS Narasimha Swamy (Jun-2015)
- Kannada Rajyotsava celebration in the month of November every year since 2015 under the banner SANSKRITI- a forum exclusively meant for Kannada language and Karnataka culture activities

Experimental Techniques

- UV-VIS spectroscopy
- Fluorescence Spectroscopy
- Excited state life time measurements by TCSPC Technique
- Thin Film Deposition by Thermal evaporation technique and RF sputtering
- Optical and electrical properties of Thin Films
- Preparation of different pH buffers and calibration

QIP/winter schools/refresher /orientation/short term courses

Sl.No				Place
1	National Conference on Shock waves	TRBL, Chandigarh	28-02-2018 to 03-03-2018	Chandigarh
2	AICTE sponsored QIP short term course on Modern Biophysical Techniques	IIT- Bombay	11-12-2017 to 15-12-2017	Mumbai
3	Winter School on Frontiers in material science	University of Cambridge, Sheik Saqr labs and JNCASR	5-12-2016 to 9-12-2016	Bengaluru
4	Refresher course on Materials preparation and measurement of properties	Science Academies {IAS, INSA and NAS}	10-2-2015 to 25-2-2015	Bengaluru
5	Quality improvement program on Functional nanomaterials: Science and engineering	IIT, Roorkee	3-2-2007 to 7-2-2007	IIT, Roorkee
6	Short term course on Nano science and engineering	VTU and M/s.bigtec pvt. Ltd and M/s. Intellisense, USA	28-9-2005 to 8-10-2005	Bengaluru

Research Publications (National and International Journals)			to 30-8-	BIT, Bengaluru
8	Short term course on Chemistry of new engineering materials	MHRD, Govt of India and Dept. of Chemistry BU	27-3-1995 to 15-4-1995	Dept. of Chemistry BU Bangalore

Sl No	Title	Journal	Details	Impact factor	No. of Citations
1	Estimation of fluorescence Quantum yield of a biologically active boronic acid-Analysis of Specific interactions with alcohols and non-alcohols <i>H.S Geethanjali, R M Melavanki, D Nagaraja</i>	Materials Today: Proceedings	5 (10) (2018) 21183-21188	0.940	
2	Binding of boronic acids with sugars in aqueous solution at physiological pH - Estimation of association and dissociation constants using spectroscopic method Geethanjali H.S., R.M. Melavanki , Nagaraja D. , Bhavya P , R.A. Kusanur	Journal of Molecular Liquids	227 (2017) 37-43	4.513	1
3	Binding interaction between 2-methoxy-5-fluoro phenyl boronic acid and sugars: Effect of structural change of sugars on binding affinity P. Bhavya, R.M. Melavanki, D. Nagaraja , H.S. Geethanjali, R.A. Kusanur, and M.N. Manjunatha	Canadian Journal of Physics	94 (12) (2016) 1384-1389	0.983	
4	Photophysical properties of 3MPBA: Evaluation and co-relation between solvatochromism and quantum yield in different solvents G.V. Muddapur, R.M. Melavanki , P.G. Patil, D. Nagaraja , N.R. Patil	Journal of Molecular Liquids	224 (2016) 201-210	4.513	5
5	Specific interactions of alcohols and non-alcohols with a biologically active boronic acid derivative: a spectroscopic study H. S. Geethanjali, R. M. Melavanki, D. Nagaraja , N. R. Patil, J. Thipperudrappa and R. A. Kusanur	Luminescence: The Journal of Biological and Chemical Luminescence(Wiley online publications)	31 (2016) 1046-1053	1.671	3
6	Fluorescence quenching of boronic acid derivatives by aniline in alcohols - A Negative deviation from Stern-Volmer equation H.S. Geethanjali, D.Nagaraja , R.M.Melavanki, R.A.Kusanur	Journal of Luminescence	167 (2015) 216-221	2.732	19
7	Estimation of Dipole Moments and Quantum Yield of 5-chloro-2-methoxyphenyl Boronic Acid in Different Solvents Environment H. S. Geethanjali, D. Nagaraja & R. M. Melavanki	Springer, Journal of fluorescence	25 (2015) 745-753	1.67	4
8	Exploring the mechanism of fluorescence quenching in two biologically active boronic acid derivatives using	Journal of Molecular	209 (2015) 669-675	4.513	15

	Stern-Volmer kinetics H.S. Geethanjali , D. Nagaraja , R.M.Melavanki	Liquids			
9	Quenching mechanism of 5BDTC by aniline using Stern–Volmer plots Shivaram N. Patil, F.M. Sanningannavar, B.S. Navati, D. Nagaraja , N.R. Patil, and R.M. Melavanki	Canadian Journal Physics	93(10) (2015) 1076-1081	0.983	5
10	Solvent effect on the relative quantum yield and fluorescence quenching of a newly synthesized coumarin derivative D. Nagaraja , R. M. Melavanki, N. R. Patil, H. S. Geethanjali and R. A. Kusanur	Luminescence: The Journal of Biological and Chemical Luminescence(Wiley online publications)	30 (2015) 495–502	1.671	6
11	Solvent effect on the relative quantum yield and fluorescence quenching of 2DAM D. Nagaraja , R.M. Melavanki, N.R. Patil, R.A. Kusanur.	Spectra Chimica Acta: A	130 (2014) 122–128	2.88	23
12	Fluorescence quenching of 6BDTC by aniline in different solvents D. Nagaraja R. M. Melavanki and N. R. Patil..	Canadian Journal Physics	91 (2013) 966-970	0.983	11
13	Quenching of the excitation energy of coumarin dyes by aniline D. Nagaraja R. M. Melavanki, N. R. Patil, R.A. Kusanur, J. Thipperudrappa and F.M. Sanningannavar	Canadian Journal Physics	91 (2013) 976–980	0.983	8
14	Quenching of fluorescence of ENCDTTC by aniline and carbon tetrachloride in different organic solvents. N. R. Patil R. M. Melavanki, D. Nagaraja , H.D. Patil, F.M. Sanningannavar and S B Kapatkar	Journal of Molecular Liquids	180 (2013) 112-120	4.513	
15	Photophysical properties of two coumarin derivatives using solvatochromic shift method. D. Nagaraja , N.R. Patil, R.A. Kusanur, H.D. Patil, R.M. Melavanki	International Journal of Life science and Pharma research.	3 (1) (2013) L55 - 64		
16	Solvent effect on the fluorescence properties of two biologically active theophenecarboxamido molecules D. Nagaraja , H.S. Geethanjali, N.R. Patil F.M Sanningannavar, R.A. Kusanur, and R.M. Melavanki,	Mapana- Journal of Science	12 (1) (2013) 49-68		1
17	Solvent effect on fluorescence quenching of 7, 8 benzo-4-azidomethyl coumarin by aniline R.M. Melavanki, N.R. Patil, D. Nagaraja , H.D. Patil, J.S. Kadadevaramath and R A Kusanur.	Mapana- Journal of Science	12 (1) (2013) 69-85		1
18	Solvent effect on fluorescence quenching of biologically active 6-methoxy-4-azidomethyl coumarin by aniline in different solvents R M Melavanki, N R Patil, F M Sanningannavar, R A Kusanur, D Nagaraja , H D Patil & J S Kadadevarmath	Indian Journal of Pure & Applied Physics	5 (1) (2013)	0.582	
19	Effect of temperature on the fluorescence quenching of biologically active carboxamide N.R. Patil, R.M.Melavanki, H.D.Patil, D.Nagaraja F.M.Sanningannavar	International Journal of Life science and Pharma research.	3 (1) (2013)		1
20	Estimation of excited state and ground state dipole moments of coumarin derivatives by solvatochromic method D. Nagaraja , N.R. Patil, R.A.Kusanur, H.D. Patil, R.M.	International Journal of Scientific research and	2 (12)(2012)		

Melavanki	publication			
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Papers presented in conferences

Sl.No	Title, Place and Date
1	Solvent Effect on the Fluorescence quenching of biologically active carboxamide by Aniline and carbon tetrachloride quencher in different Solvents D. Nagaraja , H.S. Geethanjali, R.M. Melavanki and N.R. Patil TSRP 2012 from 04-01-2012 to 07-01- 2012 at BARC Mumbai
2	Solvent effect on the photophysical properties of two thiophene carboxamidos molecules R. M. Melavanki, H.S. Geethanjali, D. Nagaraja and N. R. Patil TSRP 2012 from 04-01-2012 to 07-01- 2012 at BARC Mumbai
3	Spectroscopic investigation and HOMO-LUMO analysis using DFT of two fluorescent molecules N.R. Patil, R.M. Melavanki H.S. Geethanjali and D. Nagaraja TSRP 2012 from 04-01-2012 to 07-01- 2012 at BARC Mumbai
4	Solvent effect on the fluorescence properties and theoretical calculations using DFT of two biologically active tetramethylene thiophene carboxamidos molecules N.R. Patil, R.M. Melavanki, D. Nagaraja and H.S. Geethanjali 23rd International Conference on Raman Spectroscopy (ICORS 2012) held from 13-08-2012 to 17-08-2012 at IISc Bangalore.
5	Solvent effect on the Photophysical properties and HOMO and LUMO analysis of thiophene 3-carboxamide molecule D. Nagaraja H.S. Geethanjali, R.M. Melavanki and N.R. Patil National Conference on Recent Advances in Material Science held at MSRIT Bangalore from 12-12-2011 to 14-12-2011
6	Solvent effect on the fluorescence properties of substituted thiophene 3 - carboxamide molecule H.S. Geethanjali, D. Nagaraja R.M. Melavanki and N.R. Patil National Conference on Recent Advances in Material Science held at MSRIT Bangalore from 12-12-2011 to 14-12-2011
7	Fluorescence properties of MOCMO coumarin derivative D. Nagaraja , N.R. Patil , R.A.Kusanur, R.M. Melavanki National conference on luminescence and applications (NCLA) held at PESIT Bangalore from 08-01-2013 to 10-01-2013
8	Solvent effect on the DAOBCM Coumarin derivative N.R. Patil D. Nagaraja , R.M. Melavanki Presented at National conference on luminescence and applications (NCLA) held at PESIT Bangalore from 08-01-2013 to 10-01-2013
9	Estimation of excited state and ground state dipole moments of coumarin derivative by Solvatochromic method S.N Patil, F M Sanningannavar, D. Nagaraja , N R Patil, R.A.Kusanur, R.M. Melavanki Presented at National conference on luminescence and applications (NCLA) held at PESIT Bangalore from 08-01-2013 to 10-01-2013
10	Solvatochromic Shift Study of Boronic Acid Derivative - Estimation of Ground and Excited State Dipole moments D. Nagaraja H.S. Geethanjali, R.M. Melavanki and N.R. Patil 5th ICLA - 2015 at PESIT, Bangalore -978 - 93 - 82570 - 48 - 6

Conferences/Workshops Attended

Sl. No	Name of the conference, Organizer, Date and Place
1	Workshop on Role of statistics in Scientific Research KSTA. 04-01-2018 and 05-01-2018, Bengaluru
2	Workshop on Taxonomy and Course outcomes VTU. 3-1-2017 to 4-1-2017. regional center, Bengaluru
3	100 th year celebration of Einstein's works Dept.of Physics, BIT, 22-4-2016 to 23-4-2016. Bengaluru
4	Indo-French Seminar on Women in Science through CEFIPRA IAS and IISc, 3-2-2015 to 5-2-2015. Bangalore
5	Trombay Symposium on Radiation and Photochemistry-2014(TSRP-2014) TSRP, 6-1-2014 to 9-1-2014, BARC. Mumbai
6	National conference on luminescence and applications Dept. of Physics, PESIT, 08-1-2013 to 10-1-2013. Bangalore
7	Frontiers of Science Indian Academy of Sciences Bangalore. 3-9-2012 to 4-9-2012. Vivekananda Degree College Bangalore
8	23 rd International Conference on Raman Spectroscopy Dept of IPC, IISc. 13-8-2012 to 17-8-2012, Bangalore
9	Trombay Symposium on Radiation and Photochemistry TSRP, 04-1-2012 to 07-1-2012. BARC, Mumbai
10	National Conference on Recent Advances in Material Science Dept of Physics, MSRIT. 12-12-2011 to 14-12-2011. Bangalore
11	Advanced Techniques for Characterization of Materials MSRIT. 28 th May 2011. Bangalore
12	Research Methodologies and Latex VTU e - learning center, 9-5-2011 to 10-5-2011. SJBIT Bangalore
13	Luminescence of nanomaterials Dept of Chemistry MSRIT and LSIKC. 29 th Jan 2011. Bangalore
14	Advances in materials research Poornaprajna Institute of Scientific Research. 25-8-2010 to 27-8-2010. Bangalore
15	VTU Thesis Development using Latex VTU e - learning center, 31-12-2009. Mysore
16	Restructuring of Technical education to meet the global industrial needs AICTE and BIT. 17-11-2006 to 18-11-2006. Bangalore
17	Thin film materials and devices Dept. of physics, NITK, 23-9-2005 to 24-9-2005 Suratkal, Karnataka.
18	Human resource development Indian heritage and RVS. 20-2-2004 to 21-2-2004. Bangalore

Instruments Handled

1. UV-VIS spectrophotometer- Hitachi UH-5300, R&D Center, Department of Physics, BIT, Bengaluru
2. UV-VIS spectrophotometer - Perkin Elmer Lambda 35 UV/VIS Spectrophotometer, Department of Inorganic and Physical Chemistry, IISc, Bengaluru
3. Spectrofluorimeter- Hitachi F-2700, R&D Center, Department of Physics, MSRIT, Bengaluru
4. Spectrofluorimeter- HORIBA FLUOROLOG JOBIN YVON FL-3, Department of Inorganic and Physical Chemistry, IISc, Bengaluru
5. Time Correlated Single Photon Counting (TCSPC) technique. Photophysics model of SPC nanosecond fluorescence spectrometer- NCUIFP, University of Madras, Tharamani campus, Chennai

Research Interest

1. Study of Photophysical properties of heterocyclic molecules using fluorescence spectroscopy
2. Fluorescence correlated spectroscopy (FCS)
3. Fluorescence quenching using nano materials
4. NLO studies of coumarin derivatives
5. Boronic acid based sugar sensor studies
6. pH effect on fluorescence properties of organic molecules
7. Absorption and emission spectroscopic studies of some biologically active molecules
8. Thin Films preparation and characterization.
9. Shock Waves and High energy Physics

Member Professional Bodies

1. Life Member Indian Society For Shock Waves(ISSW), IISc, Bengaluru. INDIA
2. Life Member, Indian Society for Technical Education (ISTE), New Delhi, INDIA
3. Life Member, Luminescence Society of India (LSI), Baroda, INDIA
4. Life Member, Indian Society for Radiation and Photochemical Sciences(ISRAPs), BARC, Mumbai, INDIA