



## SCOTT CHRISTIAN COLLEGE (Autonomous), Nagercoil.

### Department of Chemistry and Research Centre

**Name** : S.BEGILA DAVID  
**Designation** : Associate Professor  
**Qualification** : M.Sc.,B.Ed.,M.Phil.,Ph.D  
**Date of Birth** : 30.03.1970  
**Gender** : Female  
**Date of Appointment** : 21.08.2006  
**Mobile Number** : 9487785342  
**Email** : begilarobin@gmail.com  
**Approved Guide by** : M.S University



#### Ongoing Research Scholars :

S.No	Name	Title	Reg No	Full time / Part time
1	Jebisha.J.L	Synthesis and characterization of biopolymer copper nanocomposites	21213162032019	Full time
2	Jeni.A	Synthesis and characterization of biopolymer silver nanocomposites	21213162032020	Full time
3	Benlin Giftna J.V	Synthesis and characterisation of nano-silica polymer composites	21213162032025	Full time



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		from bambusa vulgaris(bamboo) leaves		
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#### Completed Research Scholars: 10

S.No	Name	Title	Completed year	Reg No	Full time / Part time
1.	Mrs.C.Irin Sheela Paranthaman Vilagam,Elavuvilai P.O, KK Dist-629171	Synthesis and Characterization of Cross Linked Biopolymers from Linseed oil and Sesame oil	21.04.2016	9754	<b>PT</b>
2.	Mrs..G.S.Prabha Littis Malar Pilakadu,Marapady Arumanai Post-629151	Studies and Development of Novel Biodegradable Polyesters from Renewable Resources on.	09.12.2016	9617	<b>FT</b>
3.	Mrs..K.Priya Rajini,Eenthimoodu House,Athencode,S.T.Mangadu, .K.K. Dist- 629172.	Studies on the Development of biopolymers from Linseed and Corn oil	03.02.2017	10125	<b>PT</b>
4.	Mrs..S.P.R.Kalaikathir Assistant professor of Chemistry ,Womens Christian College, Nagercoil.	Studies on Physico-Chemical Parameters of Marine water and Synthesis and Evaluation of Electrocatalysts for Power Generation in Membraneless Seawater Fuel cells	27.11.2017	5895	<b>PT</b>
5.	Mrs.K.Rathika	Studies and	26.07.2019.	10252	<b>FT</b>



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	13-44C, Thickilan Vilai, South Soorankudy Post Pin-629501.	Development of Polymeric Materials from Renewable Resources			
<b>6.</b>	Mrs.M.L.Ginju Kadayara Puthen Veedu, Manjalumoodu P.O KK Dist-629151	Synthesis and Characterisation of Novel Bio-Polyurethane from Renewable Resources	08.02.2020	12435	<b>FT</b>
<b>7.</b>	Mrs.J.Johnsy Rose Kiruba Illam, Kesavathiruppuram, Vettornimadam P.O Pin-629003.	Studies on the Development of Polymeric Materials from Sunflower oil and Olive Oil	16.07.2013	10327	<b>PT</b>
<b>8.</b>	Mrs.K. Prema Merlin 355, M.S.Road Kattianvilai, vettornimadam P.O Kk Dist-629003	Studies and Development of Bio-polymers from Mustard Oil and Rice Bran Oil.	28.06.2014	11442	<b>PT</b>
<b>9.</b>	Mrs..Y.I.Jeba Jane Retney 12/74A, Jane Cottage, Kottaram pin- 629703.	Synthesis, Characterization and Pharmacological properties of zinc oxide and magnesium oxide nanoparticles by chemical and green method	10.07.2014	11507	<b>FT</b>
<b>10</b>	Mrs . Asmitha Beegum.S	Synthesis , characterization and applications of silver nanoparticles-nitrogen doped graphene oxide-chitosan hybrid	26.04.2024	20113 16203 2012	<b>FT</b>



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		nanocomposite			
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#### List of Publications:

1. S.Begila David K.Sathyalekshmi and G.Allen Gnana Raj, Studies on acrylated epoxidised triglyceride resin-co-butylmethacrylate towards the development of biodegradable pressure sensitive adhesives *J.Mater Sci:Mater Med* 20,2009 ,61-70.
2. S.Begila David and G.Allen Gnana Raj,Development studies of biodegradable pressure sensitives from groundnut oil and butylmethacrylate, *Asian J.Research Chem.* 3 (1),2010,40-46.
3. S.Begila David and G.Allen Gnana Raj, Synthesis and characterization of soyabean oil based biodegradable thermosetting polymer.*International Journal of Pure and Applied Chemistry*, 5(2),2010,135-141.
4. S.Begila David and G.Allen Gnana Raj, Synthesis, Characterization and Biodegradable Studies of Oil based Polymers from Triethyleneglycoldimethacrylate and Vinylacetate *Asian J.Research Chem.* 4(7),2011, 1092 -1096.
5. Irine Sheela.C, and Begila David.S, Photo and biodegradation of thermosetting polymers from linseed oil ,*International journal of chemical studies.* IJCS 2014; 2(4): 46-54.
6. K. Priya Rajini and S. Begila David, Studies and Development of Interpenetrating Polymer Networks from Linseed oil and Corn oil. *Asian J. Research Chem.* 7(10):October- 2014.
7. K. Priya Rajini and S. Begila David, Studies on the Development of Oil based Polymers from Triethyleneglycol dimethacrylate and Vinyl Pyrrolidone. *International Journal of Pure and Applied Chemistry*, 9(1-2),2014,97-103.



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8. G. S. Prabha Littis Malar and S. Begila David, Synthesis and characterisation of Novel Citric- acid derived polyesters from Linseed Oil. *Cibtech Journal of Bio-Protocols*, 2014; Vol. 3 (2),1-6.
9. G.S.Prabha Littis Malar and Begila David, Novel Biomimetic Polyesters from Linseed Oil for Tissue Engineering Applications. *The International Journal Of Science & Technoledge*, 2014; Vol. 2 (10), 132-135.
10. K.Rathika and S.Begila David, Study on Effect of Variation of NCO/OH Molar Ratio and PU/MMA Weight Ratio on Chemical and Mechanical Properties of IPNs Derived from Bio-Mass. *The International Journal Of Science & Technoledge*, 2014; Vol. 2 (10), 152-135.
11. G.S.Prabha Littis Malar and S.Begila David, Development of Novel Citric Acid Based Biodegradable Polyesters from Sesame Oil. *International Journal of Chemistry and Applications*, 2014: Vol 6(2), 133-138.
12. Irine Sheela.C, and Begila David.S, Synthesis and characterization of biopolymers from linseed oil monoglyceride cyclohexane dicarboxylate with methyl acrylate and methyl methacrylate co-monomers.*International Journal of Chemical Sciences and Applications*, 2014;Vol 5(2),30-37.
13. G.S.Prabha Littis Malar and S.Begila David, Synthesis and Characterisation of Novel Citric Acid Based Polyester Elastomers from Sunflower Oil.*International Journal of Scientific Research*, 2014; Vol.3(10), 79-81.



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14. G.S.Prabha Littis Malar and S.Begila David, Synthesis and Characterization of Biodegradable Polyesters Based on Sesame Oil for Biomedical Field. *International Journal of Science and Research (IJSR)*, 2015; Vol. 2(4),1950-1964.
15. Irine Sheela.C, and Begila David S, Photo and Biodegradation of thermosetting polymers from Sesame oil.*International Research Journal of Pharmaceutical and Biosciences (IRJPBS)* 2015; 2 (1) : 63-72.
16. Irine Sheela.C, and Begila David S, Study of crosslinked biopolymers from Linseed oil monoglyceride cyclohexane dicarboxylate with vinyl acetate and n-vinyl-2-pyrrolidone co-monomers, *International Journal of Chemical Research*. 2014; Vol 4(4), 9 – 18.
- 17.S,Begila David and K.Priya Rajini, Synthesis and Comparative study of Novel crosslinked Biopolyesters from Corn oil.*Scholars Academic Journal of Biosciences (SAJB)*,2015;3(3),284-293.
- 18..S,Begila David and K.Priya Rajini, Synthesis and Comparative study of Novel cross linked Biopolymers from Linseed oil,*Int.Journal of Engineering Research and Applications* August 2015;pp.09-15.(ISSN : 2248-9622)
19. S.P.R.Kalaikathir, S.Begila David, Assessment of water quality along the cost of Arabian Sea,*International Journal of Modern Science and Technology* May 2016. Vol1(2) pp69-79. ISSN: 2456-0235.



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20. Y.J.Jeba Jane Ratney, S.Begila David Antibacterial Activity of Zinc Oxide Nanoparticle by Sonochemical method and Green method using Zingiber Officinale, *Green Chemistry & Technology Letters*, January 2016 Vol.2, No.1, pp 11-15. ISSN:2455-3611.
21. K.Rathika, S.Begila David Effect of Increasing NCO/OH Molar Ratio on the Chemical and Mechanical Properties of Isocyanate terminated Polyurethane Prepolymer derived from Biomass, *Green Chemistry & Technology Letters*, March 2016 Vol.2, No.2, pp 78-82. ISSN:2455-3611.
22. S.P.R.Kalaikathir, S.Begila David, Synthesis and Characterisation of nanostructured carbon supported Pt electrocatalysts for membraneless methanol fuel cells (MLMFC), *International Journal of ChemTech Research*, 2016, Vol.9, No.07.p.596-610. ISSN: 0974-4290.
23. Y.J.Jeba Jane Ratney, S.Begila David, Blend of Biocompatible Magnesium Oxide Nanomolecule and its Anticancer Action against Human Colon Cell Line, *International Journal of Nanobiotechnology*, 2016 Vol.2, Issue 2, pp 15-18. ISSN:2456-0111.
24. S.P.R.Kalaikathir, S.Begila David, 2017, Performance of seawater supported Pt-Sn-Mg/C catalyst for membraneless fuel cells, *International Journal of Industrial Engineering (IJIE)*, 2017, Vol.1, Issue 2, p.52-61. ISSN:2217-2661.
25. G.S.Prabha Littis Malar and S.Begila David, Studies on Biodegradable polyesters from Sesame oil for Soft Tissue Engineering, *International Journal of Emerging Technology and Advanced Engineering*, 2017: Vol 7(9), p.126-130, ISSN:2250-2459.



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26. Y.J.Jeba Jane Ratney, S.Begila David, Evaluation of In-vitro Anticancer and Antioxidant Activity of Zinc Oxide nanoparticle by Chemical and Green method. *International Journal of Latest Trends in Engineering and Technology* 2017. pp.010-015. ISSN: 2319-3778.

27. K.Rathika, S.Begila David, Synthesis and Characterisation of Castor Oil based Polyurethane-Methyl methacrylate interpenetrating Polymer networks, *International Journal of Current Science and Technology* 2017.Vol5 (X) pp.271-275 ISSN: 2320-8090.

28. Ginju M.L, S.Begila David, Synthesis & Characterisation of a Novel Cross Linked Bio-based Polyurethane from the Egg Oil, *International Journal of Chemical and Physical Sciences*, 2018.Vol7 (1) pp.13-17 ISSN: 2319-6602.

29. Ginju M.L, S.Begila David, Comparison and Characterisation of Biodegradable Crosslinked Polycarbonateacrylate from Soyabean oil at different Concentration.*International Journal of Scientific Research and Review*, 2018.Vol 7 (12) pp. ISSN: 2279-543X.

30. K.Rathika, S.Begila David, Effect of Aliphatic Diisocyanate and Aromatic Diisocyanate on the properties of Castor Oil-based Polyurethanes.

*IOSR Journal of Applied Chemistry (IOSR-JAC)*, July 2018.Vol 11 (7) pp.52-59 ISSN: 2278-5736.





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31. K.Rathika, S.Begila David, Study on Effect of Variation of diisocyanate and NCO/OH molar ratio on Mechanical, Thermal, and Electrical properties of interpenetrating polymer networks derived from biomass.

*JETIR Journal of Emerging Technologies and Innovative Research*, Oct 2018.Vol 5 (10) pp.219-240 ISSN: 2349-5162.

32. Ginju M.L, S.Begila David, Synthesis& Characterisation of a Novel Cross Linked Bio-based Polyurethane from Egg Oil.*International Journal of Chemical and Physical Sciences*, (IJCPS) Jan-Feb 2018.Vol 7 (1) pp.13-17 ISSN: 2319-6602

33. . Ginju M.L, S.Begila David, Synthesis and Characterisation of a Novel Crosslinked Biopolyurethane from Soyabean oil as eco-friendly Biodegradable Material.*International Journal of Interdisciplinary Research and Innovations*, April-June 2018. Vol 6 (2) pp.423-430 ISSN: 2348-1218.

34. J.Johnsy Rose, S.Begila David, Study of acrylated polymers from sunflower oil with methyl acrylate and methylmethacrylate co-monomer.*International Journal of basic and applied research*, July 2018.Vol 8 (7) pp.1019-1029 ISSN: 2249-3352.

35. J.Johnsy Rose, S.Begila David, Studies on the development of oil based polymer from methyl-methacrylate and vinylacetate co-monomer.*Journal of Emerging Technologies and Innovative Research (JETIR)*, June 2018.Vol 5 (6) pp.284-291 ISSN: 2349-5162.



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36. K.Rathika, S.Begila David, Synthesis of polyurethane prepolymer using Pongamia glabra seed oil. *International Journal of Research and Analytical Reviews (IJRAR)*, December 2018. Vol 5(12 ) pp.1142-1156 ISSN: 2349-5138.

37. J.Johnsy Rose, S.Begila David, Synthesis and Characterisation of Olive oil based Biodegradable Polymers. *International Journal of Research*, February 2019. Vol 8 (2) pp.209-215 ISSN: 2236-6124.

38. J.Johnsy Rose, S.Begila David, Studies and Development of Polymeric Materials from Acrylated Epoxidized Olive oil. *Journal of Applied Science and Computations*, February 2019. Vol 6 (2) pp.323-333 ISSN: 1076-5131.

39. Ginju M.L, S.Begila David, Characteristic Studies on Novel Biodegradable Polyurethane Thin Films from Soyabean Oil, *Oriental Journal of Chemistry*, March 2019. Vol 35 (2) pp.877-884 ISSN: 0970-020X. (Scopus & ICI)

40. Ginju M.L, S.Begila David, Synthesis and Characterization of Egg Oil. (*JETIR*), *International Journal of Emerging Technologies and Innovative Research*, June 2019. Vol 6(6) pp.877-884 ISSN: 2349-5162.

41. Y.J.Jeba Jane Ratney, S.Begila David, In vitro Cytotoxicity Studies of ZnO Nanoparticle prepared by Chemical and Green Synthesis, *International Journal of Scientific Research and Review*, 2019, Vol.8, Issue 7, pp 127-138. ISSN:2279-543X.

42. Irine Sheela.C, and Begila David S, Thermal and Mechanical Properties of Polymer Composites from Sesame Oil using wood and Wheat flour as fillers. *Journal of*



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*Emerging Technologies and Innovative Research (JETIR)*, June 2019.Vol 6 (6) pp 451-455, ISSN: 2349-5162.

43. Asmitha beegum .S and S. Begila David, Synthesis and antibacterial study of silver nanoparticles-nitrogen doped grapheme oxide-chitosan nanocomposite. *Oriental Journal of Chemistry*, February 2022, vol 39, no 1, pg 154-160, ISSN :0970-020x.

44. Asmitha beegum .S and S. Begila David, Investigation of Antimicrobial Activity of Plant-mediated Green Synthesis of Silver Nanoparticles, *International Journal Of Nanoscience and Nanotechnology*, December 2022, Vol 18, No.4, pp. 265-274.

45. B Jone Magadelin, S Ajith Sinthuja, S. Begila David, A Yardily, A Novel synthesis of phyto-mediated silver nanoparticles and its bacterial performance against microbes, *Materials Today: Proceedings*, October 2022(68), pp-640-645.

46. J.L.Jebisha ,S. Begila David, Evaluation of Photocatalytic and Antimicrobial Activities of Copper Nanoparticles Synthesized Using Fenugreek seeds, *Journal of Pharmaceutical Negative Results*, December 2022, Vol 13, No.10, pp. 3970-3976.

47. J V Benlin Giftna , S. Begila David, Nano-Silica : Synthesis, Characterization and Antimicrobial Studies, *International Journal of Food and Nutritional Sciences (IJFANS)*, 2022, Vol 11, pp- 11614-11622.

48. J V Benlin Giftna , S. Begila David, Nano-Silica and Zeolite-Y : Synthesis, Characterization and Application in the photocatalytic degradation of azo dyes, *African Journal of Biological Sciences*, 2024, Vol 6(5), 2822-2838.



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49. J.L.Jebisha ,S. Begila David, Preparation and Characterization of Renewable Bio-Polyol from the Edible Seed oil, Journal of Stress Physiology & Biochemistry,vol 20 ,No 3, 2024, pp-29-36.

50. J.L.Jebisha ,S. Begila David, Synthesis and Characterization of Bio-based polyurethane for potential applications as photocatalysts and anti-microbes, Corrossion Management, vol : 34 (01), June 2024, pp: 212-220.

#### **Project Details**

1. Minor Research Project by the University Grants Commission (No.F.MRP-2583/08(MRP/UGC-SERO) Link No.2583 (2008-2010) entitled “Studies on acrylated epoxidised soyabean oil towards the development of biodegradable polymers”
2. Minor Research Project by the University Grants Commission (No.F.MRP-3823/11(MRP/UGC-SERO) Link No.3823 (2012-2014) entitled “Synthesis and characterization of sunflower oil based thermosetting polymer”.

#### **Seminars and Conferences Attended :33**

#### **Papers Presented in National/International Conferences and Seminars:13**

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

<b>S.No</b>	<b>Title</b>	<b>Seminar/ Conference</b>	<b>State level/ National/ International</b>
<b>1.</b>	<b>Convenor</b> in the National Seminar on Recents Trends in Nano Science On 23 <sup>rd</sup> August 2017 organised by the Department of Chemistry & Research	Seminar	National



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	Centre, Scott Christian College Nagercoil.		
2.	<b>Convenor</b> in conducting the Legal Rights for women Quiz competition funded by the National Commission for Women, New Delhi on October 2017 & December 2018	Quiz	
3.	<b>Organising Secretary</b> in the National Seminar on Frontiers in Chemistry on 12 <sup>th</sup> March 2018 organised by the Department of Chemistry & Research Centre, Scott Christian College Nagercoil.	Seminar	National
4.	<b>Organising Secretary</b> in the workshop on Green and sustainable Chemistry on 6 <sup>th</sup> February 2019 organised by the Department of Chemistry & Research Centre, Scott Christian College Nagercoil.	Workshop	
5.	<b>Convener</b> in the Webinar 'How to strength our Innovation through Intellectual Property Rights' on 21 <sup>st</sup> June 2021 organised by the Department of Chemistry & Research Centre, Scott Christian College Nagercoil..	Seminar	State
6.	<b>Coordinator</b> for conducting the Online vocal Patriotic song competition conducted by the Department of Chemistry on the	Online vocal Patriotic song	National



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	occasion of 75 <sup>th</sup> Independence day celebration (2020)		
7.	<b>Organising</b> Secretary for Conducting the Entrepreneurship and Professional Skill Development Programme conducted by youth welfare ,Scott Christian College.(Funded by Rajiv Gandhi National Institute of Youth Development)10.03.2022 to 12.03.2022)	Entrepreneurship	National
8.	<b>Coordinator</b> for MOU &Skill Development Programme on 18.03.2022		National
9.	<b>Convenor</b> for International Conference on Biomaterials, Biodegradables and Biomimetics on 23-01-2024	Conference	International

#### M.Phil Scholars Guided - 15

#### Served as Doctoral Committee Member:

1. A.Sahila Grace,Reg.No.182131620320152018
2. A.M.Dhanalekshmi,Reg.No.21113282032004
3. Ginu Rose C,Reg.No. 21113282032005
4. N.Kiruba. Reg.No. 21113162032024

#### Books Published

Synthesis and Characterisation of Biopolyesters from Oil , Polymer Research, Lambert Academic Publishing - S.Begila David, G.Allen Gnana Raj -2019

Book Details:

ISBN-13: 978-620-0-47528-2

Synthesis and Characterisation of Egg Polyurethane from egg yolk Oil , Polymer Research, Lambert Academic Publishing - Ginju.M.L., S.Begila David -2020



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Book Details:

ISBN-13: 978-620-0-56951-6

**Additional Responsibilities:**

**1. Mentor**

**2. NSS programme officer (2016-2019)**

**3. Member in ICTC**

**4. Lesson Writing Works**

Directorate of Distance & Continuing Education

Manomaniam Sundaranar University

Lesson Writing Works for II B.Sc Chemistry Course for Allied Bio Chemistry on  
08.09.2015

**5. Question Paper Setter**