

National Institute of Technology, Tiruchirappalli:

Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Dr. Baby Viswambharan completed her Ph.D. from CSIR-NIIST (University of Kerala) under the supervision of Dr. P. Shanmugam in 2009. She then joined the research group of Prof. Sentaro Okamoto at Kanagawa University, Japan as a Frontier research Post-Doctoral Fellow. Later in 2011 she moved to the research group of Prof. Tien-Yau Luh as a National Science Council Post-Doctoral Fellow at National Taiwan University, Taiwan. After receiving the Marie Sklodowska Curie Research-Based University Chair of Excellence University Paris Sud (RBUCE-Up) Junior Research Fellowship, she joined the research group of Prof. Cyrille Kouklovsky and Dr. Valerie Alezra MSMT, ICMMO, Universite Paris Sud, France in 2012. She then continued her research as a Marie Sklodowska Curie International Incoming Fellow. She then returned to India as a lecturer at PSMO College, Malappuram in 2016 and later joined the National Institute of Technology Calicut as a temporary faculty in the year 2017. In 2018, he was awarded the Kerala State Council for Science, Technology, and Environment (KSCSTE) Post-doctoral fellowship and joined the research group of Dr. C. Lakshmi at the National Institute of Technology Calicut in 2019. In 2020, She joined the Department of Chemistry, National Institute of Technology as an Assistant Professor.



Her research interests focus on Target Oriented Organic Synthesis (TOOS), based on Photocatalysis & Organo catalysis for the construction of fused/spiro heterocycles with potent biological and photophysical properties. Also, she has a keen interest in tracking intermediates for a better understanding of the reaction mechanism.

1. Name: Dr. Baby Viswambharan
2. Designation: Assistant Professor
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5. Email (Primary): babyv@nitt.edu Email (Secondary)
:babyviswam@gmail.com
6. Field(s) of Specialization: Synthetic Organic Chemistry

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT, Trichy	May 2020	Present
KSESTE Pos-Doctoral Fellow	NIT, Calicut	May 2019	May 2020

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Temporary Faculty	NIT, Calicut	July 2017	April 2019
Lecturer	PSMO College, Kerala	November 2016	March 2017
Marie Sklodowska Curie International Incoming Fellow	Universite Paris Sud, France	October 2013	January 2016
Visiting Scientist	Brown University, USA	February 1- 28, 2014	One month
Marie Sklodowska Curie Co-Fund RBUCE-Up Fellow	Universite Paris Sud, France	January 2012	September 2013
Short Term Project Fellow	National Taiwan University, Taiwan	September 2011	October 2011 Two months
Frontier Post-Doctoral Fellow	Kanagawa University, Japan	September 2009	March 2011

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
PhD in Chemistry	NIIST-CSIR Trivandrum, Kerala University	2009	-	Organic Chemistry
MSc Chemistry	Mahatma Gandhi University, Kottayam, Kerala	2003	First Class	Chemistry
BSc Chemistry	Mahatma Gandhi University, Kottayam, Kerala	2001	First Class with Distinction	Chemistry(major) Physics, Mathematics
Pre-Degree	Mahatma Gandhi University, Kottayam, Kerala	1998	First Class	Chemistry, Physics, Mathematics

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Warden	OPAL-C and OPAL FF Mess, Girls Hostel, NIT T	November 2022	Present
First year B. Tech Chemistry Lab Co- Ordinator	Chemistry Department	August 2020	Present

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Member, Anti ragging committee Member	NIT Trichy	February 2021	June 2022
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10. Academic/Administrative Responsibilities outside the University: Nil

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2013	Marie Sklodowska Curie IIF	European Union
2011	Marie Sklodowska Curie Co-Fund RBUCE-Up	European Union & Universite Paris Sud
2007	Second prize for Oral Presentation	RAMMS, PSG College, Coimbatore

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2018	KSCSTE Post Doctoral Fellowship	Kerala State Council for Science, Technology, and Environment	May 2019	May 2020
2011	Marie-Curie IIF	European Union	October 2013	January 2016
2011	Marie-Curie Co-Fund RBUCE-Up	European Union & Universite Paris Sud	January 2011	September 2013
2007	CSIR-SRF	CSIR-India	January 2007	September 2009
2004	CSIR-JRF	CSIR-India	February 2005	January 2007

13. Details of Academic Work

(i) Curriculum Development

-Member of the Syllabus revisal committee for S3 B.Tech. (Chemical Engineering) course CLPC-11 Chemistry III

(ii) Courses taught at

-Postgraduate levels

CY7305- Molecular Spectroscopy-II for S3 M. Sc (NIT Calicut)

CY3093 Organic synthesis practical for S2 M. Sc (NIT Calicut)

Inorganic chemistry for Master of Science S1 and S3 (PSMO college)

Inorganic Chemistry lab for MSc (PSMO college)

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-Undergraduate levels

CHIR -11 Chemistry Theory for S1 & S2 B. Tech 1st year (NIT Trichy)

CHIR 12 Chemistry Practical for S1 & S2 B. Tech 1st year (NIT Trichy)

CLPC-11 Chemistry Theory for S3 B. Tech. Chemical Engineering (NIT Trichy)

CY2002- Organic chemistry Theory for S4 B. Tech. Chemical Engineering (NIT Calicut)

CY6392 Organic -Practical for. for S5 B. Tech Engineering Physics (NIT Calicut)

CY1001D-Chemistry Theory for S1 & S2 B. Tech 1st year (NIT Calicut)

CY1094D Chemistry practical for S1 & S2 B. Tech 1st year (NIT Calicut)

(iii) Projects guided at Postgraduate level

1. Pyridinium ylide: A potential synthon for Heterocyclic compounds (Jashashree Dehuray)
2. Synthesis and characterization of vinyl terminated-Polymethylhydrosiloxane for Low Earth Orbit application (Kailas Mahipal M)
3. Functionalization of electrophilic indole by cycloaddition reaction (Assim Muhammed)

(iv) Other contribution(s)

Institute level

1. Returning officer for student's council election-2022
2. Member of Mess tender committee 2022
3. Hostel admission duty for PG and UG and 2021 & 2022
4. Convocation duty-2022

Department level

5. Member of the PhD Certificate verification committee (Chemistry)
6. Member of the Certificate verification for convocation (Chemistry)
7. Member of the screening committee for selection of Temporary faculty (Chemistry)
8. Doctoral committee member for 5 candidates

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
COACCEE-SRG 2206	DST -SERB	December 2021	December 2023	Ongoing
Institute Start-up Grant P.20	NIT Trichy	April 2021	March 2023	Ongoing
KSCSTE-PDF1894	Kerala State Council for Science, Technology, and Environment	May 2019	May 2020	Completed
DYNAMAX-300491	European Union	October 2013	January 2016	Completed
RBUCE-Up N° 246556	European Union & Universite Paris Sud	January 2011	September 2013	Completed

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15. Number of PhDs guided (Ongoing -One, Ballanki Trinadh; completed Nil)

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
September 2013	Journées de Chimie Organique,	International	Paper presenter	French Chemical Society	Ecole Polytechnique, Palaiseau, France
January – 2008.	20th Kerala Science Congress	National	Paper presenter	Kerala State Council for Science, Technology, and Environment	KSCSTE center, Pattam
July- 2007	RAMMS 2007	National	Paper presenter	PSG College of Technology	PSG College of Technology Coimbatore
July, 2014.	14th Belgian Organic Synthesis Symposium	International	Poster presenter	Belgium Chemical Society	Louvain-la-Neuve, Belgium
July, 2013.	International Symposium: Synthesis in Organic Chemistry.	International	Poster presenter	Royal Chemical Society	St. Catherine's college, Oxford University, UK
August 2012.	4 th EuCheMS Chemistry Congress	International	Poster presenter	European Chemical Society	Prague, Czech Republic,
December, 2010.	Pacificchem 2010	International	Poster presenter	International Chemical	Honolulu, Hawaii

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				Congress of Pacific Basin Societies	
July 2008.	– Third mid-year meeting of the CRSI	National	Poster presenter	CRSI, India	NIPER Mohali
January-2006	Century Organic Chemistry and Chemical Biology	International	Poster presenter	American Chemical Society and CSIR India	National Chemical Laboratory (NCL), Pune,
July 2006	– Annual IIT Madras Chemistry Symposium & First mid-year meeting of the CRSI meeting	National	Poster presenter	CRSI & IIT madras Chennai.	IIT madras Chennai.
July 2005	Workshop on GREEN CHEMISTRY	National	Poster presenter	Department of Chemistry, MKU.	Madurai Kamaraj University.

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Online National Conference on Organic Chemistry NITT Organic Chemistry Conference '21	National	16-18, December-2021	Convener	Online

18. Invited Talks delivered

Topic	Date	Inviting Organization
Stereochemistry & Chirality Its Importance in life	23 rd October 2021.	Assumption College Changanassery, Kerala

19. Membership of Learned Societies

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Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Ordinary Member	Societe de Chimique France	No. 26239 for 2013
Ordinary Member	Royal Society of Chemistry	No. 518068 for 2013 and 2014
Ordinary Member	American Chemical Society	No. 31715021 for 2018-2019
Life Member	Marie-Curie Alumni Association	From 2011 onwards

20. Academic Foreign Visits: Nill after Joining NITT

Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Roupnel L., Guillot R., Gori D., Viswambharan B. , Kouklovsky C., Alezra V.	Highly Stereoselective Aldol Reactions by Memory of Chirality: Synthesis of Quaternary β -Hydroxy α -Amino Acids	Helvetica Chimica Acta	104(10)	e21001-27	2021	2.164
Mai, T.T., Viswambharan B. , Didier Gori, Guillot Régis, Naubron, J-V., Cyrille Kouklovsky, C., Alezra, V.,	Frozen Chirality of Tertiary Aromatic Amides: Access to Enantioenriched Tertiary α -Amino acid or Amino-Alcohol without any Chiral Reagent	Chemistry. A European Journal	23	5787–5798	2017	5.02
Viswambharan B. , Gori D., Guillot R., Kouklovsky C., Alezra V.,	Substrate Control in Enantioselective and Diastereoselective Aldol Reaction by Memory of Chirality:	Organic Letters	16	788-791	2014	6.005

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	A Rapid Access to Enantiopure β -Hydroxy Quaternary α -Amino Acids					
Mai Thi Thoa, Viswambharan B, Gori D., Kouklovsky C., Alezra V.	“Memory of Chirality of Tertiary Aromatic Amide: Application to the Asymmetric Synthesis of (S)- α -MethylDOPA	Journal of Organic Chemistry	77	8797-8801	2012	4.35
Viswambharan, B.; Okimura, T., Suzuki, S., Okamoto, S	Synthesis and Catalytic Properties of 4-Aryl-2,3-dihydro-4Hpyrimido[2,3-b]benzothiazoles for Asymmetric Acyl or Carboxyl Group Transfer Reactions	Journal of Organic Chemistry	76	6678-6685	2011	4.35
Viswambharan, B.; Suchithra M.V.; Selvakumar, K.; Shanmugam P.	Pyridine core activation via 1, 5- electrocyclization of vinyl pyridinium ylides generated from bromo isomerized Morita-Baylis-Hillman adduct of isatin and pyridine: Synthesis of 3-spirodihydroindolizine oxindoles	Organic Letters	12	2108-2111	2010	6.005
Shanmugam P.; Viswambharan, B.	A short and efficient synthesis of 3-spirolactone oxindolones from allyl indium reagent of isomerised bromo derivatives of Morita-Baylis-Hillman adducts of isatin and formaldehyde	Synlett	x	2763-268	2008	2.39
Shanmugam, P.; Viswambharan, B.; Suchithra M. V.	Synthesis of Novel Functionalized 3-spiropyrrrolizidine- and 3-spiropyrrrolidine oxindoles from Baylis-Hillman adducts of Isatin and	Organic Lettes	9	4095-4098	2007	6.005

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	Heteroaldehydes with Azomethine Ylides via [3+2]-cycloaddition					
Shanmugam, P.; Viswambharan, B.; Selvakumar, K.; and Suchithra, M. V.	Synthesis of multifunctional 3, 3'-dispiro pyrrolidine- and 3, 3'-dispiro pyrrolizidine bisoxindoles from isomerised Morita-Baylis-Hillman adducts of isatin with azomethine ylides via [3+2]-Cycloaddition	Tetrahedron Letters	49	2611-2615	2007	2.415
Shanmugam, P.; Viswambharan, B.; Vaithiyanathan, V.	Silica chloride catalysed one-pot isomerisation-chlorination, arylation and etherification of Baylis-Hillman adducts	Australian Journal of Chemistry	60	850-856	2007	1.32
Shanmugam P.; Suchithra M.V.; Selvakumar, K.; Vaithiyanathan, V.	A First One-Pot Synthesis, Isomerization and Synthetic Utility of Mono and Bis Morita-Baylis-Hillman Adducts of 1,1'-Ferrocenedialdehyde	Tetrahedron Letters	50	2213-2218	2009	2.415
Shanmugam, P.; Suchithra, M. V.; Viswambharan, B.; Vaithiyanathan.	Synthesis of highly functionalized linear pentacyclic compounds from Baylis-Hillman adduct of heteroaldehydes with azomethine ylides via [3+2] cycloaddition	Indian Journal of Chemistry	47B	1113-1116	2008	0.491
Shanmugam, P.; Vaithiyanathan, V.; Viswambharan, B. Suchithra, M. V.	A facile and efficient synthesis of highly functionalised trisubstituted alkene derivatives of ferrocenealdehyde	Tetrahedron Letters	48	9190-9194	2007	2.415
Shanmugam, P.; Rajasingh, P.;	Synthesis of 3-heteroaryl substituted	Synthetic Communicati	37	2291-2299	2007	2.007

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Vaithiyathan, V. Viswambharan, B.	tetrahydrofuran by n-Bu ₃ SnH mediated 5-exo-trig vinyl radical cyclization	ons				
Shanmugam, P.; Vaithiyathan, V.; Viswambharan, B.	A facile and efficient synthesis of functionalized γ -butyrolactone from Baylis-Hillman adducts of isatin	Australian Journal of Chemistry	60	296-301	2007	1.32
Shanmugam, P.; Vaithiyathan, V.; Viswambharan, B.	Activation of the NC-H bond of Baylis-Hillman adducts of N-methylisatin with CAN/ROH	Tetrahedron Letters	47	6851-6855	2006	2.415
Shanmugam, P.; Vaithiyathan, V.; Viswambharan, B.	Synthesis of functionalized 3-spirocyclopropane-2-indolones from isomerised Baylis-Hillman adducts of isatin	Tetrahedron	62	4342-4347	2006	2.457

(B) Conferences/Workshops/Symposia Proceedings: Nil

Author(s)	Title of Abstract/Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year

(C) Books & Monographs: Nil

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number