



BIO DATA

Dr. S. FRANCIS

Assistant Professor in Chemistry

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Highest qualification	:	Ph. D in Chemistry
Present designation	:	Assistant Professor
Father's Name	:	K. A. Savarimuthu
Date of Birth	:	15.06.1972
Gender	:	Male
Nationality	:	Indian
Languages known	:	English, Tamil.
Strengths	:	Ability to handle things independently.
Address for communication	:	No.1/1261, 1A Cross, Vasan Nagar, Nachikurichi, Tiruchy-620 102.

Research Interest

Inorganic Chemistry, Peptide Chemistry, X-ray Crystallography.

Academic Profile

Degree	Subject	University / Institution	Year	Grade / Marks (%)
Ph. D	Chemistry	Bharathidasan University, Trichy	2004	-
M. Sc.	Chemistry	St. Joseph's College, Trichy	1994	73.97 %
B. Sc.	Chemistry	St. Joseph's College, Trichy	1992	74.76 %

Experience:

Total years of experience (Teaching & Research): 22 Years and 11 Months
(Up to Sep. 2023, Excluding the period of Ph. D)

Teaching Experience (starting with the latest post): 17 Years & 3 Months

College/ University	Designation	Period of working		Subjects handled
		From	To	
Rajah Serfoji Government College, Thanjavur	Assistant Professor	20.12.2022	Till Date	Chemistry (UG& PG Students)
Government Arts College for Men, Nandanam, Chennai-35	Assistant Professor	17.09.2018	19.12.2022	Chemistry (UG& PG Students)
Thiru. A. Govindasamy Government Arts College, Tindivanam.	Assistant Professor	02.08.2016	17.09.2018	Chemistry (UG& PG Students)
Government Thirumagal Mills College, Gudiyattam.	Assistant Professor	28.07.2015	01.08.2016	Chemistry (UG& PG Students)
Easwari Engineering College, Chennai.	Assistant Professor	01.07. 2008	27.07.2015	Engineering Chemistry, Environmental Science & Engineering
Easwari Engineering College, Chennai.	Senior Lecturer	11.08.2007	30.06.2008	Engineering Chemistry

KCG College of Technology, Chennai.	Senior Lecturer	03.07.2006	31.07.2007	Engineering Chemistry, Environmental Science & Engineering
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Research Experience: 5 Years & 8 Months (Excluding the period of Ph. D)

Year	Designation, place and project
Aug 2005 – Jun 2006	Research Associate at the Indian Institute of Technology Madras, Chennai, India. Project: Synthesis and structural investigation of N-glycoprotein analogs.
Sep 2004 – Jul 2005	Postdoctoral fellow at the Public Health Research Institute, NJ, USA. Worked in Molecular Biophysics and Protein Crystallography of Molecular Chaperones and TATA Binding Proteins.
Jun 2000 – July 2004	Ph. D thesis in Antifolate agents and Sulfa drugs. Investigated the coordination and non-covalent interactions of trimethoprim and sulfoxine ligands in various metal complexes and acid derivatives.
Jul 1997 – May 2000	Research Assistant at Institute of Chemistry, Academia Sinica, Taipei, Taiwan. Worked on HIV(1) proteins gp41, gp120 and influenza virus to study the conformation of these proteins.
Feb 1997 – Jun 1997	Research scholar , Department of Chemistry, Bharathidasan University, India.
Sep 1994 – Aug 1995	Junior Research Fellow at the Department of Chemistry, Bharathidasan University, Trichy. Studied the mechanism of the oxidation of phenylhydrazine derivatives by N-bromosuccinimide.

Industrial Experience (starting with the latest post): 5 Months

Organisation/ Employer	Designation	Period of working		Field of working
		From	To	
TDPL, Chennai	Trainee Chemist	Sep. 1995	Jan. 1996	Bulk-drug Production

Awards

- **Senior Research Fellowship** (Aug. 2002 to July 2004) - Awarded by the Council of Scientific and Industrial Research (CSIR), New Delhi, India.
- **Junior Research Fellowship** (Oct. 1994 to Aug. 1995) - granted by University Grants Commission, Govt. of India.
- **GATE'94** (Graduate Aptitude Test for Engineering) exam passed - conducted by Indian Institute of Technology, India.

Credits

- The following published articles have been listed as most frequently accessed sites,
1. P. T. Muthiah, S. Francis, U. Rychlewska, B. Warzajtis, Beilstein Journal of Organic Chemistry **(2006)**, 2:8.
 2. S. B. Raj, V. Sethuraman, S. Francis, M. Hemamalini, P.T. Muthiah, G. Bocelli, A. Cantoni, U. Rychlewska, B. Warzajtis, CrystEngComm. **(2003)**, 5(15), 70-76.

Achievement of 100% Pass result in theory handling subjects:

Academic Year	Details
2015-2016	100 % Pass- II MSc-Sem-III-Subject Title-Scientific Research Methodology 100 % Pass- II MSc-Sem-IV-Subject Title-Bioinorganic Chemistry 100 % Pass-III BSc (EM&TM)- Sem-VI-Subject Title -Inorganic Chemistry-II 100 % Pass-III BSc (EM&TM)- Sem-VI-Agriculture and Leather Chemistry
2019-2020	100 % Pass- II MSc (Phys) -Sem-II-Subject Title-Medicinal Chemistry-I 100 % Pass-III BSc-Sem-VI- A & B – Organic Chemistry-II
2020-2021	100 % Pass- II MSc - Sem-III-Subject Title - Molecular Spectroscopy 100 % Pass-I BSc-Sem-I- A & B - General Chemistry-I 100 % Pass-I BSc-Sem-II- A & B - General Chemistry-II 100 % Pass- II MSc (Phys) - Sem-II - Subject Title-Medicinal Chemistry-I

Publications (National/International Journals)

1. Supramolecular organization in tetra aqua(μ -8-hydroxyquinoline-5-sulfonate)barium(II) and Ag...I interactions in a pseudopolymorphic form of (7-Iodo-8-hydroxyquinoline-5-sulfonate)silver(I)monohydrate, K. Balasubramani, M. Hemamalini, S. Francis, P. T. Muthiah, T. Vijay, T. N. Guru Row, G. Bocelli and A. Cantoni, J. Chem. Cryst. **(2010)**, 40, 316-322.
2. Crystal engineering of analogous and homologous organic compounds: hydrogen bonding patterns in trimethoprim hydrogen phthalate and trimethoprim hydrogen adipate, Packianathan Thomas Muthiah, Savarimuthu Francis, Urszula Rychlewska, Beata Warzajtis, Beilstein Journal of Organic Chemistry **(2006)**, 2:8.
3. Diaquabis (7-iodo-8-oxidoquinolinium-5-sulfonato) strontium(II) monohydrate, K. Balasubramani, S. Francis, P. T. Muthiah, G. Bocelli and A. Cantoni, Acta Cryst. **(2004)**, E60, m1576-m1579.
4. Co-existence of water-mediated and normal base pairs in a supramolecular ribbon in 2-amino-4,6-dimethylpyrimidinium bromide 2-amino-4,6-dimethylpyrimidine monohydrate, P. Panneerselvam, P. T. Muthiah & S. Francis, Acta Cryst. **(2004)**, E60, o747-o749.
5. The dimer bis(μ -8-hydroxy-7-iodoquinoline-5-sulfonato-N,O:O') bis[triaquamagnesium (II)] tetrahydrate, S. Francis, P.T. Muthiah, U. Rychlewska & B. Warzajtis, Acta Cryst. **(2004)**, E60, m137-m139.
6. A supramolecular ladder in diaqua (μ -8-hydroxy-7-iodoquinoline-5-sulfonato- κ^4 N,O,O',O'')cadmium(II)dihydrate, S. Francis, P. T. Muthiah & R. J. Butcher, Acta Cryst. **(2004)**, E60, m62-m64.
7. Supramolecular organization via varied coordination modes in triaqua (μ -8-hydroxy-7-iodoquinoline-5-sulfonato- κ^4 N,O,O',O'')barium(II) monohydrate, P.T. Muthiah, S. Francis, G. Bocelli & A. Cantoni, Acta Cryst. **(2003)**, E59, m1164-1167.
8. Interplay of hydrogen bonding and coordination modes in diquabis(8-hydroxy-7-iodoquinoline-5-sulfonato) calcium(II) monohydrate, S. Francis, P.T. Muthiah, U. Rychlewska & B. Warzajtis, Acta Cryst. **(2003)**, E59, m1160-1163.
9. Polymeric diaqua(μ -8-hydroxy-7-iodoquinoline-5-sulfonato- κ^4 N,O,O',O'') copper(II) tetrahydrate, S. Francis, P.T. Muthiah, G. Bocelli & A. Cantoni, Acta Cryst. **(2003)**, E59, m1157-1159.
10. Hydrogen-bonded supramolecular motifs in aqua(8-hydroxyquinoline-5-sulfonato- κ^2 N,O)potassium(I)' S. Francis, P.T. Muthiah, G. Bocelli & A. Cantoni, Acta Cryst. **(2003)**, E59, m1154-1156.

11. 2-Chloro-(-3-methoxysalicylidene)aniline” S. Francis, P.T. Muthiah, G.Venkatachalam, R. Ramesh. *Acta Cryst.* (**2003**), E59, o1045-o1047.
12. Supramolecular organisation via hydrogen bonding in trimethoprim sulfonate salts, S. Baskar Raj, V. Sethuraman, S. Francis, M. Hemamalini, P.T. Muthiah, G. Bocelli, A. Cantoni, U. Rychlewska, B. Warzajtis, *CrystEngComm.* (**2003**), 5(15), 70-76.
13. Bis(μ -8-hydroxy-7-iodoquinoline-5-sulfonato- N,O:O') bis[triaquazinc(II)] tetrahydrate, S. Francis, P.T. Muthiah, G. Bocelli, A. Cantoni, *Acta Cryst.* (**2003**), E59, m87-m90.
14. Hydrogen-bonding patterns in trimethoprim trifluoroacetate, S. Francis, P.T. Muthiah, G. Bocelli, L.Righi, *Acta Cryst.* (**2002**), E58, o717-o719.
15. The leucine zipper motif of the envelope glycoprotein ectodomain of human immunodeficiency virus type I contains conformationally flexible regions as revealed by NMR and circular dichroism studies in different media, D.K. Chang, V.D. Trivedi, S.F. Cheng, S. Francis, *J. Pept. Res.* (**2001**), 57, 234-239.
16. Fusion induced aggregation of model vesicles studied by dynamic and static light scattering, V. D. Trivedi, C.Yu, B.Veeramuthu, S. Francis, D. K. Chang, *Chem. and Phys. of Lipids*, (**2000**), 107, 99-106.

Presentations:

1. A Review of non-covalent interactions in some crystal structure of sulfonate and carboxylate salts, S. Francis and P. Thomas Muthiah, National Conference on Advances in Chemistry-2015, Easwari Engineering College, Ramapuram, Chennai, India, Feb. 18, **2015**.
2. Crystal Structure of 2,4-diamino-5-(3', 4', 5'-trimethoxybenzyl)Pyrimidinium 3,5-dinitrobenzoate: A Novel presence of 7 molecules in the asymmetric unit, S. Francis, P. T. Muthiah & R. J. Butcher, National Conference on Advances in Chemistry-2011, Easwari Engineering College, Ramapuram, Chennai, India, Mar. 2, **2011**.
3. Synthesis and X-ray Crystallographic Investigation of N-(α -Maltosyl)alkanamides as analogs of N-glycoprotein Linkage region, M. Mathiselvam, S. Francis and D. Loganathan, Carbo XXII conference, Mohali, India, Dec. 13-15, **2007**.
4. Supramolecular organization via coordination modes and hydrogen bonding in the metal complexes of sulfoxine: An overview, P. T. Muthiah and S. Francis, Current Trends in inorganic chemistry, Cochin University of Science and Technology, Kerala, India, Mar. 15-17, **2004**.
5. Hydrogen bonded supramolecular ribbons in aminopyrimidine: carboxylic acid cocrystals, P. T. Muthiah, S. Francis, M. Hemamalini, K. Balasubramani, G. Bocelli and

- A. Cantoni, National Seminar on Recent Trends in Isolation, Characterization, Synthesis and Biological Studies of Organic Compounds, GRI, Gandhigram, Dindigul, Tamil Nadu, India, Mar. 5 & 6, **2004**.
6. Crystal Engineering of analogous and homologous organic compounds : Hydrogen bonding patterns in trimethoprim hydrogen phthalate and trimethoprim hydrogen adipate, S. Francis, P. T. Muthiah, U. Rychlewska & R. Warzajtis, XXXIII National Seminar on Crystallography, NCL, Pune, India, Jan. 8-10, **2004**.
 7. Hydrogen bonding patterns in 8-hydroxyquinolinium 3-carboxy-4-hydroxybenzenesulfonate monohydrate, S. Francis, K. Balasubramani, P. Devi, P. T. Muthiah, G. Bocelli & A. Cantoni, XXXIII National Seminar on Crystallography, NCL, Pune, India, Jan. 8-10, **2004**.
 8. Structure and Conformational flexibility of the amino-terminal region of gp41 of HIV-1 and its implications on viral fusion mechanism: A Biophysical Study, V.D. Trivedi, S.F. Cheng, W.J. Chien, S.H. Yang, S. Francis & D.K. Chang, J. of Biosciences, 24, Sep 19-24, **1999**.

Workshop/Symposium/Seminar Attended:

- One Day Webinar on “An Overview of Intellectual Property Rights and its Significance” organised by the IQAC, Government Arts College for Men, Nandanam, Chennai 35, June 30, 2021.
- International Webinar on “Emerging Trends in Chemistry 2020” conducted by Department of Chemistry, Govt. Arts College for Men, Nandanam, Chennai-35, from July 29, 2020 to July 31, 2020.
- One Day Workshop on "The art of preparing manuscripts, Thesis and project proposals", conducted by Institute of Distance Education, University of Madras and Govt. Arts College for Men, Nandanam, Chennai-35 at Institute of Distance Education, University of Madras, Chennai, Jan. 28, 2020.
- One Day Workshop on Quality Enhancement conducted by IQAC, Govt. Arts College for Men, Nandanam, Chennai, Dec. 12, 2019.
- National Conference on Recent Advances in Chemical Research Conducted by Department of Chemistry and Association of Chemistry Teachers, Mumbai, at SRM Institute of Science and Technology, Ramapuram, Chennai, Sep. 12, 2019.
- Capacity Building for Higher Education – ICT Enabled Teaching and Learning conducted by IQAC, Government Arts College for Men, Nandanam, Chennai, March 09, 2019.

- National Conference on Recent Trends in Applied Chemistry (NCRTAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, May 4, 2016.
- State Conference on Higher Education for All, Tamil Nadu Government College Teachers Association, Chennai, India, Oct. 12, 2015.
- National Conference on Advances in Chemistry-2015 (NCAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, Feb. 18, 2015.
- National Seminar on Eco-Friendly Methods in Water Treatment (NSEMWT – 2014), Jeppiaar Engineering College, Chennai, India, Jul. 31, 2014.
- National Conference on Advances in Chemistry-2012(NCAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, Apr. 27, 2012.
- Workshop on Emerging Trends in Nanotechnology research at Jeppiaar Engineering College, Chennai, India, Jul. 20-21, 2011.
- National Conference on Advances in Chemistry-2011(NCAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, Mar. 2, 2011.
- 98th Indian Science Congress, SRM University, Chennai, India, Jan. 3-7, 2011.
- National Seminar on Sensor and its Applications (NSSA-2007), NITT, Tiruchirappalli, India, Dec. 7-8, 2007.
- Radiation Safety Orientation on Training conducted by University of Medicine and Dentistry of New Jersey, NJ, USA, Feb. 3, 2005.
- National Seminar on Recent Trends in Isolation, Characterization, Synthesis and Biological Studies of Organic Compounds, GRI, Gandhigram, Dindigul, India, Mar. 5 & 6, 2004.
- XXXIII National Seminar on Crystallography, NCL, Pune, India, Jan. 8-10, 2004.
- Fifth National Symposium in Chemistry, CLRI, Chennai, India, Feb. 7-9, 2003.
- National workshop on Solid State NMR: Practice and Prospects, IISc., Bangalore, India, Nov. 5-7, 2001.

Workshop/Symposium/Seminar conducted:

1. **Co-Convener** - National Conference on Advances in Chemistry-2011 (NCAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, Mar. 2, **2011**.

2. **Co-Convener** - National Conference on Advances in Chemistry-2012(NCAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, April 27, **2012**.
3. **Co-Convener** - National Conference on Advances in Chemistry-2015 (NCAC), Department of Chemistry, Easwari Engineering College, Ramapuram, Chennai, India, Feb.18th, **2015**.

Workshop/Symposium/Seminar – Committee member:

1. International Webinar on “Emerging Trends in Chemistry 2020” conducted by Department of Chemistry, Govt. Arts College for Men, Nandanam, Chennai-35, from July 29, 2020 to July 31, 2020.
2. Motivational Sessions on “**LIFE WITH CHEMISTRY**” for the commencement of PG First Year Chemistry course in 2020-2021 on 03.11.2020.
3. International conference on “Computational chemistry to study chemical biology and design covid-19 drug with the aid of machine learning and data science” conducted by Department of Chemistry & Department of Computer Science, Govt. Arts College for Men, Nandanam, Chennai-35, from Mar. 29th, 2021 to Mar. 30th, 2021.

Orientation Programme / Refresher Courses / Short Term Courses Attended:

1. Refresher Course in material science (Interdisciplinary) conducted by UGC- Human Resource Development Centre, Bharathidasan University, Tiruchirappalli, Tamil Nadu from 05.07.2022 to 18.07.2022 (14 Days).
2. Refresher Course in Chemistry conducted by UGC- Human Resource Development Centre, Bharathidasan University, Tiruchirappalli, Tamil Nadu from 20.09.2019 to 03.10.2019 (14 Days).
3. Orientation Programme conducted by UGC-HRDC, University of Madras, Tamil Nadu, India, 10.05.2017 to 06.06.2017 (28 days).
4. Dr. S. Francis has attended the faculty development programme entitled “Attributes of an engineering teacher and value education” on 26.6.13.
5. Dr. S. Francis has attended the faculty development programme entitled “Instructional Design and Delivery system” on 12.12.13.

Extracurricular Activities:

- Actively participated in National Service Scheme for about three years from 1989 - 92.
- Three ten days camp was attended from 1990 - 91.
- Two years member in Nature Club from 1990 – 92.

Signature