UNIVERSITÀ DEGLI STUDI DI MILANO

TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE** Id-5951

DR. SUBASHCHANDRABOSE SUBRAMANIYAN

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at the **Dipartimento di " PHYSICS "**

Scientist- in – charge: **Prof. Fratesi Guido**

Project Title: "Ab initio study of surface-anchored homo chiral molecular films"

CURRICULUM VITAE

Dr. SUBASHCHANDRABOSE SUBRAMANIYAN

1. PERSONAL INFORMATION

Surname	SUBRAMANIYAN
Name	SUBASHCHANDRABOSE

2. PRESENT OCCUPATION

Appointment	Structure
TEMPRARORY Dec, 2019-Till date	RESEARCH- ASSOCIATE PROFESOR Head of the department of Physics, at the PRIST Deemed University, Thanjavur, TN, India

3. EDUCATION AND TRAINING

Degree	Course of studies	specialization	University	year of achievement of the degree
1. M.SC	MASTER OF SCIENCE IN PHYSICS	PHYSICS	ANNAMALAI UNIVERSITY, TN, INDIA	2007
2. M.PHIL	MASTER OF PHILOSOPHY IN PHYSICS	ATOMIC AND MOLECULAR SPECTROSCOPY	ANNAMALAI UNIVERSITY, TN, INDIA	2009
3. PH.D	PHD IN PHYSICS	MOLECULAR STRUCTURE OF HETEROCYCLIC AND SCHIFF BASE COMPOUNS-EXPERIMENTAL AND DFT APPROACH	ANNAMALAI UNIVERSITY, TN, INDIA	AUG,2012
Degree of medicalspecialization	-	-	-	-
Degree of Europeanspecialization	-	-	-	-

4. REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
-	-	-

5. FOREIGN LANGUAGES

Languages	level of knowledge
TAMIL	Mother Tongue
ENGLISH	GOOD COMMUNICATION, READING AND WRITING
RUSSIAN	BASICS
ITALIAN	BASICS [LEARNING LEVEL]

6. AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2019-2021	Designation: Post-doc fellow Type (A) research grant Department of Physics and Astronomy "Galileo Galilei" University of Padova| Padova, Italy
2016-2018	Russian academic excellence 5 to 100 top projects. Science and Technology park «Fabrika», Immanuel Kant Baltic Federal University, (IKBFU), Gaydara st., 6, Kaliningrad, Russia
2023- Till date	Head of the department of Physics, Institution innovation council coordinator at the PRIST Deemed University, TN, India
22nd MARCH 2014	Honoured as the best teacher and head of the department of science and Humanities – this award presented by Dr. K.Sivan, Director Indian space research organisation (ISRO), at the M.A.R. college of Engineering and Technology, on 22nd March, 2014 at Trichy, Tamilnadu, India.
2012	I received best researcher award for having high publication during PhD at department of Physics, Annamalai University, TN India. (meritorious-scholarships)
2009	For blood donation (GOVT. HOSPITAL, CUDDALORE, TN, INDIA)

7. TRAINING OR RESEARCH ACTIVITY

description of activity: One week research training school and international conference participation
WORKSHOP – 26- 30th Nov-2018 Workshop-Indo-French School cum Conference on Magnetism of Molecular Systems| Indian Institute of Science, Bangalore – 560 012, India International conference: 20-24, August- 2017 International Baltic Conference on Magnetism focused of functionalized magnetic structure for energy and biomedical application. Kaliningrad, Russia

8. PROJECT ACTIVITY

Year	Project
2023 Awaiting for results	ACCEPTED FOR EVALUATION STAGE-SERB/DST/GOVT. OF INDIA Design, development and investigation of 2D Dichalcogenide materials for photoelectric and tribological applications using the first principle approaches FILE NUMBER:EEQ/2023/000652

2019-2021	Type (A) research grant Developing computational codes, performing first principle calculations and Investigations Prof. Pier Luigi Silvestrelli Department of Physics and Astronomy "Galileo Galilei" University of Padova| Padova, Italy
2016-2018	Russian academic excellence 5 to 100 top projects Functionalized magnetic nano materials for energy and Biomedical applications Prof. Michael Farle, University of Duisburg-Essen| Chairman of the Magnetism, Germany. Science and Technology park «Fabrika», Immanuel Kant Baltic Federal University (IKBFU), Gaydara st., 6, Kaliningrad, Russia

9. PATENTS

Patent
WORKING ON IT

10. CONGRESSES AND SEMINARS: ORGANISED

Date	Title	Place
19-21st , Feb, 2019	International conference on advance Chemicals and Structural Biology- Department of Science and Technology, SERB	PRIST Deemed University, Thanjavur, TN, India.
2nd July 2016|	Molecular simulation and interpretation of Chemical Structures (MSICS)- PRIST Deemed University & Indian Institute of Food Corporation of India	PRIST Deemed University, Thanjavur, TN, India.

11. CONGRESSES AND SEMINARS: INVITED TALK PRESENTED

Date	Title	Place
03rd -04th October 2023	Invited talk on: Screening and anti-screening effect in Fullerene cages	TBML Arts and Science College, Poraya, TN, India
23rd -24th August 2022	Invited talk on: Tunable van der Waals interactions in low-dimensional nanostructures, at ICMSSE, Holy cross college, Trichy, India.	Holy cross college, Trichy, TN, India.
28-30th January 2016	Invited talk on: Interpretation of spectral, chromatographic, crystallographic and computational data of chemical system,	PRIST Deemed to be University, Thanjavur, TN, India

12. PUBLICATIONS:

Total research publications (Dr. Subashchandrabose Subramaniyan):

Total papers	Citations	h-index	i-index
50	643	15	21

1# Selective publications:

S.No	Title, Authors, Journals, Volume, Year an Pages
1.	Screening and anti-screening in fullerene-like cages: dipole-field amplification with ionic nanocages, Pier Luigi Silvestrelli, S Subashchandrabose, A Seif, Alberto Ambrosetti, Carbon Trends 10 (2023) 100242
2.	Tunable van der Waals interactions in low-dimensional nanostructures, Pier Luigi Silvestrelli S. Subaschandrabose, Alberto Ambrosetti, B. Liu, The Journal of Chemical Physics, 154 (2021) 224105
3.	Synthesis and characterization of poly indole-iron oxide nanoparticles for biomedical applications" Journal of Cluster Science article in press (2022)
4.	Electrochemical and magnetic properties of zinc ferrite nanoparticles through chemical co-precipitation method, K Sathiyamurthy, C Rajeevgandhi, S Bharanidharan, P Sugumar, S Subashchandrabose, Chemical Data Collections, 28 (2021) 100477.
5.	Synthesis, characterization and electrical conductivity of Fe3O4 nanoparticles, B. Aarthy, S. Subashchandrabose*, J.S. Nirmal Ram, D. Nandhini, N. Anandhan, Indian Journal of Applied Research, (2019).
6.	Synthesis, characterization and computation of potassium doped calcium hydroxide nanoparticles and nanotubes, D Nandhini, S Subashchandrabose, P Ramesh, International Journal of Mechanical and Production Engineering Research and Development, Vol. 9, Issue 1, 441-448 (2019)
7.	Synthesis and Characterization of Ni Doped CuO Nanoparticles from Aqueous Solution, D Nandhini, S Subashchandrabose, International Journal of Current Engineering and Scientific Research, (2017)
8.	Single crystal, spectral and electronic transition studies on (E)-N-(3-methoxy-4- hydroxybenzylidene)-4-nitrobenzohydrazide monohydrate, M.Manvizhi, S.Murugan, S.Subaschandrabose P.Sutharsan, J.S.Nirmalram, Journal of Molecular structure, 1183 (2019) 390-397.
9.	Synthesis, crystal growth, structural evaluation and nonlinear optical analysis of ethyl-4- (3, 4-dimethoxyphenyl)-6-methyl-2-sulfanylidene-3, 4-dihydro-1H-pyrimidine-5- carboxylate, A Dhandapani, S Manivarman, S Subashchandrabose, Journal of Molecular Structure, 1127 (2017) 212-225.
10.	Crystal structure of ethyl (2S)-9-methoxy- 2-methyl-4-oxo-3,4,5,6-tetrahydro-2H- 2,6-methanobenzo[g][1,3,5]oxadiazocine- 11-carboxylate, Dhandapani, Manivarman, Subashchandrabose, Acta Cryst. E, 71 (2015) o117–o118
11.	FT-Raman, FT-IR spectra and total energy distribution of 3-pentyl-2, 6- diphenylpiperidin-4-one: DFT method, S Subashchandrabose, H Saleem, Y Erdogdu, G Rajarajan, V Thanikachalam, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 82 (2011) 260-269.
12.	Haemostatic effects of latex from Croton sparsiflorus Morang, in vitro, in vivo, in silico approaches, MC Kamaraj, S Mohan Raj, D Palani Selvam, S Subashchandrabose, A Kalaiselvan, Computational Biology and Chemistry, 74 (2018) 157-166.

13.	Investigation on the isoform selectivity of novel kinesin-like protein 1 (KIF11) inhibitorusing chemical feature based pharmacophore, molecular docking, and quantum mechanical studies, Subramanian Karunagaran, Subramaniyan Subhashchandrabose, Keun Woo Lee, Chandrasekaran Meganathan, Computational Biology and Chemistry, 61(2016) 47-61.
14.	Pharmacophore modeling, virtual screening, molecular dockingstudies and density functional theory approaches to identify novelketohexokinase (KHK) inhibitors, Chandrasekaran Meganathan Rengarajan Kavitha, Subramanian Karunagaran, Subramaniam Subhash Chandrabose,Keun Woo Lee, BioSystems 138 (2015) 39–52.
15.	Synthesis, in vitro and in silico antitumor evaluation of 3-(2, 6-dichlorophenyl)-1, 5- diphenylpentane-1, 5- dione: Structure, spectroscopic, RDG, Hirshfeld and DFT based analyses, A Dhandapani, S Veeramanikandan, Raju Suresh Kumar, Abdulrahman I Almansour, Natarajan Arumugam, S Subashchandrabose, J Suresh, R Arulraj, D Gajalakshmi, Journal of Molecular Structure, 1251 (2022) 132002.
16.	Spectroscopic, structural, electronic and bioactive characteristics of 3, 5-bis (2, 5- dimethylphenyl) pyridine (1): An experimental and theoretical investigations, Muhammad Akram, Shanawer Niaz, Muhammad Adeel, Muhammad Nawaz Tahir, Irfan Ullah, Malik Aman Ullah, S Subashchandrabose, Ghias Uddin, Journal of Molecular Structure, 1203 (2020) 127448
17.	Synthesis, solid state structure, Hirshfeld surface, nonlinear optics and DFT studies on novel bischalcone derivative, Synthesis Veeramanikandan, H Benita Sherine, A Dhandapani, S Subashchandrabose, Journal of Molecular Structure, 1180 (2019) 798-811
18.	Synthesis, rotational, vibrational and transitional spectra investigation on novel ethyl-4- (3-(benzo [d] 1, 3di-oxole-5-carboxamido) phenyl)-1, 2, 3, 4-tetrahydro-6-methyl-2, C Adaikalaraj, S Manivarman, S Subashchandrabose, A Dhandapani, Journal of Molecular Structure, 1165 (2018) 132-141.
19.	Synthesis, Spectroscopic, Intramolecular Energy Transfer and Electronic Structure Nonlinear Optical Properties of Novel Tetrahydropyrimidinone, Ukkaramoorthy Umadevi, Arumugam Dhandapani, Subramaniyan Manivarman, Subramaniyan Subashchandrabose, Oriental Journal of Chemistry, 34 (2018) 1222
20.	Synthesis and spectral characterization of bis (4-amino-5-mercapto-1, 2, 4-triazol-3-yl) propane, S Subashchandrabose, V Thanikachalam, G Manikandan, H Saleem, Y Erdogdu, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 157 (2016) 96-103.
21.	Structural and vibrational studies on 1-(5-methyl-[1, 3, 4] thiadiazol-2-yl)-pyrolidin-2-ol, N Ramesh Babu, H Saleem, S Subashchandrabose, M Syed Ali Padusha, S Bharanidharan, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy,152 (2016) 252-261.
22.	Vibrational studies on (E)-1-((pyridine-2-yl) methylene) semicarbazide using experimental and theoretical method, S Subashchandrabose, N Ramesh Babu, H Saleem, M Syed Ali Padusha, Journal of Molecular Structure, 1094 (2015) 254-263.
23.	Synthesis and spectroscopical study of rhodanine derivative using DFT approaches, R Anbarasan, A Dhandapani, S Manivarman, S Subashchandrabose, H Saleem, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 146 (2015) 261-272.
24.	Vibrational spectroscopy investigation and density functional theory calculations on (E)- N'-(4-methoxybenzylidene) benzohydrazide, H Saleem, S Subashchandrabose, N Ramesh Babu, M Syed Ali Padusha, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 43 (2015) 230-241.

25.	Synthesis and spectral characterization of hydrazone derivative of furfural using experimental and DFT methods, N Ramesh Babu, S Subashchandrabose, M Syed Ali Padusha, H Saleem, YUSUF Erdogdu, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 120 (2014) 314-322.
26.	Molecular structure and vibrational analysis on (E)-1-(3-methyl-2, 6-diphenyl piperidin-4- ylidene) semicarbazide, A Dhandapani, S Manivarman, S Subashchandrabose, H Saleem, Journal of Molecular Structure, 1058 (2014) 41-50.
27.	Vibrational and conformational analysis on-N1-N2-bis ((pyridine-4-yl) methylene) benzene-1, 2-diamine, S Subashchandrabose, C Meganathan, YUSUF Erdogdu, H Saleem, C Jajkumar, P Latha, Journal of Molecular Structure, 1034 (2013) 37-44.
28.	FT-IR, FT-Raman spectral and conformational studies on (E)-2-(2- hydroxybenzylidenamino)-3-(1H-indol-3yl) propionic acid, H Saleem, S Subashchandrabose, Y Erdogdu, V Thanikachalam, J Jayabharathi, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 101 (2013) 91-99.
29.	Structural and vibrational studies on (E)-2-(2-hydroxy benzyliden amino)-3-phenyl propionic acid using experimental and DFT methods, H Saleem, Y Erdogdu, S Subashchandrabose, V Thanikachalam, J Jayabharathi, N Ramesh Babu, Journal of Molecular Structure, 1030 (2012) 157-167.
30.	FT-Raman, FT-IR spectral and DFT studies on (E)-1-4- nitrobenzylidenethiocarbonohydrazide, V Thanikachalam, V Periyanayagasamy, J Jayabharathi, G Manikandan, H Saleem, S Subashchandrabose, Y Erdogdu, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 87 (2012) 86-95.
31.	Structural, vibrational and hyperpolarizability calculation of (E)-2-(2- hydroxybenzylideneamino)-3-methylbutanoic acid, Subashchandrabose, H Saleem, Y Erdogdu, Ö Dereli, V Thanikachalam, J Jayabharathi, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 86 (2012) 231-241.
32.	Density functional theory studies on 2, 5-bis (4-hydroxy-3-methoxybenzylidene) cyclopentanone, H Saleem, Akhil R Krishnan, Y Erdogdu, S Subashchandrabose, V Thanikachalam, G Manikandan, Journal of Molecular Structure, 999(2011)2-9.
33.	FT-IR, FT-Raman spectra and scaled quantum mechanical study of 4-amino-1-benzylpiperidine, S Chandra, H Saleem, Y Erdogdu, S Subashchandrabose, Akhil R Krishnan, MT Gulluoglu, Journal of Molecular Structure, 998(2011)69-78.
34.	Synthesis and comparison of bis (4-amino-5-mercapto-1, 2, 4-triazol-3-yl) butane using DFT study, S Subashchandrabose, Akhil R Krishnan, H Saleem, S Kavitha, V Thanikachalam, G Manikandan, Journal of Molecular Structure, 996(2011)1-11.
35.	Molecular structure, vibrational spectroscopic (FT-IR, FT-Raman), UV and NBO analysis of 2-chlorobenzonitrile by density functional method, Akhil R Krishnan, H Saleem, S Subashchandrabose, N Sundaraganesan, S Sebastain, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 78(2011)582-589.
36.	Vibrational spectroscopic study and NBO analysis on bis (4-amino-5-mercapto-1, 2, 4- triazol-3-yl) methane using DFT method, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, S Subashchandrabose, Akhil R Krishnan, H Saleem, R Parameswari, N Sundaraganesan, V Thanikachalam, G Manikandan, 77 (2010) 877-884.
37.	FT-IR, FT-Raman, NMR spectral analysis and theoretical NBO, HOMO-LUMO analysis of bis (4-amino-5-mercapto-1, 2, 4-triazol-3-yl) ethane by ab initio HF and DFT methods, S Subashchandrabose, Akhil R Krishnan, H Saleem, V Thanikachalam, G Manikandan, Yusuf Erdogdu, Journal of Molecular Structure, 981(2010)59-70.

*corresponding author

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https://www.scopus.com/authid/detail.uri?authorId=36247723600

2# Articles in reviews
Title: Synthesis and characterization of poly-indole iron oxide nanoparticles for biomedical applications Journal: Inorganic Chemistry communication Status: **Under revision**

13. OTHER INFORMATION

1	**Professional skill**	
	1#Teaching Experience	
	1# Position	Scientist and Head, Associate Professor of Physics
	Service period	18-12-2021-Till date| 24months
	Role	Research/Teaching
	Institute	Research and Development Cell (RDC) | PRIST Deemed University, Thanjavur, Tamilnadu-613403
	Country	India
	2# Position	Associate Professor
	Service period	July, 2018-December, 2019|18 months
	Role	Guiding PhD, Master students, Teaching to the Master students and Research work
	Institute	Centre for Research and Development (CRD) | PRIST Deemed University, Thanjavur, Tamilnadu-613403
	Country	India
	3#Position	Assistant Professor and Scientist
	Service period	3rd September, 2014- 30th December, 2016| 26 months
	Role	Research work, Teaching to the Master, Guiding PhD, and Master
	Institute	Centre for Research and Development (CRD) | PRIST Deemed University, Thanjavur, Tamilnadu-613403
	Country	India
	4# Position	Assistant Professor and Head
	Service period	March, 2012- 30th June, 2014|(27 months)
	Role	Research work & Teaching to the Bachelor of Engineers (B.E)
	Department	Department of Science and humanities
	Institute	M.A.R. College of Engineering and Technology | Trichy | Tamilnadu | 621316
	Country	India-621316
	2#Programming	➢ FORTRAN 95 ➢ Python (Learning)
	3#Experience in comp. codes	➢ Quantum Espresso| Wein2K_17.1|Gaussian 03, 09| VESTA
	4#Computational resources	➢ CINECA-ISCRA (Italian Super Computing Resource Allocation)

	4#Description of Scientific experience	➢ State-of-the-art first-principle simulation techniques ➢ First-principle calculations on 1D and 2D nano structures ➢ Computational code development ➢ Organic single crystals-growth and structure solutions ➢ Synthesis of nanomaterials (especially using sol-gel method) and preparation of precursors. ➢ Scientific instruments handled- FT-IR, FT-Raman, UV-Visible, X-ray, and FE-SEM and SEM-EDX
	3#Software developed	➢ MBD code & Interface code developed for generating input files, to calculate the binding energy and power law ➢ Link to a repository: https://github.com/sscbphysics/qhorec
2	**Research supervision and leadership experience**	
	1#As a Supervisor	I was being as supervisor for Ph.D scholar; There are two scholars have completed PhD under my supervision
	Thesis Title 1	Growth and characterization of organic and semi-organic functional non-linear single crystals
	Thesis Title 2	Synthesis and characterization of Cu and Ni doped iron oxide and alkali metals doped Ca(OH)2 nanoparticles for energy and biomedical applications
	2#As a Head	I was serving as a Head for Department of Science and Humanities at the M.A.R college of Engineering and Technology, TN, India.
3	**Other key academic merits**	
	1#Referee of Scientific journals	J.Mol.Struct. |Journal of Molecular Structure Arb.J.Chem. |Arabian journal of chemistry Solid-state elect. |Solid-state electronics Comp.Mat.Sci. |Computational Materials Science Chem.phys.Lett |Chemical Physics Letters Spectrochim Acta A |Molecular and Bimolecular Spectroscopy J.Mol.Struct. | Journal of Molecular liquids
4	Other education and expertise	One year "Computer – Cum- Internet Literacy Programme" by the Directorate of Collegiate Education, Department f Higher Education, Government of India. 2001-2002
5	Personal information	Date of Birth: 27.05.1983
		Place of Birth: Chidambaram
		Address: Sagajanantha nagar, Parathur & Post, Chidambaram Taluk, Cuddalore District Tamilnadu (TN)-608201, India

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN thisform.

Place and date: Thanjavur, Tamilnadu, India, 08-11-203,