CURRICULUM VITAE

Home:

House Number: 116/C

Velayutham Road

Sivakasi – 626 123

Tamilnadu

India

B. Thangagiri

Assistant Professor of Chemistry

Department of Chemistry

Mepco Schlenk Engineering College

(An Autonomous Institution, Accredited by

NAAC with A-Grade by NBA and

Affiliated to Anna University, Chennai)

Mepco Engineering College Post

Sivakasi – 626 005, Tamil Nadu, India

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Researcher ID: E-9074-2011; ORCID: http://orcid.org/0000-0002-9301-9776; SCOPUS ID: 56580315800



To work with a leading team of scientific & technical people involved into area of novel synthetic organic and medicinal chemistry. I am looking forward to be part of an organizational team that is involved in field of teaching and synthesis of compounds with significant, broad spectrum biological activity.

Career Profile:

I worked as **Research Associate** (**RA**) in Synthetic Division, Medicinal Chemistry Laboratory, GVK BioSciences Private Limited (Contract Research and Development Organisation), Hyderabad, Telangana, India from 2004 to 2009. Then I worked as **Assistant Professor** in Department of Chemistry, P.S.R. Engineering College (Autonomous), Sivakasi 626140 from 2009 to 2011. Now, I am working as **Assistant Professor** in **Department of Chemistry**, **Mepco Schlenk Engineering College** (Autonomous), Mepco Engineering College Post, Mepco Nagar, Sivakasi 626005, affiliated to **Anna University**, Chennai, India from 2011 to tile date.

Educational Qualifications:

DEGREE/CERTIFICATE	PERIOD	PERCENTAGE/RANK	UNIVERSITY/ INSTITUTION
M.Phil. Chemistry	2003 – 2004	80.40 (Gold Medal, First Rank)	A. N. J. A. College, affiliated to Madurai Kamaraj University, Madurai, India.
M.Sc. Chemistry	2001 – 2003	81.72	A. N. J. A. College, affiliated to Madurai Kamaraj University, Madurai, India.
B.Sc. Chemistry	1998 – 2001	78.92	A. N. J. A. College, affiliated to Madurai Kamaraj University, India.
H.S.C. (XII Standard)	1997 – 1998	87.58	S. H. N. V. Higher Secondary School, Sivakasi, India.
S.S.L.C. (X Standard)	1995 – 1996	88.20	S. H. N. V. Higher Secondary School, Sivakasi, India.

M.Phil. Thesis: Synthesis and Characterization Studies of Calix[n]arenes and Calix[4]resorcarene Derivatives where n = 4, 6 & 8.

Outline of M.Phil. Research: Calixarenes having simple types synthesised and characterized using ¹H NMR, ¹³C NMR, FT–IR, UV and other available techniques.

M.Sc. Thesis: Computer Assisted Literature Survey in Organic Photochemistry: Photolysis of benzophenone and Maleic acid in Solution State.

Outline of M.Sc. Research: The databade of various type of organic photochemistry reactions' Journal were created with MS-Access & Visual Basic; further the photolysis study of benzophenone & Maleic acid in solution state was studied, characterized using TLC, ¹H NMR.



Research & Development Experience:

Designation	RESEARCH ASSOCIATE (RA)
Area of Work	Synthesis, purifications, characterization of impotant Medicinal and Organic Chemistry molecules, Building blocks, Compound Libraries, <i>etc</i> .
Duration	2004 to 2009
Organization	Synthetic Division, Medicinal Chemistry Laboratory, GVK BioSciences Private Limited, Hyderabad, India.

Academic Awards & Professional Affiliation:

- 1. First Rank holder in M.Phil. Program and Gold Medallist also.
- 2. Second Rank holder in M.Sc. Degree examinations
- 3. Awarded as a *Summer Research Fellow-20001* in Jawaharlal Neheru Centre for Advanced Scientific Research (JNCASR Deemed University), Bangalore 560 064, India.

Teaching Experience:

	PRESENT	PAST
Designation	ASSISTANT PROFESSOR (AP)	ASSISTANT PROFESSOR (AP)
Area of Work	Handling the following papers: Engineering Chemistry I (CY2111) Engineering Chemistry II (CY2161) Engineering Chemistry Laboratory (GS2165) Engineering Chemistry (13BS103) Engineering Chemistry Laboratory (13BS151) Environmental Sciences (13BS202) Environmental Chemistry Laboratory (13BS251)	Handled the following papers: Engineering Chemistry I (CY14) Engineering Chemistry II (CY24) Engineering Chemistry Laboratory (PCP18, GS28, PCP28) Environmental Sciences and Engineering (CY1201 & GE32)
Duration	2011 to till date	2009 to 2011
	Department of Chemistry,	Department of Chemistry,
Organization	Mepco Schlenk Engineering College (Autonomous),	P. S. R. Engineering College
	Mepco Nagar, Sivakasi – 626 005.	(Autonomous), Sivakasi – 626 140.

Details of Research Experiences: (In Reverse Chronological order)

- 1. *Pfizer, AstraZeneca R&D Project* (2004 to 2009): Synthetic Organic Chemistry Project: Worked for *Pfizer, Bristol-Mayer-Squib (BMS), Astra-Zeneca Research & Development Projects* towards synthesis and characterization of medicinally important building blocks, scaffolds, intermediate compounds generating analogues and compound Libraries in Synthetic Division, Medicinal Chemistry Laboratory, *GVK BioSciences Private Limited*, Hyderabad, India. (http://www.gvkbio.com/mchemistry/index.htm)
- 2. M.Phil. Research Project (2003 to 2004): "Synthesis and Characterization Studies of Calix[n]arenes and Calix[4]resorcarene Derivatives where n = 4, 6 & 8", Department of Chemistry (P.G), A. N. J. A. College, affiliated to Madurai Kamaraj University, Madurai, India.
- 3. M.Sc. Research Project (2002 to 2003): "Computer Assisted Literature Survey in Organic Photochemistry: Photolysis of benzophenone and maleic acid in solution state", Department of Chemistry (P.G), A. N. J. A. College, affiliated to Madurai Kamaraj University, Madurai, India.
- 4. Summer Research Fellowship Project (2001): "Computer Simulation of Super-cooled liquid" in Molecular Modelling Laboratory, Chemistry and Physics of Materials Unit (CPMU), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR Deemed University), Bangalore 560 064, affiliated to Indian Institute of Science (IISc), Bangalore, India.(http://www.jncasr.ac.in/bala/report.pdf)

Chemistry Software & Databases Handled:

ChemDraw Ultra, ChemOffice, ISIS Draw, MDL CrossFire – Beilstein CrossFire Databases, Spectral Database for Organic Compounds - SDBS, Molecular Modelling, Molecular Dynamics Software, Matlab 8.01 (Artificial Neural Network) and other scientific related software.

Instrument Handled:

Digital Chromatographic Separator (automated), UV-Visible spectrophotometer, digital spectrophotometer, digital conductivity-meter, digital pH-meter, electronic melting point instruments, while doing synthetic organic, bio-enzymatic reactions.

Reagents & Chemicals Handled:

- 1. Harpoon bases like LDA, NaHMDS, KHMDS, LiTMP, t-BuOK
- 2. Handled Na, K metal, NaSH, CH₃CH₂OK, NaOCH₃, NaSCH₃, *n*-BuLi, *s*-BuLi, *t*-BuLi, NaH, SOCl₂, Oxalyl chloride, POCl₃, POBr₃, NaBH₄, LAlH₄, DIBAL-H, NaN₃, Lewis acid like BF₃.Et₂O, Trimethyl Aluminum, thiol compounds, other Organo metallic reagents like Ferrocenes, Ru₂(OCO)₈, etc.
- 3. Peptide bond synthesis using coupling reagent like HOBT, HBTU, BOP, etc.
- 4. Synthesis and fictionalization of Heterocyclic compounds.
- 5. Handled Phase Transfer Catalyst (PTC) like 15-crown-5, 16-crown-5, 18-crown-6, etc.
- 6. Handled specific name reagent like Burgess Reagent, Lawesson's reagent, Dess-Martin Periodinane (DMP), etc.
- 7. Handled an enzymatic Reaction using enzyme like *Baker Yeast* at controlled pH.
- 8. Hands on experience with selective nitration, chlorination, bromination, iodination, metal reductions, Low temperature reactions (up to -150° C, using liquid N₂), High temperature reactions (up to 400° C, using *Dowtherm A*), inert atmosphere reaction, and Hydrogenation reactions.

Reactions carried out:

- 1. Naming reactions like Baeyer-Villiger reaction, Bartoli indole synthesis, Birch reduction, Buckwald-Hartwig reaction, Dess-Martin periodinane oxidation, Hetro Diels-Alder (HDA) reaction using *Danishefsky's Diene*, Grignard reactions, Heck reaction, Horner-Wadsworth-Emmons (HWE) reaction, Mannich reaction, Mitsunobu reaction, Negishi coupling, Pinner synthesis, Pinnick oxidation, Stork Enamine synthesis, Stille coupling, Suzuki coupling, Swern oxidation, Sharpless asymmetric epoxidation, Vilsmeier-Haack reaction, Wittig-Horner reaction, etc.
- 2. Ozonolysis, Sonication, carbonyl group insertion (by CO gas), carboxyl group insertion (by CO₂), selective bromination by NBS and DBDMH (using benzoyl peroxide and AIBN)
- 3. Reduction of double bonds, debenzylation by Pd/C, PtO₂, Raney Ni, 5 % Ru in alumina, 5% Rh in Carbon, Fe/acetic acid, Reductive cyclisation using trimethyl aluminium; reductive amination using NaCNBH₃, etc.
- 4. Peptide bond formation with HOBT, BOP, HATU, etc.
- 5. Reactions with biocatalyst Baker yeast at controlled pH
- 6. High pressure reactions using sealed tube, autoclave and microwave reactions etc.,
- 7. Functional group inter-conversions in multi-step synthesis.
- 8. Functional groups like amines, alcohols, -amino acid protection by specific reagents and their respective deportations.
- 9. Familiar with inert atmosphere reactions, low temperature and high temperature reactions.

Synthetic Chemistry Experience Includes:

- 1. Basic knowledge of synthetic strategy and the retro-synthetic analysis
- 2. Generation of Kinetically controlled enolates using LDA or LiHMDS
- 3. Preparation of enamines
- 4. Pd based chemistry & various condensation reactions

- 5. Grignard, Wittig & Mitsunobu Reactions
- 6. Protection & Deprotection reactions
- 7. Handling of phosgene, cyanide reagents
- 8. Chiral synthesis using chiral reagent or chiral catalysts
- 9. General reactions like oxidation, reductions using LAlH₄, DIBAL-H, etc,
- 10. Handling of amino acid derivatives in peptide bond formation
- 11. Hydrogenations including high-pressure, high-temperature types
- 12. Handling of Parallel Synthesizer for parallel synthesis
- 13. Handling Photochemical Reactions, Microwave Reactions, Ultrasonic Reactions, Autoclave Reactions.

Strength:

- 1. Able to perform reactions well independently as well as in professional team
- 2. Able to perform reactions from few milligrams to multi-gram scale level with desired purity
- 3. Able to monitor the reactions using TLC, FT-IR, GC, Mass, LC-Mass, ¹H-NMR, HPLC, Chiral-HPLC, etc.,
- 4. Purification of the synthesised compounds using Acid-Base treatment, Recrystallisation methods, Gravity Column Chromatography, Flash Column Chromatography, Ion Exchange Chromatography, Medium Pressure Liquid Chromatography (MPLC), Preparative Thin Layer Chromatography, High Vacuum Fractional Distillation Method, Preparative HPLC method, Preparative Chiral-HPLC method, solvent removal by *Lyphilizer* and then characterization of purified compounds using ¹H-NMR, ¹³C-NMR, FT-IR, Mass, LC-Mass, GG-Mass, GC, HPLC, UPLC, Specific Optical Rotation (SOR), Melting point, *etc.*,
- 5. Performed reactions in Autoclave, Microwave and Ultrasonic instruments.
- 6. Effective documentation of observations and interpretations with ChemOffice, MS-Office, ISIS Draw *etc.*

Computer Oualifications:

DIDI OLGA			
DIPLOMA /	PERIOD	PERCENTAGE /	UNIVERSITY / INSTITUTION
CERTIFICATE	ILMOD	GRADE	
H. D. C. A.			
Honours Diploma in	1999 - 2001	'B' Grade	CSC Computer Centre, Sivakasi, India
Computer Application			
C. I. T.			A L C II CCI L L M L
Certificate course in	1999 – 2001	76.50	A. J. College, affiliated to Madurai Kamaraj University, India.
Information Technology			Kamaraj Omversity, muia.
C. P. C.			
Certificate course in	1000 1000	76.00	A. J. College, affiliated to Madurai
Programming in 'C' and	1998 – 1999	76.00	Kamaraj University, India.
'C++' Languages			
C. D. T. P.			
Certificate course in	1999 – 2000	90.50	A. J. College, affiliated to Madurai
DeskTop Publishing			Kamaraj University, India.

Management skill Qualification:

CERTIFICATE	PERIOD	PERCENTAGE / GRADE	UNIVERSITY / INSTITUTION
C. E. M. Certificate course in Export Management	1999 – 2000	63.50	A. J. College, affiliated to Madurai Kamaraj University, India.

Computer Proficiency:

Languages : C, C++, FORTRAN, Basic, Visual Basic, & HTML 4.0

Databases : MS-Access, FoxPro, & Oracle 7.4
OS : Windows, MS-DOS & Linux
Applications : MS-Office & Multimedia software

FDP, STTP, Training, Induction Programs Attended:

1. The five day – five sessions training program for "*Communication Skill*" organized (2005) by Medicinal Chemistry Laboratory, GVK BioSciences Private Limited, Hyderabad, India.

- 2. One day program on "Intellectual Property (IP) & Confidence Management" organized (2007) by Medicinal Chemistry Laboratory, GVK BioSciences Private Limited, Hyderabad, India.
- 3. Attended the eight sessions training program about "*Lead towards Success*" organized (2007) by Medicinal Chemistry Laboratory, GVK BioSciences Private Limited, Hyderabad, India.
- 4. Participated in three day induction programme on "Teaching skills and Quality Education TEQ" organized (2009) by the Department of Electrical and Electronics Engineering & Research and Development Cell of P. S. R. Engineering College, Sivakasi 626 140.
- 5. Participated in one day program on "*Teacher Empowerment Program*" organized (2011) by the ISTE Chapter of P. S. R. Engineering College, Sivakasi 626 140.
- 6. Participated in two day program on "Faculty Induction and Training Program" organised (2011) by the ISTE Staff Chapter of Mepco Schlenk Engineering College, Sivakasi 626 005.
- 7. Participated in two day Workshop on "*Aakash for Education*" organized (2012) by the IIT Bombay, and Mepco Schlenk Engineering College, Sivakasi 626 005.
- 8. Participated in five day Faculty Development Program (FDP) on "Green Chemistry Frontiers and Challenges" organised (2013) by the Department of Chemistry, National Institute of Technology Calicut, Kerala 673 601.
- 9. Participated in TWO WEEK ISTE Short Term Training Programme (STTP) on "*Pedagogy for Effective use of ICT in Engineering Education*" organised (2015) by the IIT Bombay and Mepco Schlenk Engineering College (Autonomous), Sivakasi 626 005.
- 10. Participated in TWO WEEK ISTE Short Term Training Programme (STTP) on "*Environmental Studies*" organised (2015) by the IIT Bombay and Mepco Schlenk Engineering College (Autonomous), Sivakasi 626 005.

National INSPIRE Science Camp Organised:

- 1. Organised a Five day *INSPIRE Science Camp* with support of Department of Science and Technology (*DST*), New Delhi in Department of Chemistry, Mepco Schlenk Engineering College, Sivakasi during July 30 August 03, 2012.
- 2. Organised a Five day *INSPIRE Science Camp* with support of Department of Science and Technology (*DST*), New Delhi in Department of Chemistry, Mepco Schlenk Engineering College (Autonomous), Sivakasi during July 29 August 02, 2013.
- 3. Organised a Five day *INSPIRE Science Camp* with support of Department of Science and Technology (*DST*), New Delhi in Department of Chemistry, Mepco Schlenk Engineering College (Autonomous), Sivakasi during July 14 July 18, 2014.

National, International Symposium Attended:

- 1. Attended National Seminar on "*Recent Trends in Chemistry*" on 1st February 2002 organized by S. F. R. College for Women (Autonomous), Sivakasi.
- 2. Attended International symposium on "New Dimensions in Organic Synthesis" on 5th October 2007 organised by GVK BioSciences Private Limited, Hyderabad and Wyeth Pharmaceutical, USA.

Paper Presented in National Conference and Symposium:

1. Paper presented "The Computer Assisted Literature Survey in Organic Photochemistry" in the National Symposium on the Recent Development on Organometallic Chemistry, which organized (2003) by Manonmaniam Sundaranar University, Thirunelveli.

- 2. Paper presented "One-step acid-catalysied synthesis & photochemical studies of C-methylcalix[4] resorcinolarene" in the National Seminor on the Current Trends in Chemistry, which organized (2004) by Annamali University, Annamali Nagar.
- 3. Paper presented "Investigation on the effects of nanocerium oxide on the performance of Calophyllum Inophyllum (Punnai) biodiesel in a DI diesel engine" in the National Conference on the Current Trends and Developments in Sustainable Green Technologies, which organized (2015) by Anna University, Chennai.

List of Publications:

- 1. Physical Chemistry Calculation with 'C' Language, K. Karpagavel, **B. Thangagiri**, T. Sathish and P. Velusamy, ANJAC Journal of Sciences, **1** (2), 31-42 (2002).
- Experimental Investigations on the Influence of Properties of Calophyllum Inophyllum Biodiesel on Performance, Combustion, and Emission Characteristics of a DI diesel Engine, G. Vairamuthu, S. Sundarapandian and B. Thangagiri, International Journal of Ambient Energy, 1-9 (2015), DOI:10.1080/01430750.2015.1023838.
- 3. Investigation on the effects of nanocerium oxide on the performance of Calophyllum Inophyllum (Punnai) biodiesel in a DI diesel engine, G. Vairamuthu, S. Sundarapandian, C. Kailasanathan and **B. Thangagiri**, Journal of Chemical and Pharmaceutical Sciences, 7, 92-95 (2015).
- 4. Experimental investigation on the effects of cerium oxide nanoparticle on Calophyllum Inophyllum (punnai) biodiesel blended with diesel fuel in DI diesel engine modified by nozzle geometry, G. Vairamuthu, S. Sundarapandian, C. Kailasanathan and **B. Thangagiri**, Journal of Energy Institute, DOI:10.1016/j.joei.2015.05.005 (2015).
- 5. Use of Calophyllum Inophyllum biofuel blended with diesel in DI diesel engine modified with nozzle holes and its size, G. Vairamuthu, S. Sundarapandian and **B. Thangagiri**, Heat and Mass Transfer, DOI: 10.1007/s00231-015-1623-2 (2015).

Professional Membership:

- 1. Membership Certificate (2002) received from the American Association for the Advancement of Science (AAAS). (http://www.aaas.org/)
- 2. Member in the *International Journal of Multidisciplinary Research Academy (IJMDRA)*. (http://www.ijmra.us/search_members.php/)
- 3. Life member of *Indian Association of Chemistry Teacher (IACT) LM725 (http://www.iactindia.org/)*
- 4. Life member of *Indian Society for Technical Education (ISTE) -. LM83801 (http://www.isteonline.in/)*

The Role of Reviewer in the International Journals:

- 1. International Journal of Engineering Research and Technology (*IJERT*). (http://www.ijert.org/about-us/review-board/) Reviewer ID: IJERTREW679
- 2. International Journal of Engineering Research (*IJER*). (http://www.ijer.in/ijer/index.php/explore/layout/editorial-board/reviewers/joined-in-2014)
- 3. International Journal of Research in Engineering and Technology (*IJRET*). (http://ijret.org/ReviewBoard/) Reviewer ID: 20140324
- 4. International Journal of Scientific Engineering and Technology (*IJSET*). (http://ijset.com/ijset/index.php/editorial-board/reviewers/joined-in-2014/)
- 5. International Journal of Engineering and TechniQues (*IJET*). (http://www.ijetjournal.org/BoardMembers.htm)
- 6. International Journal for Research in Emerging Science and Technology (IJREST) (http://ijrest.net/reviewer-board.html/)
- 7. International Research Journal of Innovative Engineering (IRJIE) (http://www.irjie.com/reviewer-board)

- 8. International Journal of Advance Research and Innovative Ideas in Education (IJARIIE) (http://www.ijariie.com/reviewer/board)
- 9. World Journal of Engineering and Technology (WJET) (http://www.scirp.org/journal/wjet/)
- 10. Kuwait Journal of Science (KJS) (http://pubcouncil.kuniv.edu.kw/kjs/home.aspx?id=1&Root=yes)
- 11. International Journal of Materials Science and Engineering (IJMSE) (http://www.ijmse.net/)
- 12. International Journal of Computer and Mathematical Science (IJCMS)
- 13. International Journal of Sciences: Basic and Applied Research (IJSBAR)

The Role of Editorial Board Member in the International Journals:

- 1. International Journal of Emerging Technology and Innovative Engineering (IJETIE) (http://www.ijetie.org/editors.html/)
- 2. SSRG International Journal of Applied Chemistry (SSRG IJAC) (http://www.internationaljournalssrg.org/IJAC/index.html/)
- 3. International Journal of Innovative Technology and Research (IJITR) (http://ijitr.com/index.php/ojs/about/editorialTeam)
- 4. International Journal of Innovative and Applied Research (IJIAR) (http://http://journalijiar.com/editorial-board/)
- 5. International Journal of Chemical Sciences and Research (IJCSR) (http://www.ijcsr.in/Edboard.php)
- 6. The International Journal of Emerging Technology and Advanced Engineering (IJETAE) (http://ijetae.com/editorial_board.html)
- 7. International Journal in Physical and Applied Sciences (IJPAS) (http://www.ijmr.net.in/educational-board.php)
- 8. International Journal of Engineering Works (IJEW) (http://kwpublisher.com/?page=Editorial-Board-of-Committee)
- 9. International Journal of Advances in Engineering Research (IJAER) (http://www.ijaer.com/editorboard.html)
- 10. International Journal of Research in Science and Technology (IJRST) (http://www.ijaer.com/editorboard.html)

The Role as Campus Ambassador:

1. Acted as Campus Ambassador in Campus Ambassador Program for ICMRP-2014. (http://rsisinternational.org/ICMRP_Campus_Ambassador.html)

Extra Curricular Activities:

- Actively participated in various cultural programs from school onwards, Holding of 12 I prize and 4 II prize certificates in Elocution, Debate, Mono acting, Skit, Essay writing, verse writing, ChemQuiz and Group drama.
- ➤ Unit Divisional Leader of N.S.S. (National Service Scheme) for two years and participated in Two 10 days camp conducted by Madurai Kamaraj University, Madurai, India.
- Actively participated and presented posters in various *National Level Symposium*
- ➤ Joint Secretary of Post-Graduate Chemistry Department's Chemical Society Association of the year 2002.
- ➤ One of the **Editors** for the Mepco Newsletter from Mepco Schlenk Engineering College (Autonomous), Sivakasi 626005, India.

Personal Details:

Name : **THANGAGIRI, B.**Father's Name : Mr. A. Baskaran
Date of Birth : 7th April 1981

Sex : Male
Nationality : Indian
Marital Status : Married

Passport : **G5015823** (Issued in Truchirappalli)

Languages known : English, Tamil, Telugu (to speak only), Hindi

Permanent Address:

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References:

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Sivakasi – 626123, India	
Prof. R. Anantharam	Phone: +91 4562 254100 (Office)
Professor and Head	+91 4562 225005 (Residence)
The Department of Under Graduate (PG) Chemistry,	Mobile: +91 9443155852
A.N. J. A. College (Autonomous)	E-mail: vranantharam@yahoo.com
Sivakasi – 626123, India	vranantharam@gmail.com

DECLARATION

I, hereby, declare that all the information and statements given in this resume are true, complete and correct to the best of my knowledge and belief.

Sincerely Yours,

B. Thanga Giri

B. Thangagiri.