CURRICULUM VITAE

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Name of the Teaching Staff	Dr.T.Kavitha
Designation	Assistant Professor
Department	Physics
Institution	SDNB Vaishnav College for Women, Chromepet, Chennai- 44
Date of Birth	03.02.1976
Date of Joining the Institution	20.06.2013
Email id	kavitha.t@sdnbvc.edu.in

Qualification with Class / Grade

B.Sc. (Physics) (1993-1996)
S.D.N.B. Vaishnav College for Women, Chromepet.
University of Madras, Chennai, India.
I class

M.Sc. (Physics) (1996-1998)
Madras christian College, Tambaram.
University of Madras, Chennai, India.
I class

M.Phil. (Physics) (1998-2000)
Madras christian College, Tambaram.
University of Madras, Chennai, India.
I class

Ph.D. (Crystallography and Biophysics) - (2005-2011)
Centre of Advanced Study in Crystallography and Biophysics, Guindy Campus, University of Madras, Chennai, India.
commended

Papers Published in Journals	International :26 (list attached)
Papers Presented in Conferences	National : 5
Conferences Attended	National : 7
UG Projects Guided	30 (students)
M.Phil Projects Guided	5 (students)
Technical Skills	Small Molecular Crystallography • Experience in solving and refining crystal structures using crystallographic packages such as SHELXS97, SHELXL97 & WinGX. • Experience in using molecular graphics program ORTEP for windows. • Experience in softwares used to prepare material for publication using PLATON, CIF & PARST.
Computer Skills	• Working knowledge in operating systems such as Windows and Unix. • Experience in presentation/drawing and image editing programs (Microsoft Power Point, Corel Draw and Photo Paint etc). • Working knowledge in Autodock software.

Prince Shri Venkateshwara Arts& science College, Gowrivakkam	1.7.2000 to 23.11.2004
S.D.N.B. Vaishnav college for women, Chromepet	20.06.2011 to 30.05.2013
S.D.N.B. Vaishnav college for women, Chromepet	20.06.2013 to till date

List of Publications

P.Koteeswari, **T.Kavitha**, S.Vanitha. 2018. Investigations on structural, dielectric and optical properties of cu- doped zno nanoparticles. International journal of engineering sciences & research technology 7(4), 50-57.

S. Vanitha, P. Koteeswari & **T. Kavitha**. 2018. Growth and Characterization of Semiorganic Nonlinear Optical Crystal: L-Tyrosine Hydrobromide. International Journal of Advanced Trends in Engineering and Technology, Volume 3, Issue 1, Page Number 119-125.

T. Kavitha, Devaraj Anandkumar, Perumal Rajakumar, Srinivasan Bargavi and Srinivasakannan Lakshmi. 2017. (3R,5S,7R,8R,9S,10S,12S,13R,14S)-10,13-Dimethyl-17-[5-oxo-5-(prop-2-yn-1- yloxy)pentan-2-yl]hexadecahydro-1Hcyclopenta[a]phenanthrene-3,7,12-triyltriacetate .IUCrData. 2, x170436.

T. Kavitha, Sivakalai Mayakrishnan, T. Paramasivam Perumal, Chandramouleeswaran Suvasini and SrinivasakannanLakshmi. 2017. 2-(5-Bromothiophen-2-yl)-1-phenyl-1H-phenanthro[9,10- d]imidazole. IUCrData 2, x170089.

T. Kavitha, S. Ponnuswamy, S. Suguna, P. Sakthivel & M. N.Ponnuswamy. 2012. Crystal Structures of 1, 5-Diacetyl-2,2, 4-trimethyl-1H-tetrahydro-1, 5-benzodiazepine (DARTMBD) and N 5-Ethoxycarbonyl-2-methyl-2,4-diphenyl-1H-tetrahydro-1, 5-benzodiazepine (ECRPMBD). Molecular Crystals and Liquid Crystals. Vol. 557: pp. 18–27,

T. Kavitha, S. Ponnuswamy, R. Vijayalakshmi, M. Thenmozhi, & M.N. Ponnuswamy. 2010. Cyclohexane-1-spiro-2'-imidazolidine-5'-spiro-1"-cyclohexan-4'-one. *Acta Cryst*. **E66**, o1072.

T. Kavitha, M. Thenmozhi, V. Dhayalan, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2010. 8, 9-Dimethoxy-5-phenylsulfonyl-5H-benzo [b] carbazole. *Acta Cryst*. **E66**, o1071.

M. Thenmozhi, **T. Kavitha**, B.P. Reddy, V. Vijayakumar & M.N. Ponnuswamy. 2010. (E)-N-Benzylidene-4H-1,2,4-triazol-4-amine. *Acta Cryst*. E**66**, o558.

M. Thenmozhi, **T. Kavitha**, S. Ponnuswamy, M. Jamesh & M.N. Ponnuswamy. 2009.c-3, t-3-Dimethyl-4-oxo-r-2, c-6-diphenylpiperidine-1-carboxamide. *Acta Cryst*. E**65**, o2808.

M. Thenmozhi, **T. Kavitha**, V. Dhayalan, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2009. tert-Butyl 3-[2,2-bis(ethoxycarbonyl)vinyl]-2-bromomethyl-1H-indole-1 carboxylate. *Acta Cryst*. E**65**, o2796.

T. Kavitha, B. P. Reddy, V. Vijayakumar & M. N. Ponnuswamy. (2009). 1, 1'-[4-(4-Methoxyphenyl)-2, 6-dimethyl-1, 4-dihydropyridine-3, 5 diyl]diethanone. M. Thenmozhi, *Acta Cryst*. E**65**, o2795.

M. Thenmozhi, **T. Kavitha**, V. Mohanraj, S. Ponnuswamy & M.N. Ponnuswamy. 2009. 1-Chloroacetyl-r-2,c-6-bis(4-methoxyphenyl)-c-3,t-3-dimethylpiperidin-4-one. *Acta Cryst*. E**65**, o2793.

M. Thenmozhi, **T. Kavitha**, V. S.V. Satyanarayana, V. Vijayakumar & M.N. Ponnuswamy. 2009. Methyl 4-(3-ethoxy-4-hydroxyphenyl)-6-methyl-2-oxo-1, 2, 3, 4 tetrahydropyrimidine-5-carboxylate monohydrate *Acta Cryst*. **E65**, o1921-o1922.

M. Thenmozhi, **T. Kavitha**, V. Dhayalan, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2009. Tert-Butyl 3-[2,2-bis(ethoxycarbonyl)vinyl]-2-methyl-1H-indole-1-carboxylate.*Acta Cryst*. E**65**, o825.

T. Kavitha, P. Sakthivel, S. Ponnuswamy, S.S. Ilango & M.N. Ponnuswamy. 2009. 1-Formyl-r-2, c-6-bis(4-methoxyphenyl)-t-3, t-5-dimethylpiperidin-4-one. *Acta Cryst*. **E65**, o2818.

T. Kavitha, M. Thenmozhi, S. Ponnuswamy, P. Sakthivel & M.N. Ponnuswamy. 2009. t-3-Ethyl-r-2, c-6-bis(4-methoxyphenyl)-1-nitrosopiperidin-4-one. *Acta Cryst*. **E65**, o1765.

T. Kavitha, S. Ponnuswamy, P. Sakthivel, K. Karthik & M.N. Ponnuswamy. 2009. r-2, c-6-Bis (4-methoxyphenyl)-c-3, t-3-dimethyl-1-nitrosopiperidin-4-one. *Acta Cryst*. **E65**, o1420.

T. Kavitha, M. Thenmozhi, V. Dhayalan, A.K. Mohanakrishnan & M. N. Ponnuswamy. 2009. Diethyl2-[(5-methoxy-2-methyl-1-phenylsulfonyl-1H-indol-3-yl)methylene] malonate. *Acta Cryst*. E65, o1418-o1419.

T. Kavitha, S. Ponnuswamy, P. Sakthivel, K. Karthik & M.N. Ponnuswamy. 2009. 1-Formyl-r-2, c-6-bis(4-methoxyphenyl)-c-3, t-3-dimethylpiperidin-4-one. *Acta Cryst*. **E65**, o856.

T. Kavitha, M. Thenmozhi, V. Dhayalan, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2009. 3-(4-Methoxybenzyl)-2-methyl-1-phenylsulfonyl-1H-indole *Acta Cryst*. **E65**, o847.

T. Kavitha, M. Thenmozhi, G. Gobi Rajeshwaran, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2009. (E)-Methyl 3-(2-methyl-1-phenylsulfonyl-1H-indol-3-yl)but-2-enoate. *Acta Cryst*. **E65**, o431.

T. Kavitha, M. Thenmozhi, R. Sureshbabu, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2009. Trimethyl 1-(2-methyl-1-phenylsulfonyl-1H-indol-3-yl) propane-1, 2, 3-tricarboxylate. *Acta Cryst*. **E65**, o264.

T. Kavitha, M. Thenmozhi, V. Dhayalan, A.K. Mohanakrishnan & M.N. Ponnuswamy. 2009. Diethyl-2-[(2-benzyl-1-phenylsulfonyl-1H-indol-3-yl) methylene] malonate. *Acta Cryst*. **E65**, o12.

T. Kavitha, S. Ponnuswamy, M. Jamesh, J. Umamaheshwari & M.N. Ponnuswamy. 2009. 1-Dichloroacetyl-3,3-dimethyl-2,6-diphenylpiperidin-4-one. *Acta Cryst.* **E65**, o10.

T. Kavitha, S. Ponnuswamy, M. Jamesh, J. Umamaheshwari & M.N. Ponnuswamy. 2008. 1-Chloroacetyl-3, 3-dimethyl-2, 6-diphenylpiperidin-4-one *Acta Cryst*. **E64**, o2041.

T. Kavitha, C. Revathi, M. Hemalatha, A. Dayalan & M.N. Ponnuswamy. 2008. N-Butylpyridine-4-thiocarboxamide. *Acta Cryst*. **E64**, o114.

T. Kavitha, S. Ponnuswamy,V. Mohanraj, S.S. Ilango & M.N. Ponnuswamy. 2007. 3-Ethyl-2, 6-bis (4-methoxyphenyl) piperidin -4-one. *Acta Cryst*. **E63**, o3985.

T. Kavitha, S. Ponnuswamy, K. Kaileshwaran & M.N. Ponnuswamy. 2007. 1-Acetyl-2, 6-bis (4-methoxyphenyl) – 3 – methyl – 4-piperidone. *Acta Cryst*. **E63**, o3648.

Research Work

The research work presented in my Ph.D work is designed to establish the crystal structure and conformation of some organic compounds. A docking study has also been carried out.

Heterocyclic compounds, especially five- and six-membered rings, have occupied an important place among organic compounds in view of their biological activities. Piperidine-4-ones are the important group of heterocyclic compounds in the field of medicinal chemistry due to their biological activities, including cytotoxic and anticancer properties. The skeletal ring of piperidine is contained in the molecules of many synthetic and natural medicaments. In view of this, crystal structure and conformation of some piperidine derivatives are elucidated.

The indole ring system is present in a number of natural products, many of which are found to possess antibacterial, antitumour, antidepressant, antimicrobial, and anti- inflammatory activities. In view of the medicinal importance, the crystal structure and conformation of some indole derivatives are studied.

Benzodiazepines are the important class of psychotherapeutic compounds. They are useful in treating anxiety, insomnia, agitation, seizures, and muscle spasms. In view of these importance crystal structures of two benzodiazepine derivatives have been carried out.

Crystal structures of three organic compounds, namely Imidazolidine, pyridine and carbazole derivatives have been studied for their biological importance.

Hepatitis C is an infectious disease affecting the liver, caused by the hepatitis C virus (HCV). Nearly 3% of the world's population is infected with Hepatitis C virus, and 3-4 million are infected every year. The extent and severity of hepatitis C has stimulated the development of many new antiviral compounds. The RNA dependent RNA polymerase (NS5B) from Hepatitis C virus (HCV) is a key enzyme in HCV replication and is a major target for the development of antiviral compounds. An attempt was made to dock four benzodiazepine derivatives with RNA dependent RNA polymerase (RdRp).

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