



## SCOTT CHRISTIAN COLLEGE (Autonomous), Nagercoil.

### Department of Chemistry and Research Centre

**Name** :Dr.A.Malar Retna

**Designation** :Associate Professor

**Qualification** :M.Sc., M.Phil., Ph.D.,

**Date of Birth** :14.02.1980

**Gender** :Female

**Date of Appointment** :19.08.2009

**Mobile Number** :9442338628

**Email** :iammalar80@gmail.com

**Approved Guide by** :Manonmaniam Sundaranar University



#### Ongoing Research Scholars :

S.No	Name	Title	Reg No	Full time / Part time
1.	Saranya	Synthesis of molecular imprinted polymers	12483	Full time
2.	Florina Solomon	Design, synthesis and characterisation of superamphiphobic polyurethane coatings based on renewable resources	21115901	Full time
3.	D.Saranya		22213162032014	Full time

#### Completed Research Scholars:

S.No	Name	Title	Completed year	Reg No	Full time / Part time
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1.	P.Ethalsha	Phytochemical and Biological Evaluation of Ipomoea Pes-Capre(l.)R.BR and Catharanthus Roseus(l.)G.DON	2016	9126	Full time
2.	N.J.Sangeetha	Studies on some novel polyurethane composites based on natural products	2016	9368	Full time
3.	A.Sophia	Studies on casein and soy protein based polymers	2018	9483	Full time
4.	A.Anita	Pharmacognostic Studies on Some Traditional Medicinal Plants	2019	10122	Full time
5.	Y. Jasmala Joy	Synthesis and Characterisation of novel fibre reinforced polyurethane composites	2018	10566	Full time
6.	Sasikala	Fiber Reinforced Composites	2019	10122	Part time
7.	S.R.Kalaivani	Synthesis and spectral characterisations and biochemical studies of metal complexes of	2019	11084	Part time



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		<b>bioactive ligands</b>			
<b>8.</b>	<b>A.Sreedevi</b>	<b>Pharmacognostic studies on some radioprotective plants</b>	<b>2022</b>	<b>12316</b>	<b>Full time</b>
<b>9.</b>	<b>Ganesh</b>	<b>Application of selective biocides on the chemistry of coolant sea water in kudankulam nuclear power plant</b>	<b>11838</b>	<b>Part-time</b>	

#### List of Publications:

1. A. Malar Retna, C.V. Mythilli and S. Gopalakrishnan, Synthesis, mechanical, thermal and chemical properties of polyurethanes based on cardanol, Bull.Mat.Sci., 27(3): 101-107, 2004.
2. . Malar Retna, C.V. Mythilli and S. Gopalakrishnan, Synthesis and characterization of cardanol based polyols- a valuable Starting material for polyurethane, J.Curr.Sci., 5(2): 507-514, 2004.
3. A. Malar Retna, C.V. Mythilli and S.Gopalakrishnan, Physical, mechanical and thermal properties of polyurethanes based on hydroxyl-alkylated cardanol-formaldehyde resins, J.Appl.Polym.Sci., 98(1): 284, 2005.
4. A. Malar Retna, C.V. Mythilli and S.Gopalakrishnan, Synthesis and characterization of hydroxyalkylated dimerised cardanol formaldehyde resins, J.Curr.sci., 10(2): 507-514, 2007.



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5. P. Ethalsha and A. Malar Retna, A review of the taxonomy, ethnobotany chemistry and pharmacology of *Catharanthus roseus* (Apocyanaceae), *Int. J.Engine.Res and Tech.*, 2(10), 3899-3912, 2013.
6. Malar Retna and Ethalsha, Photochemical tests, antioxidant potential and TLC analysis of *ipomoea pes caprae* and *catharanthus roseus*, *Int.J.Nat.Prod.Res* 4(2):58-64, 2014.
7. Ethalsha and Malar Retna, *In vitro* antidiabetic and antioxidant property of crude extracts of *catharanthus roseus*, *J.Res.Sci* 2, 167-171, 2014.
8. N.J. Sangeetha, A.Malar Retna, Y.Jasmala Joy and A.Sophia, A review on advanced methods of polyurethane synthesis based on natural resources, *J.Chem.Pharma.Sci* 7(3), 242 -249, 2014.
9. P. Ethalsha and A. Malar Retna, Evaluation of Anti-oxidant Potential and Anti-bacterial Activity of Crude Extracts *Catharanthus roseus*, *Int.J.Pharm.Sci and Res.*, 5(8), 3490-3495, 2014.
10. N.J. Sangeetha, A. Malar Retna, Y.Jasmala Joy and A.Sophia, Novel polyurethane composites based on cardanol and coir fiber, *Adv.Poly.Sci. and Tech.* 5(1):7-10 (2015).
11. P. Ethalsha Robert and A. Malar Retna, Quantitative Phytochemical determination and *in-vitro* cytotoxic activity of medicinal plants, *Green Chem.Tech. Let.*, 1(1), 1, 2015.
12. T.J. Sasikala and A. Malar Retna, Synthesis and Characterization of coir fibre reinforced epoxy composites from punnel oil, *Green Chem.Tech. Let.*, 1(1), 3, 2015.



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13. Y.Jasmala Joy and A. Malar Retna, Synthesis and Characterization of natural fibre reinforced polyurethane composites based on cardanol, Green Chem.Tech. Let., 1(1), 4, 2015.
14. N.J. Sangeetha and A. Malar Retna, Preparation of chain extended polyurethane and its composites based on castor oil and coir fibre, Green Chem.Tech. Let., 1(1), 6, 2015.
15. A. Anita and A. Malar Retna, A study on the Bioactive compounds present in leaves of dichrostachyscinerea, Green Chem.Tech. Let., 2(1), 20, 2015.
16. P. Ethalsha and A. Malar Retna, In vitro studies of anti-bacterial and anti-oxidant activity of Ipomea pes-caprae root extracts, world J.Pharm.Sci., 3(3), 622-627, 2015.
17. P. Ethalsha, J. Lydia, A. Malar Retna, Docking score of the isolated compound: 19 – hydroxy lochnericine with different proteins, Green Chem.Tech. Let., 2(1), 3, 2016.
18. A. Sophia and A. Malar Retna, Preparation of soyprotein based nano particle, Green Chem.Tech. Let., 2(1), 45-49, 2016.
19. Anju Mathew and A. Malar Retna, Antilithiatic activity and pharmacognostic studies of Scoparia Dulcis, Green Chem.Tech. Let., 2(1), 1-10, 2016.
20. A. Malar Retna, S.R Kalaivani, J.Joseph and G.Boomadevi Janaki, Synthesis, structural Characterization and electrochemical behavior of metal complexes derived from 2-hydroxynaphthoic acid derivatives, J.Chem and Pharm. Res., 8(1S), 82-88, 2016.
21. P. Ethalsha and A. Malar Retna, 5,7,4'trihydroxyisoflavone Isolated from Ipomea pes-caprae roots by normal phase column chromatography, Bull.EnvIRON,Pharm and Life Sci. Bull. Env. Pharmacol.Life Sci., 5(5), 27-33, 2016.



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22. P. Ethalsha and A. Malar Retna, Docking of the Isolated Compounds-3,3',4',5,7-Penta Hydroxy Isoflavone and 5,7,4'-Tri Hydroxy Isoflavone with various proteins, IOSR J.Pharmacy, 6(6), 3-12, 2016.
23. A.Anita and Malar Retna, Phytochemical screening and column chromatography studies of *Aerva lanata* Asian Journal of Research in Chemistry, 11(1), 84-90, 2018.
24. Y.Jasmala Joy and A.Malar Retna A new insight of degradation and stability performance of polyurethane and its composites Materials Today Proceedings 2018.
25. Saranya K and A.Malar Retna Isolation of (-) – Epicatechin from green tea by using molecular imprinted technique and structural confirmation of (-) –Epicatechin by different chromatographic methods, Journal of Xidian University, 1176 – 1188, 2020.
26. Sreedevi A and A.Malar Retna, The mode of action of phyto compound from the medicinal plant *Biophytumsensitivum* using docking studies, Journal of Emerging Technologies and Innovative Research, 543-548, 2020.
27. Evaluation of phytochemical standardization and antioxidant activity of leaf part of *Biophytumsensitivum*, International Journal of Advanced Scientific Research and Management, 1-5, 2019.
28. Sreedevi A and A.Malar Retna ,Breast Cancer Activity of isolated compound from *Tinospora cardifolia* aerial, Asian Journal of Pharmaceutical and Clinical Research, 14 (1), 84-88, 2021.
29. Sreedevi A and A.Malar Retna ,Molecular Docking study of naturally occurring compounds as inhibitors of Covid-19, Asian Journal of Pharmaceutical and Clinical Research, 15(1), 69-71, 2022.
30. T. Subba Rao Ganesh, A. M. Retna, P. S. Murthy, G. S. Wesley Assessment of Biogrowth at Two Different Environments of Nuclear Power Plant Cooling Water System Located at Southern Coast of India Asian Journal of Chemistry 5(1) 69 -78, 2002

**Book published/ Edited**



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1. Thermal analysis and Coats- Redfern treatment of polyurethanes synthesized from Cashew Nut Shell Liquid, Publication Division, Manonmaniam Sundaranar University, Tirunelveli-627 012, pp. 1-163. ISBN-978-81-908352-1.
2. Abstract of the proceedings of 1<sup>st</sup> National Conference on Innovations in Chemical Sciences and Technology ISBN 978-93-8300603-8
3. Abstract Proceedings of ninth All India Conference of Scott Research Forum 2017 ISBN-978-93-83006-85-4.
4. Proceedings of the International conference on Biomaterials, Biodegradables and Biomimetics ISBN 9789383006243

#### **Seminar/Conference Organised:**

<b>S.No</b>	<b>Title</b>	<b>Seminar/ Conference</b>	<b>State level/ National/ International</b>
<b>1.</b>	National Conference on Innovations in Chemical Sciences and Technology, <b>2015</b>	Conference	National
<b>2.</b>	The Ninth All India Conference of Scott Research Forum, <b>2016</b>	Conference	National
<b>3.</b>	Recent Trends in Nano Science, <b>2017</b>	Seminar	National
<b>4.</b>	Frontiers in Chemistry, <b>2018</b>	Seminar	National
<b>5.</b>	The Tenth All India Conference of Scott Research Forum, <b>2020</b>	Conference	National
<b>6.</b>	The Eleventh All India Conference of Scott Research Forum, <b>2021</b>	Conference	National
<b>7.</b>	Workshop on Green and Sustainable Chemistry, <b>2019</b>	Workshop	Regional
<b>8.</b>	Awareness Program on Intellectual Property	Workshop	Regional



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	Rights,2022		
9.	<b>Coordinator</b> for conducting Entrepreneurship and Professional Skill Development programme( <b>funded byRajiv Gandhi Institute of Youth Development</b> ),2022	workshop	Regional

#### Served as Doctoral Committee Member:

1. Ms.T.Sasitha
2. A.Asha Reg.No.18213162032033
3. R.Jeslin Reshi Reg.No.21213162032047
4. Benlin Giftna
5. Cini Roach

#### Served as Resource Person:

1. An Insight on Natural Products Chemistry, Chemistry Association Sree Ayyappa College for Women, 11.02.2017
2. Womens Christian College on 23.03.2017
3. Development of Advanced Polymer Composites, Caledonian College of Engineering on 21.11.2017
4. Workshop on Chromatographic Techniques, Dept.of Zoology on 23.01.2018
5. An Insight on Extraction, Isolation and Characterisation of Natural Products, Workshop held in Sree Devi Kumari Women's College on 07.02.2018
6. National Symposium on Past and Present Research System in the Chemical Sciences, Nanjil Catholic College of Arts and Science on 5.03.2018
7. National Conference on Novel Techniques in Chemical Sciences, Malankara Catholic College on 22.02.2019
8. FDP on Research Based Pedagogical Tools, IQAC, SCC on 11.02.2020
9. Summer Training Program in Chemistry 2021 by Academy of Sciences, Chennai on 20.07.2021
10. Guest Lecture in Pioneer Kumarasamy College on 28.02.2022





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11. Special talk on Innovative approaches and Digital development for empowering women on 02.03.2023 at Annai Velankanni College, Tholayavattam.

#### **Paper presented in Conferences:**

<b>National Conference on Materials Science and Technology</b>	<b>National</b>	<b>Indian Institute of Space and Technology</b>	<b>2014</b>	
<b>National Conference on Materials Science and Technology</b>	<b>National</b>	<b>Indian Institute of Space and Technology</b>	<b>2014</b>	
<b>National Conference on Materials Science and Technology</b>	<b>National</b>	<b>Indian Institute of Space and Technology</b>	<b>2014</b>	
<b>National Conference on Materials Science and Technology</b>	<b>National</b>	<b>Indian Institute of Space and Technology</b>	<b>2014</b>	
<b>International Conference on Material and Drug Chemistry</b>	<b>International</b>	<b>Sarah Tucker College</b>	<b>2014</b>	
<b>International Conference on Material and Drug Chemistry</b>	<b>International</b>	<b>Sarah Tucker College</b>	<b>2014</b>	
<b>National Conference on Emerging Trends in Chemical Science</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2014</b>	
<b>National Conference on Emerging Trends in Chemical Science</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2014</b>	



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<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference in Innovations in Science and Technology</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference on Emerging Trends in Chemical Science</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Conference on Emerging Trends in Chemical Science</b>	<b>National</b>	<b>ACT Mumbai, and GIAP Journals , Mumbai</b>	<b>2015</b>	
<b>National Seminar on Innovation in</b>	<b>National</b>	<b>Department of Chemistry and</b>	<b>2015</b>	



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<b>Chemical and Nuclear Technology</b>		<b>Research Centre</b>		
<b>National Seminar on Innovation in Chemical and Nuclear Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National Seminar on Innovation in Chemical and Nuclear Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National Seminar on Innovation in Chemical and Nuclear Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National Seminar on Innovation in Chemical and Nuclear Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National Seminar on Innovation in Chemical and Nuclear Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National Seminar on Innovation in Chemical and Nuclear Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	
<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>	



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<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>
<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>
<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>
<b>National conference on Innovations in Chemical Science and Technology</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2015</b>
<b>National Conference on Recent Trends in Chemistry</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2016</b>
<b>National Conference on Recent Trends in Chemistry</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2016</b>
<b>National Conference on Recent Trends in Chemistry</b>	<b>National</b>	<b>Department of Chemistry and Research Centre</b>	<b>2016</b>
<b>National Symposium on Recent Developments in organometallic Chemistry</b>	<b>National</b>	<b>Manonmanium Sundaranar University</b>	<b>2003</b>



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<b>National seminar on Current Trends in Chemistry</b>	<b>National</b>	<b>Annamalai University</b>	<b>2004</b>
<b>Current Research Trends in Chemistry</b>	<b>Regional</b>	<b>Kongunadu Arts and Science College, Coimbatore</b>	<b>2004</b>

#### Participation Details (Conference/Seminar/Workshop/Symposium)

Title/ Institution	Conference/ Seminar/ Workshop/ Symposium	Level: State/ Nation al/ International	Status of Participation Presentation/ Participant	Year e
Scott Christian College (Autonomous) Nagercoil.	One-Day Training Programme on Human Rights	State level	Participated	17.08.2017
Research Department of Chemistry, St.John's College	One day State level Seminar on Nuclear Energy and Environment	State level	Participated	12 <sup>th</sup> October 2017.
. Nanjil Catholic College of Arts and Science, Kaliyakkavilai	National Conference on Chemical Sciences: Emerging Scenario and Global Challenges	National level	Participated	October 30,2017
Department of Chemistry & Research	National Seminar on Recents Trends in NanoScience	National level	Participated	23 <sup>rd</sup> August 2017



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Centre, Scott Christian College Nagercoil.				
Patent Information Centre, Tamil Nadu State Council for Science and Technology & Sarah Tucker College, Tirunelveli at Sarah Tucker College Tirunelveli during	Two Days Technical Workshop on Intellectual Property Rights	State level	Participated	31.01.2018 & 01.01.2018.
The Department of Chemistry & Research Centre, Scott Christian College Nagercoil.	National Seminar on Frontiers in Chemistry	National level	Participated	12 <sup>th</sup> March 2018
The Department of Chemistry & Research Centre, Women's Christian College, Nagercoil.	International Seminar on Modern Trends in Material Science	International level	Participated	31 <sup>st</sup> January 2019



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The Department of Chemistry & Research Centre, Scott Christian College Nagercoil	workshop on Green and sustainable Chemistry	State level	Participated	6 <sup>th</sup> February 2019
The Department of Zoology, Scott Christian College Nagercoil.	Seminar on Non-Power Applications of Nuclear Energy	State level	Participated	7 <sup>th</sup> and 8 <sup>th</sup> March 2019
The Department of Chemistry & Research Centre, Scott Christian College (Autonomous), Nagercoil.	Entrepreneurship Training on Preparation of Simple Chemical Products	State level	Participated	6 <sup>th</sup> September 2019
The Department of Zoology and Research Centre, Scott Christian College (Autonomous), Nagercoil, partially funded by Tamilnadu State Council for Science and Technology (TNSCST).	State level workshop on "Research Methodology with Special reference to Plagiarism"	State level	Participated	13 <sup>th</sup> December 2019



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The Department of Science and Technology(DBT), Govt. of India and organized by Centre of Excellence in Science	Regional Workshop on Research Based Pedogogical Tools	State level	Participated	30 <sup>th</sup> January to 1 <sup>st</sup> February 2020
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#### **Additional Responsibilities:**

1. Coordinator of Youth Welfare Department
2. Convener of IIC
3. Associate Dean of IQAC
4. Question Paper Setter
5. Coordinator UG Association
6. Editor Scott Chemazine
7. Innovation Ambassador MHRD