### Dr. A. SIVA M.Sc., Ph.D., FASCh

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### **1. Personal Details**

Date of Birth & Age	: 03/06/1977
Gender & Marital Status	: Male
Community	: MBC
Nationality	: Indian
Place of Birth	: Dindigul

### 2. Educational Qualifications

#### 2.1. Academic

Degree/ Examination	Name of the Exam	University/ Institute	Year of Passing	Percentage/ Grade	Main Subject
Under	BSc	Gandhigram	1997	First	Chemistry
Graduate		University			
Post Graduate	MSc	Gandhigram	1999	First	Chemistry
		University			

#### 2.2. Research

Degree	Name of the	Title of the Thesis	Date of	Date of
	University		Submission	Award
PhD	Gandhigram University	Synthesis, characterization of achiral and chiral multi-site phase-transfer catalysts and their applications to various organic reactions	29/08/2005	24/4/2006

#### 3. Post-Doctoral / Research Associate / Industrial Experience

Name of the University / Institute /	Period of Work	Nature of Work
Industry		
Department of Chemical	22/08/2007 to	Research Professor
Engineering, Pohang University of	16/10/2010	
Science and Technology		

(POSTECH), Pohang, South Korea.		
Syngene International Pvt Ltd, A Biocon Company, Bangalore, Karnataka	03/10/2005 to 09/08/2007	Associate Scientific Manager

### **4.** Professional Experience

No	Name of the University /	Position Held	From	To (Date)
	Institution		(Date)	
1	Department of Inorganic	Associate Professor	18/10/2020	Till Date
	Chemistry, School of			
	Chemistry, Madurai Kamaraj			
	University, Madurai			
2	Department of Inorganic	Assistant Professor	18/10/2010	17.10.2020
	Chemistry, School of			
	Chemistry, Madurai Kamaraj			
	University, Madurai			

## 5. Teaching

No	Year	Semester	Course	Course Title	Hours per
			Code		Week
1	2022-23	Ι	CHE2212C	Inorganic Chemistry I	7
			CHE2215E	Nanoscience and	
				Environmental Chemistry	
2	2022-23	II	CHE2222C	Inorganic Chemistry II	11
			CHE2224C	Inorganic Chemistry	
				Practical	
			CHE2225E	Elective	
3	2022-23	III	CHE2133C	Applications of	6
				Spectroscopy and	
				Magnetism	
			CHE2135E	Elective	
4	2022-23	IV	CHE2142	Inorganic Chemistry IV	3
5	2022-23	M.Phil	-	Advanced Inorganic	3
		(I Sem)		Chemistry	

### 6. Design/Development of New Curricula and Courses

No	Description	Organization for which it was Developed	Level (PG/UG)
1	M.Sc Chemistry (General Chemistry)	Department of Chemistry, Manonmaniam Sundaranar University	PG
2	M.Sc Chemistry (General Chemistry)	School of Advaced Sciences, Dept. of Chemistry, Vellore Institute of Technology, Vellore	PG

### 7. Creation of ICT Mediated Teaching-Learning Pedagogy: --

### 7.1. SWAYAM / MOOCs ----

No	Description	Organization for which it was Developed	Level (PG/UG)

### 7.2. E-Contents : Nil

No	Description	Organization for which it was Developed	Level (PG/UG)

### 7.3. Development of other ICT Mediated Teaching-Learning Pedagogy : Nil

No	Description	Organization for which it was Developed	Level (PG/UG)

### 8. Research Specialization / Field of Research

- Asymmetric Synthesis
- Chemosensor
- Organic Photovoltaics.
- Supramolecular Chemistry
- Organometallic Chemistry

### 9. Research Publications

Туре	International	National	
Papers Published in UGC-CARE Listed Journals	107		
Papers in Refereed Journals (Not mentioned above)			
Books Published	1		
Books Edited			
Contributions to Book Chapters	1		
Editor of Conference/Seminar Proceedings			
Papers Published in Conference/Seminar Proceedings	4		
Papers Presented in Conferences/Seminars	42	24	
Deposits in CCDC, PDB, etc.	2		

### **10. Citation Metrics**

Cumulative Impact Factor (Recent Annual JCR)	436
Total Citations (Scopus/Web of Science)	1420
h-Index (Scopus/Web of Science)	24
g-Index (Scopus/Web of Science)	
i10 Index (Scopus/Web of Science)	54

### **11. Details of Patents : Nil**

### 12. Research Guidance/Supervision

Degree / Programme	Completed	Submitted	Ongoing
PhD (Full-time)	12	1	2
PhD (Part-time)	3		1
MPhil Research Project (Full-time)	18		
MPhil Research Project (Part-time)			
MSc Projects/Dissertation	32		3
MSc Internships/Summer or Winter Projects	2		

# **13. Funded Research Projects** *13.1. Ongoing*

No	Title of the Project	Funding	Period /	<b>Total Grants</b>
		Agency	Duration	Sanctioned (Rs)
1	Development of Functional	RUSA, MHRD	2021-2023	1,67,00000
	Nanomaterials for Green			(One of the PI,
	Energy and Environment			Group Project)
2	Synthesis and Studies of D-A- $\pi$ -A-D Type Weak Donor [Thieno(Indenoindole)] and Strong Acceptors Based Polymers Solar Cell	TANSCHE, Chennai, Tamilnadu	2020-2023	38,16,500

### 13.2 Completed

No	Title of the Project	Funding Agency	Duration and Month & Year of Completion	Total Grants Received (Rs)	No of Papers out of Project
1	Stimuli-response supramolecular assembly	DST- SERC, Fast Track, New Delhi	2012-2015	24,55,000	13
2	Perpendicularly Aligned Organic Nanotubes for Photonics and Optoelectronics	CSIR- HRDC, New Delhi	2012-2015	22,93,000	9
3	Molecular engineering approach for Dye sensitized solar cells	UGC- Major Research, New Delhi	2012-2015	6,00,000	7
4	Triarylamine and Carbazole-Based Hole Transporting Materials and Their Applications in Efficient Organic Solar Cells	DST- SERB, EMR, New Delhi	2016-2019	40,26,000	14
5	Investigation of New	DST-CERI,	2016-2019	23,36,000	15

	Hole Transporting Materials for Efficient Perovskite Organic- Inorganic Hybrid Solar Cells	New Delhi			
6	Supramolecular Architectures of Azo Derivatives: Properties and Applications	CSIR, HRDC, New Delhi	2017-2020	9,00,000	13

### 14. Reviewer in Journals

Name of the Journal	Publisher	No of Papers Reviewed
Inorganic Chemistry Communictions	Elsevier	14
Molecular Catalysis A: Chemical	Elsevier	1
Tetrahedron Letters	Elsevier	6
Sensor and Actuators B: Chemical	Elsevier	13
Dyes and Pigments	Elsevier	6
Spectrochimica acta	Elsevier	3
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	Elsevier	16
Journal of Photochemistry and Photobiology A: Chemistry	Elsevier	9
Analytica Chimica Acta	Elsevier	3
New Journal of Chemistry	Royal Society of Chemistry	7
RSC Advances	Royal Society of Chemistry	4
Organic and Biomolecular Chemistry	Royal Society of Chemistry	3
Chemical Communications	Royal Society of Chemistry	1
Photochemical & Photobiological	Royal Society of	2
Sciences	Chemistry	
Journal of Materials Chemistry A	Royal Society of Chemistry	2
Journal of Fluorescence	Springer	4
Research on Chemical Intermediates	Springer	3
Chemistryselect	Willey Inter Sciences	12
Energy and Fuels	American Chemical Society	6
Organic Letters	American Chemical Society	2
Advanced Energy Materials	American Chemical Society	3
Synlett	Thieme	4
Journal of Physical Chemistry C	American	2

Chemical Society	

### **15. Research Collaborations**

Name of the Collaborator	Institute	Collaboration Details
Prof. Taiho Park	POSTECH, South	DSSC, device fabrication and
	Korea	analysis
Dr. S. Easwaramoorthi	CLRI, Adyar,	Ultra-fast process analysis
	Chennai	
Dr. R. Easwaramoorthi	ARCI, Hyderabad	Perovskite Solar cell analysis
		and characterization

### **16.** Countries Visited

Name of the Country	Period	Purpose
South Korea	2007	Research Professor
Japan	2009	International Conference

### 17. Honours / Awards / Recognitions

Name of the Honours / Awards / Recognition	Awarding Agency	International / National / State / Institute Level
Fellow of Academy Sciences	FAS, Chennai, Tamil nadu	State Level
Brain of Korea Research fellow-2007	POSTECH, South Korea.	International Level
Young scientist fellow (DST-Fast Track)	DST-SERC	National Level
Best research award (Kalvi Valarchi naal, MKU, 2017)	MKU, 2017	Institute Level

### 18. Conferences / Seminars / Workshops Organized

Level	<b>Conference Title</b>	Date(s)	Place	<b>Role Played</b>	Funding
International	International	May 16-17,	MKU	Organising	CSIR, DST
	conference on	2019		Secretary	
	recent trends in				
	Chemistry and				
	Biosciences-2019				
	(ICRTCB-2019)				
	May 16-17, 2019				

### **19. Invited Lectures / Resource Person**

No	Institute /	Name of the Conference /	International / National	Date(s)
	Organizer	Seminar / Workshop	/ State / Institute Level	
1	MKU	Academic Staff College, Madurai Kamaraj University,	Institute Level	25-07-2015
		Madurai, Tamil Nadu		

		Refresher Resource person: Stimuli Responses of Azo macromolecules		
2	MKU	Academic Staff College, Madurai Kamaraj University, Madurai, Tamil Nadu Refresher Resource person: Novel Hole Transport Materials for Dye Sensitized Solar Cells	Institute Level	29-11-2016
3	Bhrathiar University	Recent Treads in Dye Sensitised Solar Cells	Institute Level	07.02.2018
4	Bhrathiar University	New Approaches for the Design of Asymmetric Catalysts: Applications in Various Organic Reactions	National Level	14.08.2020

### 20. Professional Development Programs / Faculty Development Programs Organized: -

Name of the Program	Role	Place	Date(s)	Funds in Rs & Sponsor

### 21. Professional Development Programs / Faculty Development Programs Attended

Name of the Program	Place	Date(s)	Sponsor
Orientation Course, Academic	Madurai Kamaraj	27 <sup>th</sup> July 2011	UGC
Staff College, MKU, India	University, Madurai	to 23 <sup>rd</sup> August	
		2011 (Four	
		weeks)	
Refresher Course, Academic	Madurai Kamaraj	12 <sup>th</sup> July 2012–	UGC
Staff College, MKU, India	University, Madurai	1 <sup>st</sup> August	
		2012. (Three	
		weeks)	
Refresher Course, Academic	Madurai Kamaraj	1 <sup>st</sup> February	UGC
Staff College, MKU, India	University, Madurai	$2018 \text{ to } 21^{\text{st}}$	
		February 2018	
		(Three weeks)	
		4	
Novel Applications of Waste	M S RAMAIAH	9 <sup>th</sup> March 2020	AICTE
technology Systems for	INSTITUTE OF	to 13 <sup>th</sup> march	training and
Sustainable Future	TECHNOLOGY,	2020	learning
	Bengaluru		Academy,
			New Delhi
Research Methodology	26 <sup>th</sup> April 2021 to 1 <sup>st</sup>	Kamala Nehru	MHRD,
	May 2021	Mahavidyalaya,	New Delhi
		Nagpur	
Green Technology and	Athiyamaan College	2 <sup>nd</sup> August	AICTE

Sustainability in Chemistry	of Engineering, Hosur	2021 to 6 <sup>th</sup>	training and
		August 2021	learning
			Academy,
			New Delhi

### 22. Administrative Experiences

Role Played	Responsibilities	Period (from to)
Coordinator-Campus	Campus interview arrangement-	2011-2013
Interview (SOC)	M.Sc, M.phil and Ph.D students	
	(Chemistry)	
SOC, Chemical Store	Maintain the stock register and	2012-2015
In charge	Purchase of chemicals	
Analytical instruments	Maintain instruments	2015-till date
in charge (HPLC,		
DSC-TGA, EPR)		
Exam Coordinator	Preparing time tables, exam	2020 to till date
(SOC)	schedule, Exam Hall arrangements	
Building Coordinator	School of Chemistry Building	2022- till date
	Maintenance	

### 23. Membership in Academic Bodies

Duration / Date range	Details of activity		
(In chronological order)			
12.2.2014	Constitution of doctoral committee meeting at Anna University,		
	Dindigul.		
12.2.2014	M.Sc programme examination question setter, at Manonmaniam		
	Sundaranar University, Tirunelveli		
21.02.2014	Constitution of doctoral committee meeting at VIT university,		
	Vellore.		
14.03.2014	Doctoral Committee meeting-External Member, Gandhigram		
	Rural University, Gandhigram, Dindigul.		
19.08.2014	Doctoral Committee meeting-External Member, Gandhigram		
	Rural University, Gandhigram, Dindigul.		
30.10.2014	Constitution of doctoral committee meeting at VIT university,		
	Vellore.		
15.11 2014	Gandhigram Rural Institute-DU, Ph.D chemistry, semester		
	examination valuation of answer papers, Gandhigram		
15.12 2014	Gandhigram Rural Institute-DU, M.Sc chemistry, semester		
	examination valuation of answer papers, Gandhigram		
06.02.2014	Constitution of doctoral committee meeting at VIT university,		
	Vellore.		
12.03.2015	External examiner for Ph.D. public viva voce examination at		
	Prist University, Tanjore.		

25.03.2015	External examiner for Ph.D. public viva voce examination at Prist University, Tanjore.
21.04.2015	Doctoral Committee meeting-External Member, Gandhigram Rural University, Gandhigram, Dindigul.
30.04 2015	Gandhigram Rural Institute-DU, M.Sc chemistry, semester examination question setter, GRI, Gandhigram
07.05.2015	External examiner for Ph.D. public viva voce examination at Prist University, Tanjore.
9.04.2015	External examiner for M.Sc. project evaluation and viva voce examination at Lady Doak College, Madurai.
25.06. 2015	Gandhigram Rural Institute-DU, Ph.D chemistry, semester examination valuation of answer papers, Gandhigram
15.10.2015	Doctoral Committee meeting-External Member, Gandhigram Rural University, Gandhigram, Dindigul.
30.11 2015	Gandhigram Rural Institute-DU, M.Sc chemistry, semester examination question setter, GRI, Gandhigram
4.2.2016	Adjudicators of Ph.D thesis evaluation, VIT University, Vellore.
12.02. 2015	Gandhigram Rural Institute-DU, Ph.D chemistry, semester examination valuation of answer papers, Gandhigram
28.3.2016	Subject expert for selection committee, DST-SERB project, Thiagarajar college, Madurai
30.03. 2016	Bharathidasan University, M.Sc chemistry, semester examination question setter, BDU, Tiruchirappalli.
28.04. 2016	Bharathidasan University, M.Phil chemistry, semester examination question setter, BDU, Tiruchirappalli.
16.12 2016	Gandhigram Rural Institute-DU, M.Sc chemistry, semester examination question setter, GRI, Gandhigram
22.12 2016	Gandhigram Rural Institute-DU, M.Phil chemistry, semester examination question setter, GRI, Gandhigram
26.12.2016 to 7.1-2017	Mother Teresa womens university, PG chemistry, semester examination valuation of answer papers, Theni
20.04. 2017	Bharathidasan University, M.Sc., chemistry, semester examination question setter, BDU, Tiruchirappalli.
27.04 2017	Gandhigram Rural Institute-DU, M.Sc., chemistry, semester examination question setter, GRI, Gandhigram
07.06.2017 to 18.6.2017	Mother Teresa womens university, PG chemistry, semester examination valuation of answer papers, Theni
22.05.2017	Constitution of doctoral committee meeting at VIT university, Vellore.
08.11.2017	Gandhigram Rural Institute-DU, External examiner for M.Sc., Chemistry practicals. Gandhigram
30.10.2018	Gandhigram Rural Institute-DU, External examiner for M.Sc.,

	Chemistry practicals. Gandhigram		
10.12.2018	Gandhigram Rural Institute-DU, External examiner for M.Sc.,		
	Chemistry paper evaluation, Gandhigram		
29.10.2019	Gandhigram Rural Institute-DU, External examiner for M.Sc.,		
	Chemistry practicals. Gandhigram		
04.12.2019	Doctoral Committee meeting-External Member, Manonmaniam		
	Sundaranar University, Tirunelveli.		
03.07.2020	Constitution of doctoral committee meeting at VIT university,		
	Vellore.		
11.09.2020	Constitution of doctoral committee meeting, Bharathiar		
	University, Coimbatore.		
21.10.2020	Constitution of doctoral committee meeting at VIT university,		
	Vellore.		

### 24. Membership in Recognised Professional Bodies

Name of the Professional Body	International / National	Type of Membership
Korean polymer society	International	Life member
CRSI	National	Life Member

### 25. Languages Known

Languages	Read	Write	Speak
Tamil	Yes	Yes	Yes
English	Yes	Yes	Yes

### **26.** Competence in Computer Applications

### 27. Involvement in Extension Activities other than Academic Works

- (i) Editorial Board member in Current organic Synthesis
- (ii) Editorial board member in Journal of applied polymer Science

### 28. Any Other Relevant Information

### **Future Plans**

### **Teaching:**

- ✤ To teach scientific ways of thinking
- ✤ New methods for making more effective class sessions
- ✤ Actively involve students in their own learning
- ♦ Way to encourage student's participation in competitive examinations
- Promote student discussion and group activities
- ✤ To teach effective examples for laboratory practices
- ✤ Help students experience science in varied, interesting and enjoyable ways.
- Assess student understanding at frequent intervals throughout the learning process.

### **Details of Publications**

#### 1. Books Published

Spectroscopy-Applications in organic and inorganic chemistry, Alagappa University,

Karaikudi, 2019.

### 2. Books Edited : Nil

### 3. Contribution to Book Chapters

Nelson Malini, Sepperumal Murugesan, **Ayyanar Siva**, Design and Synthesis of Fluorescent Chemosensors for the Detection of Biological Amines and their Cell Imaging Studies (Book chapter in Press)

### 4. Editor of Conference/Seminar Proceedings : Nil

### 5. Research Publications

#### 5.1. UGC-CARE Listed Journals

#### **Total Number of Publications : 109**

#### **Selected Publications**

- Design, synthesis, experimental investigations, theoretical corroborations, and distinct applications of a futuristic fluorescence chemosensor for the unveiling of Zn<sup>2+</sup> ions Malini Nelson; Franc Predih; Aravind Manikka Kubendran; Gayathri Santhalingam; Ashokkumar Balasubramaniem, and Siva Ayyanar, *Journal of Molecular structure*, 2023, Accepted for publication.
- 2. A novel hydrazone platform for the recognition of Cd<sup>2+</sup> and F<sup>-</sup> ions: Imaging analysis in Zebrafish embryos Krishnaveni Karuppiah, Malini Nelson, Muniyappan

Chinnamadhaiyan, Manickam Selvaraj, Murugesan Sepperumal and Siva Ayyanar, *Journal of Molecular structure*, **2023**, Accepted for publication.

- Molecular Design and Cost-Effective Synthesis of Tetraphenylethene-Based Hole-Transporting Materials for Hybrid Solar Cell Application, Harikrishnan Muniyasamy, Kandasamy Muthusamy, Muniyappan Chinnamadhaiyan, Murugesan Sepperumal, Siva Ayyanar, Manickam Selvaraj, *Energy Fuels*, 2022, 36, 7, 3909–3919. Impact factor: 4.32.
- 4. Incredible colorimetric sensing behavior of pyrazole-based imine chemosensor towards copper (II) ion detection: synthesis, characterization and theoretical investigations, Malini Nelson, Harikrishnan Muniyasamy, Pavithra Ongi, Sankar Balakrishnan, Murugesan Sepperumal, Siva Ayyanar, Rajesh Jegathalaprathaban, *Results in Chemistry*, 2022, 4, 100501. Impact factor: 2.21.
- Visualization of CO<sub>3</sub><sup>2-</sup> detection using colorimetric chemosensor by simple molecular motif in aqueous environment and its versatile utilizations, Nelson Malini, Ayyanar Siva, Inorganic Chemistry Communications, 2022, 143, 109754. Impact factor: 2.9.
- Synthesis of C3-Symmetric Triazine-Based Derivatives: Study of their AIEE, Mechanochromic Behaviors, and Detection of Picric Acid and Uric Acid in Aqueous Medium, Harikrishnan Muniyasamy, Chithiraikumar Chinnadurai, Malini Nelson, Ashokkumar Veeramanoharan, Murugesan Sepperumal and Siva Ayyanar, *Industrial* & Engineering Chemistry Research, 2021, 60, 21, 7987-7997. Impact factor: 4.05.
- Carbazole based fluorescent chemosensor for the meticulous detection of tryptamine in aqueous medium and its efficacy in cell-imaging and molecular logic gate, Malini Nelson, Harikrishnan Muniyasamy, Aravind Manikka Kubendran, Ashokkumar Balasubramaniem, Murugesan Sepperumal, Siva Ayyanar, Journal of Molecular Liquids 2021, 337, 116445. Impact factor: 6.206.
- Triazole-naphthalene based fluorescent chemosensor for highly selective naked eye detection of carbonate ion and real sample analyses, Harikrishnan Muniyasamy, Chithiraikumar Chinnadurai, Malini Nelson, Muniyappan Chinnamadhaiyan, Siva Ayyanar, Inorganic Chemistry Communications, 2021, 133, 108883. Impact factor: 2.9.
- Fluorimetric and colorimetric detection of multianalytes Zn2+/Cd2+/F- ions via 5bromosalicyl hydrazone appended pyrazole receptor; live cell imaging analysis in HeLa cells and zebra fish embryos, Karuppiah Krishnaveni, Sepperumal Murugesan,

**Ayyanar Siva,** *Inorganic Chemistry Communications,* 132, **2021**, 108843. Impact factor: 2.9.

- Efficient base-free asymmetric one-pot synthesis of spiro [in doline-3,3'-pyrrolizin]
  -2-one derivatives catalyzed by chiral organocatalyst, Chinnadurai Chithiraikumar, Kottala Vijaya Ponmuthu, Muniyasamy Harikrishnan, Nelson Malini, Murugesan Sepperumal, Ayyanar Siva, *Research on Chemical Intermediates*, 2021, 47, 895–909. Impact factor: 2.99.
- An aerobic oxidation of alcohols into carbonyl synthons using bipyridyl-cinchona based palladium catalyst, Ravi Kumar Cheedarala, Ramasamy R. Chidambaram, Ayyanar Siva and Jung Il Song, RSC Advances., 2021, 11, 32942. Impact factor: 3.245.
- Highly Selective fluorogenic chemosensor for cyanide ion in aqueous medium and its applications of logic gate and Hela cells, Harikrishnan Muniyasamy, Chithiraikumar Chinnadurai, Malini Nelson, Aravind Manikka Kubendran, Karthika Sukumaran, Ashokkumar Balasubramaniem, Murugesan Sepperumal, Siva Ayyanar, Mani Govindasamy, Ayman Ghfar, Fehaid Mohammed Alsubaied, Journal of Molecular Liquids, 334, 2021, 116076. Impact factor: 6.206.
- Marine algal antagonists targeting 3CL protease and spike glycoprotein of SARS-CoV-2: a computational approach for anti-COVID-19 drug discovery, Marine algal antagonists targeting 3CL protease and spike glycoprotein of SARS-CoV-2: a computational approach for anti-COVID-19 drug discovery, *Journal of Biomolecular Structure and Dynamics*, 2021, 1-28. Impact factor: 4.15.
- Anthracene-based fluorescent probe: Synthesis, characterization, aggregation-induced emission, mechanochromism, and sensing of nitroaromatics in aqueous media, Kumaraguru Duraimurugan, Muniyasamy Harikrishnan, Jagannathan Madhavan, Ayyanar Siva, Seung Jun Lee, Jayaraman Theerthagiri, Myong Yong Choi, *Environmental Research*, 194, 2021, 110741. Impact factor: 7.64.
- A dual responsive probe based on bromo substituted salicyl hydrazone moiety for the colorimetric detection of Cd2+ ions and fluorometric detection of F– ions: Applications in live cell imaging, Krishnaveni Karuppiah, Iniya Murugan, Murugesan Sepperumal, and Siva Ayyanar, Int. J. Bioorg. and Med. Chem. 2021, 1, 1-9.
- 12. Naphthyl hydrazone anchored with nitrosalicyl moiety as fluorogenic and chromogenic receptor for heavy metals  $(Ag^+, Hg^{2+})$  and biologically important F<sup>-</sup> ion and its live cell imaging applications in HeLa cells and Zebrafish embryos, Karuppiah

Krishnaveni, Murugan Iniya, **Ayyanar Siva**, Narayanadoss Vidhyalakshmi, Sundaresan Sasikumar, Uthanda Kalai Pandian Ramesh, Sepperumal Murugesan, *Journal of Molecular Structure* 1217, **2020**, 128446. Impact factor: 3.57.

- 13. Design and synthesis of new salicylhydrazone tagged indole derivative for fluorometric sensing of Zn<sup>2+</sup> ion and colorimetric sensing of F<sup>-</sup> ion: Applications in live cell imaging, Krishnaveni Karuppiah, Harikrishnan Muniyasamy, Murugesan Sepperumal, Siva Ayyanar, *Microchemical Journal*, 159, 2020, 105543. Impact factor: 4.821.
- 14. A highly sensitive and selective Schiff-base probe as a colorimetric sensor for Co2+ and a fluorimetric sensor for F- and its utility in bio-imaging, molecular logic gate and real sample analysis, Ganesan Jeya Shree, Sepperumal Murugesan, Ayyanar Siva, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2265, 2020, 117613. Impact factor: 4.831.
- 15. Novel star-shaped D-π-D-π-D and (D-π)<sub>2</sub>-D-(π-D)<sub>2</sub> anthracene-based hole transporting materials for perovskite solar cells, Muniyasamy Harikrishnan, Sepperumal Murugesan and Ayyanar Siva, Nanoscale Advances, 2020, 2, 3514. Impact factor: 5.11.
- 16. Cu (OAc)<sub>2</sub>-entrapped on ethylene glycol modified melamine-formaldehyde polymer as an efficient heterogeneous catalyst for Suzuki-Miyaura coupling reactions, Velu Sadhasivam, Balakrishnan Sankar, Ganesan Elamathi, Mathappan Mariyappan and Ayyanar Siva, *Res. Chem. Intermed*, 2020, 46, 681-700. Impact factor: 2.99.
- Copper nanoparticles supported on highly nitrogen-rich containing covalent organic polymers as heterogeneous catalyst for *ipso*-hydroxylation of phenyl boronic acid to phenol, Velu Sadhasivam, Muniyasamy Harikrishnan, Ganesan Elamathi, Rajendran Balasaravanan, Sepperumal Murugesan and Ayyanar Siva, New J. Chem., 2020, 44, 6222-6231. Impact factor: 3.63.
- Energy Level Tuning of Novel Star Shaped D-π-D-A Based Metal Free Organic Dyes for Solar Cell Application, Harikrishnan Muniyasamy, Sadhasivam Velu, Siva Ayyanar, Anandan Sambandam, Vijaya Subbiah, Murugesan Sepperumal, J. Phys. Chem. C, 2019, 123, 21959–21968. Impact factor: 4.126.
- 19. Catalytic hydrogenation of aldehydes and ketones using cinchona–bipyridyl-based palladium catalyst, Ramasamy R. Chidambaram, Velu Sadhasivam,

Mathappan Mariyappan, Ayyanar Siva, *Journal of the Iranian Chemical Society*, **2019**, 16, 2, 373–384. Impact factor: 2.30.

- 20. Execution of julolidine based derivative as bifunctional chemosensor for Zn<sup>2+</sup> and Cu<sup>2+</sup> ions, Jeya Shree Ganesan, Sivaraman Gandhi, K. Radhakrishnan, Murugesan Sepperumal and Siva Ayyanar, Dyes and Pigments, 2019, 163, 204-112. Impact factor: 5.122.
- 21. Design, synthesis of organic sensitizers containing carbazole and triphenylamine  $\pi$ bridged moiety for dye-sensitized solar cells, Velu Sadhasivam, Muniyasamy Harikrishnan, **Ayyanar Siva**, Suresh Maniarasu, Ganapathy Veerappan, Sepperumal Murugesan, *Journal of the Iranian Chemical Society*, **2019**, 16, 9, 1923–1937. Impact factor: 2.30.
- 22. Novel furan coupled quinoline diamide hybrid scaffolds as potent antitubercular agents: Design, synthesis and molecular modelling, Anantacharya Rajpurohit, Satyanarayan Nayak Devappa, Lokesh Pathak, Siva Ayyanar, Chidambaram Ramaswamy Rishinaradamangalam, Praveen Shoorapani, *Medicinal Chemistry*, 2020, 16, 4, 507-516. Impact factor: 2.36.
- 23. The organocatalytic Highly Enantioselective Knoevenagel Condensation: Applications in the Synthesis of Various Chiral Amide Derivatives, Veeramanoharan Ashokkumar, Ayyanar Siva and Balakrishnan Sankar, *Journal of the Iranian Chemical Society* 2019, 29, 3 737–749. Impact factor: 2.30.
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- 69. A New Class of Bifunctional Chiral Phase Transfer Catalysts for Highly Enantioselective Asymmetric Epoxidation of α, β-Unsaturated Ketones at Ambient Temperature, V. Ashokkumar, R. Balasaravanan, S. Mehtob Jenofar, A. Siva, *Journal* of Molecular Catalysis A: Chemical, 409, 2015, 127-136. Impact factor: 1.34.
- 70. Cinchona Alkaloid Based Chiral Catalysts act as Highly Efficient Multifunctional Organocatalyst for the Asymmetric Conjugate Addition of Malonates to Nitroolefins, V. Ashokkumar and A. Siva, Organic and Biomolecular Chemistry, 2015, 13, 10216-10225. Impact factor: 3.89.

#### 5.2. Other Refereed Journals : Nil

#### 5.3. Papers Published in Conference Proceedings : Nil

#### 5.4.1. International Conferences

- Duraimurugan Kumaraguru, Sathiyaraj Munusamy, Thiagarajan Viruthachalam and Siva Ayyanar, Synthesis, photo physical properties and DFT study of triphenylamine based fluorescent dyes, International Conference on Advances in New materials [ICAN -2014], 20 th & amp; 21<sup>st</sup> June 2014.
- Sivamani Jayaraman and Siva Ayyanar, Highly Enantioselective Asymmetric Michael Addition Reactions with New Chiral Multisite Phase Transfer Catalysts, International Conference on Advances in New materials [ICAN -2014], University of Madras.20 th & amp; 21 st June 2014,
- Balasaravanan Rajendiran, Thiagarajan Viruthachalam and Siva Ayyanar, Synthesis and two photon absorption properties of novel triphenylamine based dendrimers, International Conference on Advances in New materials [ICAN -2014], University of Madras, 20 th & amp; 21<sup>st</sup> June 2014.
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- KottalaVijaya Ponmuthu and Siva Ayyanar, Enantioselective Epoxidation of α, β-Unsaturated Ketones Mediated by New Cinchona Alkaloid as Chiral Phase-Transfer Catalysts, International Conference on Advances in New materials [ICAN -2014], University of Madras, 20 th & amp; 21<sup>st</sup> June 2014.
- 6. Sathiyaraj Munusamy, Duraimurugan Kumaraguru, Thiagarajan Viruthachalam and Siva Ayyanar, Synthesis, characterization and photophysical properties of 9,10-Bis (alkoxystyrylanthracene with various chain length, International Conference on Advances in New materials [ICAN -2014], University of Madras, 20 th & amp; 21 st June 2014.
- Arockiam Jesin Beneto and Ayyanar Siva, Triphenylamine based benzothiazolepyridinyl funcitonalized fluorophore for tunable switching under peace, themo, protonation and deprotonation conditions, 13<sup>th</sup> Eurasia conference on chemical sciences, Indian Institute of Science, Bangalore, India. December 14-18, 2014.

- Duraimurugan Kumaraguru and Siva Ayyanar, Aggregation-induced emission and piezochromic luminescence behavior of 9, 10-bis(alkoxystyryl)anthracene derivatives, New Materials in Chemistry (NMC-2015), University of Calicut, 30 & amp; 31 January 2015.
- Jayaraman Sivamani, Rajendiran Balasaravanan, Velu Sadhasivam and Ayyanar Siva, Synthesis, Characterization and photo physical properties of biphenyl based azo derivatives, New Materials in Chemistry (NMC-2015), University of Calicut, 30 & amp; 31 January 2015.
- Balasaravanan Rajendiran, Sivamani Jayaraman, Balaji Ganesan and Siva Ayyanar, Synthesis and Photophysical Properties of Multi Branched Triphenylamine Derivatives, New Materials in Chemistry (NMC-2015), University of Calicut, 30 & amp; 31 January 2015.
- 11. Ashokkumar Veeramanoharan and Siva Ayyanar, Cinchona Alkaloid Based Chiral Catalysts act as Highly Efficient Multifunctional Organocatalysts for the Asymmetric Conjugate Addition of Malonates to Nitroolefins,New Materials in Chemistry (NMC-2015), University of Calicut,30 & Camp; 31 January 2015,.
- 12. Duraimurugan Kumaraguru and Siva Ayyanar, Synthesis, characterization and photophysical properties of triazine based star-like dendrimers, International Conference on Recent Advances in Materials and Chemical Sciences [ICRAMCS-2015] Gandhigram Rural Institute-Deemed University, 14 & amp; 15 th December 2015.
- Ashokkumar Veeramanoharan and Siva Ayyanar, Binaphthol based efficient chiral organocatalysts for enantioselective synthesis of Nitroaldol reaction, , International Conference on Recent Advances in Materials and Chemical Sciences [ICRAMCS-2015] Gandhigram Rural Institute-Deemed University, 14 & amp; 15 th December 2015.
- 14. KottalaVijaya Ponmuthu, Murugesan Sepperumal and **Siva Ayyanar**, Highly Enantioselective Epoxidation of Benzylidenemalononitrile Derivatives Using New Cinchona Alkaloid Based Chiral Phase-Transfer Catalysts, International Conference on Recent Advances in Materials and Chemical Sciences [ICRAMCS-2015], Gandhigram Rural Institute-Deemed University, 14 & Camp; 15 th December 2015.
- 15. Kumaresan Gnanasekaran, Kottala Vijaya Ponmuthu, and **Siva Ayyanar**, An Efficient Method For The Heck Coupling Reactions Catalysed By Bipyridine Based Palladium Catalyst, International Conference on Recent Advances in Materials and

Chemical Sciences [ICRAMCS-2015], Gandhigram Rural Institute-Deemed University, 14 & amp; 15 th December 2015.

- 16. Muniyasamy Harikrishnan, Velu Sadhasivam, Mathappan Mariyappan, Sepperumal Murugesan, Ayyanar Siva, Design, Synthesis and Characterization of Triazine (D-A) Based Fluorophore for Selective Sensing of Copper (II) and Dichromate ions by Naked eye, at international conference on Advances, University of Madras, Jun-2018
- 17. Nelson Malini, Muniyasamy Harikrishnan, Ongi Pavithra, Ayyanar Siva, Incredible Colorimetric Sensing Behavior of Pyrazole-Based Imine Chemosensor towards Copper (II) Ion Detection: Synthesis, Characterization and Theoretical Investigations. International Conference on Frontiers in Chemical and Material Sciences (ICFCMS-2020), The Gandhigram Rural Institute (Deemed to be University), 24-25 Feb 2020.
- 18. Sabareesan A, Malini N, Berty Ashley, Arun Shastry, Siva A, Process and Development of novel method for synthesis of Modified Oligonucleotides with Phosphorothioate backbone as potential Antisense Drugs for Duchenne Muscular Dystrophy, International Conference on Frontiers in Chemical and Material Sciences (ICFCMS-2020), The Gandhigram Rural Institute (Deemed to be University), 24-25 Feb 2020.
- 19. Malini Nelson, Harikrishnan Muniyasamy, Chithiraikumar Chinnadurai and Siva Ayyanar, Triazole-Naphthalene based Fluorescent Chemosensor for Highly Selective Naked Eye Detection of Carbonate Ion and Real Sample Analyses, Recent Trends in Natural Products Research and their Applications (RTNPRA-21), Madurai Kamaraj University, School of Chemistry, 16-17th September, 2021.
- 20. Muniyappan Chinnamadhaiyan Harikrishnan Muniyasamy and **Siva Ayyanar**, Design, Synthesis of Carbazole and Triphenylamine Based Metal Free Organic Dyes for Solar Cell Application, Recent Trends in Natural Products Research and their Applications (RTNPRA-21), Madurai Kamaraj University, School of Chemistry,16-17th September, 2021.
- 21. Yesudhasan Chinnaraj, Krishnaveni Karuppiah, Murugesan Sepperumal and Siva Ayyanar, A Novel 5-Bromoindolehydrazone Anchored Diiodosalicylaldehyde Derivative As Turn- On Multifunctional Probe For The Selective And Sensitive Detection Of Biogenic Tryptamine And F– Ions and Their Live Cell Applications in Hela Cells/Zebrafish Embryos, Recent Trends in Natural Products Research and their Applications (RTNPRA-21), Madurai Kamaraj University, School of Chemistry 16-17th September, 2021.

- 22. Muniyappan Chinnamadhaiyan, **Siva Ayyanar**, Molecular design and Cost-effective Synthesis of Tetraphenylethene based Hole transporting Materials for Hybrid Solar cell Application, Recent Advances in Chemical Sciences (RACS 2k22), The Gandhigram Rural Institute (Deemed to be University), July 21-22, 2022.
- 23. K. Fathima Ramisha, Nelson Malini, Ayyanar Siva, Visualization of CO<sub>3</sub><sup>2-</sup> Detection using Colorimetric Chemosensors by Simple molecular motif in aqueous Environment and its Versatile Utilizations. Recent Advances in Chemical Sciences (RACS 2k22), The Gandhigram Rural Institute (Deemed to be University), July 21-22, 2022.

#### 5.4.2. National Conferences

- 1. KottalaVijaya Ponmuthu, Murugesan Sepperumal and **Siva Ayyanar**, Inversion of the Enantioselectivity in Michael Addition Reaction using Chiral Phase Transfer Catalysts derived from Cinchonine, National Conference on Chemistry for Sustainable Energy, Clean Environment and Health (CEEH), Manonmaniam Sundaranar University, Tirunelveli. 21 & amp; 22 nd January 2015,
- Kumaraguru Duraimurugan and Ayyanar Siva, Electron Rich Triphenylamine Derivative (D-П-D) For Selective Sensing of Picric Acid in Aqueous Media, Indian National conference on Development in Inorganic Applications (INDIA-2015), Periyar University,15 & amp; 16 th October 2015,
- Jayaraman Sivamani, and Ayyanar Siva, A Selective and Effective Detection of Hg 2+ on Biphenyl Oxime Based Azo Derivative, Indian National conference on Development in Inorganic Applications (INDIA-2015), Periyar University,15 & amp; 16 th October 2015.
- Rajendiran Balasaravanan and Ayyanar Siva, Intramolecular Charge Transfer and Aggregation Induced Emission Properties of Cyano Substituted Triphenylamine Derivatives, Indian National conference on Development in Inorganic Applications (INDIA-2015), Periyar University, 15 & amp; 16<sup>th</sup> October 2015,
- 5. Veeramanoharan Ashokkumar and **Ayyanar Siva**, A Transition-Metal Free Henry Reaction Using Efficient Chiral Organocatalyst: Synthesis of β-Nitroalcohols in High Enantiomeric Excess, Indian National conference on Development in Inorganic Applications (INDIA-2015), Periyar University, 15 & amp; 16 th October 2015.

- Vaithilingam Dhanamoorthy and Ayyanar Siva, Alkylation reactions of Curcumin in Presence of Novel Multi-site Quaternary Ammonium ion act as a Phase Transfer Catalyst, Indian National conference on Development in Inorganic Applications (INDIA-2015), Periyar University, 15 & amp; 16 th October 2015.
- Velu Sadhasivam, Jayaraman Sivamani and Ayyanar Siva, Triphenylamine Based Azo Derivative for Selective Turn-Off Sensing of Picric acid, Indian National conference on Development in Inorganic Applications (INDIA-2015) Periyar University. 15 & amp; 16 th October 2015.
- Arockiam Jesin Beneto and Ayyanar Siva, Selective detection of trivalent cations (Al <sup>3+</sup>, Cr <sup>3+</sup>, Fe <sup>3+</sup>) by pyridinyl functionalized triphenylamine fluorogen, National conference on recent advances in chemical sciences (RACS-2015), Gandhigram Rural Institute-Deemed university 5-6 march 2015.
- Arockiam Jesin Beneto and Ayyanar Siva, Phenanthro[9,10-d] imidazole based ratiometric pH sensor, 10 th Mid-Year Chemical Research Society of India (CRSI) symposium in chemistry, jointly organised by Nationl Institute of Technology & amp; Bharathidasan University, Tiruchirappalli, India, july23-25, 2015.
- Siva Ayyanar, Participated in Solar Energy Conversion, Lecture Workshop conducted by School of Chemistry, Madurai Kamaraj University, Madurai, India. 29 th September 2014.
- 11. Siva Ayyanar, Participated in Recent Trends in Chemistry, National seminar organised by School of Chemistry, Madurai Kamaraj University, Madurai, India. September 11 th, 2015.
- 12. Ashokkumar Veeramanoharan and Siva Ayyanar, (Poster Presentation), Highly Efficient Direct Asymmetric Aldol Reactions in Aqueous Media Catalyzed by a Bifunctional Chiral Organocatalysts, CRSI organized Three-day National Seminar on Emerging Trends in Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai, Tamil Nadu, 18-20, February-2016.
- Vaithialingam Dhanamoorthy and Ayyanar Siva, Catalyst Free Effective synthesis of α–Fluorinated amides, Presented poster presentation in Three-Day National Seminar on EmergingTrends in Chemistry, Madurai Kamaraj University, Madurai-21. during February 18-20, 2016.
- 14. Ponmuthu KottalaVijaya, Sepperumal Murugesan and Ayyanar Siva, Asymmetric Henry Reaction Catalyzed by New Cinchona Alkaloid as Chiral Phase-Transfer Catalysts. Paper presented in National Seminar on Emerging Trends in Chemistry,

School of Chemistry, Madurai Kamaraj University, Madurai-625 021, February 18 to 20, 2016.

- 15. Muniyasamy Harikrishnan, Velu Sadhasivam, Sepperumal Murugesan, Nelson Malini, Ayyanar Siva. Photophysical studies tetraphenylethene base hole transport materials. International conference on Nanomaterials for Energy, Environment, Catalysis and Sensors, MKU, Madurai, Dec-2017, participation
- 16. Muniyasamy Harikrishnan, Velu Sadhasivam, Sepperumal Murugesan, Ayyanar Siva, Energy level tuning of novel star shaped D- $\pi$ -D-A based dyes for DSSCs applications, Gandhigram Rural Institute, March 2019.
- 17. Balakrishnan Sankar, Nelson Malini, Muniyasamy Harikrishnan, Sepperumal Murugesan and Ayyanar Siva, Design of a simple and efficient synthesis for bioactive novel pyrazolyl–isoxazoline hybrids, Gandhigram Rural Institute, March 2019.
- 18. Nelson Malini, Ayyanar Siva, Exploiting tryptamine detection via carbazole based fluorescent chemosensor under aqueous medium and its usefulness in cell-imaging and molecular logic gate, National Conference on Analytical and Materials Chemistry for Everyday life (AMC-21), Theivanai Ammal College for women (autonomous), Villupuram, 3<sup>rd</sup> feb 2021.

#### 5.4.3. State : Nil

#### 5.5. Any Other Publications Not Mentioned Above

#### 6. Conferences / Seminars / Workshops / Webinars Attended : Nil

#### 7. Details of Deposits in CCDC, PDB, etc.

No	Name of Deposit	<b>Reference No.</b>	Date of Deposition
1	Ayyanar Siva	1516218	10.10.2016
2	Ayyanar Siva	1897410	08.07.2019