

BIO-DATA

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Objective:

To acquire a passion for research and teaching, and associate with young minds to innovate new ideas in the field of electrochemistry and nanotechnology.

Academic Qualifications:

- **From June 2014 – Present** - **Assistant Professor, University of Madras**
- **August 2012 – May 2014** - **Post doctoral Researcher**
Department of Chemistry,
National Tsing Hua University,
Hsingchu, Taiwan
- **October 2006 – August 2011** - **Doctor of Philosophy (Ph. D.,)**
Department of Organic Chemistry,
University of Madras, Chennai, India.
- **July 2003 - May 2005** - **Post graduation (M. Sc.,)**
Department of Inorganic Chemistry,
University of Madras, Chennai, India.
- **June 2000 - April 2003** - **Under graduation in Chemistry (B. Sc.,)**
Department of Chemistry,
Kandaswamy Kander's College, (Affiliated to
Periyar University), Chennai, India.

Awards / Honours:

- Awarded Council of Scientific and Industrial Research (CSIR) - JRF (NET) in 2006.
- Awarded GATE (Graduate Aptitude Test in Engineering) 2005 and 2006.
- Awarded Mr. Ramachandra Rao gold medal Award for the Best Ph.D thesis in 2012- University of Madras.
- July 2012 – May 2014, National Science Council Postdoctoral Fellowship (NSC), Taiwan
- Visiting Professor in National Tsing Hua University, Taiwan.

Research Area:

- Visible light mediated Photocatalysis,
- Electroorganic Synthesis
- Asymmetric Synthesis,
- Supramolecular chemistry and Dendritic probes.

Project Sanctioned as Principal Investigator:

1. Title : **Synthesis Of Polyheterocyclic Scaffolds By Visible-Light Photoredox Catalyst For The Treatment Of Anti-Cancer And Alzheimer's Disease**
Duration : 2021 – 2023 (Two years)
Funding Agency : RUSA
Amount Sanctioned : **14 lakhs**
2. Title : **Development of Visible Light Induced Copper (I) Catalysed Novel Organic Transformations.**
Duration : 2019 – 2021 (Three years)
Funding Agency : DST-SERB
Amount Sanctioned : **47.84 lakhs**
3. Title : **Hybrid Organic Materials for DSSC**
Duration : 2017 – 2019 (Two years)
Funding Agency : RUSA
Amount Approved : **10.2 lakhs**
4. Title : **Synthesis of Novel Dendrimers Supported Immobilized Pyrrolidine and Their Catalyzed Asymmetric Reaction.**

Duration : 2015 – 2018 (Three years)
 Funding Agency : DST-SERB, Start up Research Grant (Young Scientist)
 Amount Approved : **25.6 lakhs**

5. Title : **Synthesis of PEG-dendritic block copolymers for the preparation of intelligent polyion complex micelles and drug delivery applications**

Duration : 2015 – 2017 (Two years)
 Funding Agency : UGC, Start up Research Grant,
 Amount Approved : **6 lakhs**

Projects Completed: at University of Madras (June 2014 – June 2021)

- ✓ **Project Assistants: 2**
- ✓ **M. Phil Dissertation: 8** (Completed); Ongoing: **1**
- ✓ **M. Sc., Dissertations: 19** (Completed); Ongoing: **5**
- ✓ **External Projects: 3** (Completed)

Research Publications:

Total Articles Published (19):

S.N O	TITLE	AUTHORS	JOURNAL NAME	YEAR/VOL/ PAGE NO.
1.	Photoredox-catalyzed chemoselective aerobic C α -H oxidation of propargylamines: synthesis of substituted 2-ynamide and oxazolo[2,3-a]isoquinolinone derivatives	Mandapati Bhargava Reddy, Nalladhambi Neerathilingam and Ramasamy Anandhan*	Org. Chem. Front., (I.F: 5.155)	2021, 8, 87-93
2.	Gold-like Thiolate-Protected Ultrasmall Cubic Copper Nanocluster-Based Metal–Organic Framework as a Selective Catalyst for Stepwise Synthesis of Unsymmetric Bistriazole by Click Reaction	Ramadurai Murugan, Mandapati Bhargava Reddy, Prabhu Pandurangan, and Ramasamy Anandhan*	ACS Applied Materials & Interfaces, (I.F: 8.58)	2020, 12, 56004-56016

3.	Visible-light induced copper(I)-catalyzed oxidative cyclization of o-aminobenzamides with methanol and ethanol via HAT	Mandapati Bhargava Reddy, Kesavan Prasanth and Ramasamy Anandhan*	Org. Biomol. Chem., (I.F: 3.56)	2020, 18, 9601-9605
4.	Visible light initiated amino group ortho-directed copper (I)-catalysed aerobic oxidative C(sp)-S coupling reaction: synthesis of substituted 2-phenylbenzothiazoles via thia-Wolff rearrangement	Mandapati Bhargava Reddy, Ramasamy Anandhan*	<i>Chemical Communications</i> (I.F: 6)	2020, 56, 3781-3784
5.	Development of novel triazole based dendrimer supported spiroborate chiral catalysts for the reduction of (E)-O-benzyl oxime: an enantioselective synthesis of (S)-dapoxetine	Ramasamy Anandhan,* Mandapati Bhargava Reddy, Murugesan Sasikumar	<i>New Journal of Chemistry</i> (I.F: 3,28)	2019, 43, 15052-15056
6.	Synthesis of (R)-2-benzylmorpholine employing catalytic stereospecific rearrangement of L-Phenylalaninol	Bhargava Reddy Mandapati, Ramasamy Anandhan*	<i>Letters in Organic Chemistry</i> (I.F: 0.78)	2019, 16, 633-636
7.	Synthesis and anti-inflammatory activity of triazole based macrocyclic amides through click chemistry	Ramasamy Anandhan,* Ayyavoo Kannan, Perumal Rajakumar	<i>Synthetic Communications</i> (I.F: 1.37)	2017, 47, 671-679
8.	Synthesis and Optical, Electrochemical Properties of Glucose Cored Ferrocenyl Dendrimers	Ayyavoo Kannan, Ramasamy Anandhan,* Perumal Rajakumar	<i>Synthetic Communications</i> (I.F: 1.37)	2017, 47, 541-550
9.	“Vanadyl species-catalyzed complementary β -oxidative carbonylation of styrene derivatives with aldehydes”	Wen-Chieh Y, Shiue-Shien w, Anandhan R, Gobi Rajeshwaren	<i>Org. Biomol. Chem</i> (I.F: 3.56)	2015, 13, 2385-2392

10.	"Synthesis, H ₂ PO ₄ ⁻ and Pd ²⁺ ion sensing and gold nanoparticle encapsulation of ferrocenyldendrimers by a green chemistry approach"	Perumal Rajakumar, Ramasamy Anandhan , Devaraj Manoj, Jayadevan Santhanalakshmi	RSC <i>Advances</i> (I.F: 3.05)	2014, 4, 4413-4419
11.	"Synthesis and cadio protective biological applications of glucodendrimers by H9C2 cell studies"	Perumal Rajakumar, Ramasamy Anandhan , Gangadhar Prasadachari Vadla, Elangovan Vellaichamy	<i>Carbohydrate Polymer</i> (I.F: 6.04)	2014, 99, 403-414
12.	"Synthesis, photophysical and electrochemical properties of 1,2,3-triazolyl bridged ferrocenyl dendrimers through click chemistry"	Perumal Rajakumar, Ayyavoo Kannan, Ramasamy Anandhan	<i>New J. Chem</i> (I.F: 3.06).	2014, 38, 1594-1600
13.	"Synthesis, optical and electrochemical studies on dicationic flurenophanes"	Perumal Rajakumar, Ramasamy Anandhan	<i>Synthetic Communications</i> . (I.F: 1.37)	2013, 43, 882-892,
14	"Synthesis and characterization of some novel glycodendrimers and N-alkyldendrimers with amide core and triazole functionality through click chemistry"	Perumal Rajakumar, Ramasamy Anandhan	<i>Synthetic Communications</i> (I.F: 1.37)	2013, 43, 2217-2225
15	"Synthesis and In-vitro antiinflammatory and anti-arthritis activity of novel glycodendrimers with various carbohydrates as surface functionality"	Perumal Rajakumar, Ramasamy Anandhan	Supramolecular chemistry (I.F: 1.07)	2013, 25, 362-370,
16	"Triazole based ferrocenyldendrimers as a medium for the encapsulated of Palladium	Perumal Rajakumar, Ramasamy Anandhan ,	Synlett (I.F: 2.36)	2013, 24, 575-580,

	nanoparticles”	Sampath Malathi, Sengottuvelan Balasubramanian		
17	“1,2,3-Triazole ferrocenyldendrimers through click chemistry approach and their optical and electrochemical properties”	Perumal Rajakumar, Ramasamy Anandhan , Ayyavoo Kannan,	Aust. J. Chem. (I.F: 1.22)	2012 , 65, 1457-1462
18	“Synthesis and In-vitro antiinflammatory activity of novel glycodendrimers with benzene 1,3,5 carboxamide core and triazole as branching unit”	Perumal Rajakumar, Ramasamy Anandhan	Eur. J. Med. Chem. (I.F: 4.18)	2011 , 46, 4687-4695,
19	“Click chemistry approach for the synthesis of water-soluble glycodendrimers with triazole as building unit”	Perumal Rajakumar, Ramasamy Anandhan , Venkatesan, Kalpana	Synlett (I.F: 2.36)	2009 , 9, 1417-1422,

Invited Talks/Guest Lectures (13):

1. Lecture on “Basic Concept of Chirality and Asymmetric Synthesis” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on May 30th, 2018.
2. Lecture on “Basic Concept of Chirality and Asymmetric Synthesis” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on May 26th, 2018.
3. Lecture on “Asymmetric Synthesis in Organic Chemistry” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on May 24th, 2018.
4. Invited talk on Synthesis of Novel Dendrimers and its Materials & Biology Application. R. Anandhan, For “**Advanced Materials and Supramolecular Chemistry**” organized by Department of Chemistry, SSN college of Engineering, held on 21st January 2017.
5. Lecture on “Basic Concept of Chirality and Asymmetric Synthesis” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on Jun 08th, 2017.

6. Lecture on “Asymmetric Synthesis in Organic Chemistry” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on Jun 02nd, 2017.
7. Lecture on “Asymmetric Synthesis in Organic Chemistry” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on Jun 14th and Jun 08th, 2016.
8. Lecture on Synthesis of Novel Glucodendrimers and Ferrocenyldendrimers and its Biology and Materials Application. R. Anandhan, For **Academic Staff College - UGC Refresher Course** organized by The Department of Organic Chemistry, University of Madras on 11th to 31st August 2015.
9. Lecture on “Basic Concept of Chirality and Asymmetric Synthesis” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on June 12th, 2015.
10. Lecture on “Basic Concept of Chirality and Asymmetric Synthesis” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on June 6th, 2015.
11. Lecture on “Basic Concept of Chirality and Asymmetric Synthesis” at **Summer Training Programme in Chemistry [STPIC] for PG students** organized by **Science City & The Academy of Sciences**, Chennai on June 01th, 2015.
12. Guest Lecture in one-day Seminar on “ChemFest-2015” in Shanmuga Industries Arts & Science College, Tiruvannamalai, on February 25th, 2015.
13. Lecture on “Novel Reagents in Organic Chemistry” at **CSIR-UGC NET [Chemical Sciences] Coaching Classes** organized by **University Student Advisory Bureau (USAB), University of Madras**, Chennai on June 11th, 2014.

Research work presented in the International / National Conferences/ Workshop:

LIST OF INTERNATIONAL CONFERENCES

1. Chairing a Session on “2nd International Conference on Recent Trend in Analytical Chemistry (ICORTAC - 2018)” organized by Department of Analytical Chemistry, University of Madras during 15th - 17th of March, 2018.
2. Oral Presentation entitled “Click chemistry approach of synthesis of 1,2,3-triazolelinked ferrocenyldendrimers with amide core functionality and their electrochemical studies” International conference on supramolecular chemistry and nanomaterials held at University of Mumbai, Mumbai, India, Feb 14th-16th, 2011.

3. Oral Presentation entitled “Click chemistry approach for the synthesis of biologically active water soluble triazole based glycodendrimers” International conference on recent research trends in chemical science held at VIT university, Vellore, Tamil nadu, India, Dec 02th-06th, 2009.

LIST OF NATIONAL CONFERENCES

1. Organized committee member in One-day Seminar on “ONE DAY PROGRAM ON RECENT TRENDS IN ORGANIC SYNTHESIS’ Organized by The Faculty and Students of Department of Organic Chemistry on May 10th, 2016 held at Department of Organic Chemistry, University of Madras, Chennai-25.
2. Oral Presentation entitled “Click chemistry assembly of 1,2,3-Triazole-linked ferrocenyldendrimers” Recent trends in chemistry held at Government arts college Selam-7, Tamil nadu, India, March 14th, 2011.
3. Presented a poster entitled “Synthesis and photophysical properties of conjugated dendrimers bearing pyrene as peripheral and phenylene vinylene group as core groups” 11th CRSI National Symposium in Chemistry held at National Chemical Laboratory, Pune, India, Feb 6th-8th, 2009.

LIST WORKSHOP/SEMINARS/SYMPOSIUM

1. “Synthesis of novel glucodendrimers and their biological applications of cardio protective H9C2 cell”, R. Anandhan, Poster Presentation in INDO-GERMAN workshop on “**Recent Applications of Carbohydrates in Chemistry and Biology (RACCB-2017)**” organized by Indian Institute of Technology (BHU)-Varanasi, Varanasi held on August 14-16th, 2017.
2. Participated in **National Seminar on Recent Analytical and Characterisation Techniques (RACT-2017)** conducted by Department of Chemistry, Guru Nanak College (Autonomous) Velacherry, Chennai on January 4th, 2017.
3. Participated in **one-day Seminar on “Experimental Methods in Chemistry”** sponsored by RSC - South India Section on October 17th, 2015 held at Department of Analytical