



Dr.S.Thambidurai
Professor

Contact

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Academic Qualifications: M.Sc.,Ph.D.

Teaching Experience: 22 Years

Research Experience: 20 Years

Additional Responsibilities

1. NSS-Programme Officer, 01.09.2016 to 31.3.2018
2. Coordinator, M.Phil.Chemistry (Week-End)-12.08.2016 to 31.3.2019
3. Coordinator, Swachh Bharat and Swasth Bharat-25.07.2017 onwards

Areas of Research

1. Textile Chemistry 2. Bio-nanomaterials

Research Supervision / Guidance

Program of Study		Completed	Ongoing
Research	Ph.D.	13	2
	M.Phil.	45	-
Project	PG	60	4
	UG / Others	--	--

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books / Chapters / Monographs / Manuals
56	38	04	103	03

Cumulative Impact Factor (as per JCR) : 189
h-index : 19
i10 index : 37
Total Citations : 1200

Funded Research Projects

Completed Projects

S. No	Agency	Period		Project Title	Budget (Rs. In lakhs)
		From	To		
1	UGC	2010	2013	Optimization study of salt-free reactive dyeing and fixing of seaweed nano particles on cotton fabric for permanent antibacterial finishing	7.71
2	AURF	2010	2011	Synthesis of Zinc Oxide Blended Chitosan Nanoparticles for Antibacterial and UV-Protection on Cotton Fabric	0.64

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized: 03

1. Conference: Recent Advances in Textile and Electrochemical Sciences (RATES-2007), on June 1-2, 2007-Organizing Secretary
2. Workshop: Green Process Techniques for Industrial Applications (Greptia-2009), on March 20-21, 2009-Coordinator
3. Workshop: Materials Chemistry for Future Industrial Development, (MATCH FIND-2017), on 6-7th January, 2017- Organizing Secretary
4. Two days training programme on Business Training Programme on Textiles and Batteries, on 7-8th February, 2017- Coordinator

Membership in

Professional Bodies

1. Life Member: The Indian Science Congress Association

Academic Bodies (such as Board of Studies etc.,)

1. B.Tech. Textile Technology		University of Madras:
2. B.E. Textile Technology		Bharathidasan University
3. B.Sc. Apparel and Fashion Technology		Bharathidasan University
4. P.G Diploma In Fashion Technology		Bharathidasan University
5. B.Sc. Garment Technology		Alagappa University (collaborative)
6. M.Sc. Garment Technology		Alagappa University (collaborative)
7. M.B.A. Apparel Production		Alagappa University (collaborative)
8. M.Sc., Chemistry	2009 to 2012	Alagappa University (Affiliated colleges)
9. M.Phil., Chemistry	2017 to 2020	Alagappa University (Affiliated colleges)
10. M.Sc., Chemistry	2017 to 2020	Alagappa University (Affiliated colleges)
11. B.Sc., Chemistry	2017 to 2020	Alagappa University (Affiliated colleges)
12. M.Sc., Chemistry	2018 to 2019	Alagappa University (Department)

Resource persons in various capacities

Number of Invited / Special Lectures delivered: 05

Others

1. No. of PhD Thesis evaluated : 25
2. No. of PhD Public Viva Voce Examination conducted : 20
3. Sequences submitted in GenBank
4. Acted as Member of Inspection committee of following courses
M.Sc.Chemistry for Alagappa University (Affiliated colleges)
M.Phil.Chemistry for Alagappa University (Affiliated colleges)
B.Sc. Apparel and Fashion Technology Bharathidasan University
P.G Diploma In Fashion Technology Bharathidasan University
B.Sc. Garment Technology Alagappa University (collaborative)

Book Chapters Published

- 1.S.Thambidurai, (2011), Extraction and Characterization of Seaweed Nanoparticles for Application on Cotton Fabric. In S-K. Kim (Ed), Handbook of Marine Macroalgae: Biotechnology and Applied Phycology, **JohnWiley & Sons**, Ltd. West Sussex, England, pp 205-220. ISBN: 978-0-470-97918-1.
- 2.S.Thambidurai and K.Pandiselvi, (2017), Polyaniline/Natural Polymer Composites and Nanocomposites, P.M.Visakh et al (Ed), Polyaniline Blends, Composites, and Nanocomposites. **Elsevier**, pp-235-256, ISBN: 9780128095515.
- 3.S.Thambidurai, R.Pandimurugan, (2020) Antibacterial Activity of Seaweed-ZnO Composites, Prof. Se-Kwon Kim(Ed), Encyclopedia of Marine Biotechnology, Chapter 110, **John Wiley & Sons** Ltd, pp: 2443-2452. ISBN: 9781119143772.

Recent Publications

- 1.Revathi T, Thambidurai S, (2019), Cytotoxic, antioxidant and antibacterial activities of copper oxide incorporated chitosan-neem seed biocomposites, International Journal of Biological Macromolecules. 139 867–878, Elsevier, USA, (Impact factor: 6.953).
- 2.Rajaboopathi S, Thambidurai S, (2019), Synthesis of bio-surfactant based Ag/ZnO nanoparticles for better thermal, photocatalytic and antibacterial activity, Materials Chemistry and Physics, Elsevier, 223, 512-522. (Impact factor:4.094).
- 3.Rajaboopathi S, Thambidurai S, (2018), Enhanced photocatalytic activity of Ag-ZnO nanoparticles synthesized by using Padina gymnospora seaweed extract, Journal of Molecular Liquids, Elsevier, 262, 148–160. (Impact factor: 6.165).
4. Revathi T, Thambidurai S, (2018), Immobilization of ZnO on Chitosan-Neem seed composite for enhanced thermal and antibacterial activity, Advanced Powder Technology, Elsevier, 29, 1445–1454. (Impact factor: 4.833).
- 5.Rajaboopathi S, Thambidurai S, (2018), Evaluation of UPF and antibacterial activity of cotton fabric coated with colloidal seaweed extract functionalized silver nanoparticles, Journal of Photochemistry & Photobiology, B: Biology, Elsevier, 183, 75–87. (Impact factor:6.252).
- 6.Pandimurugan R, Thambidurai S, (2017), UV protection and antibacterial properties of seaweed capped ZnO nanoparticles coated cotton fabrics, International Journal of Biological Macromolecules, Elsevier, 105, 788-795. (Impact factor: 6.953).
- 7.Rajaboopathi S, Thambidurai S, (2017), Green synthesis of seaweed surfactant based CdO-ZnO nanoparticles for better thermal and photocatalytic activity, Current Applied Physics, Elsevier, 17, 1622-1638. (Impact factor: 2.48).

- 8.Karpuraranjith M, Thambidurai S, (2017), Synergistic effect of chitosan-zinc-tin oxide colloidal nanoparticle and their binding performance on bovine albumin serum, *Materials Chemistry and Physics*, Elsevier, 199, 370-378. (Impact factor: 4.094).
- 9.Rajaboopathi S, Thambidurai S, (2017), Chitosan-Magnesium oxide Bio-composite for better thermal and Antibacterial properties, *Journal of Polymer Materials*, 34, 91-102. (Impact factor:0.48).
- 10.Karpuraranjith M, Thambidurai S, (2017), Morphological and Thermal Properties of low Temperature Preparation zinc-tin oxide/chitosan Hybrid Composite, *Journal of Polymer Materials*, 34, 185-194. (Impact factor:0.48).
- 11.Karpuraranjith M, Thambidurai S, (2017), Design and synthesis of graphene-SnO₂ particles architecture with polyaniline and their better photodegradation performance, *Synthetic Metals*, Elsevier, 229, 100-111. (Impact factor:3.266).
- 12.Karthik R, Thambidurai S, (2017), Synthesis of cobalt doped ZnO/reduced graphene oxide nanorods as active material for heavy metal ions sensor and antibacterial activity, *Journal of Alloys and Compounds*, 715, 254-265. Elsevier, UK, (Impact factor: 5.316).
- 13.Revathi T, Thambidurai S, (2017), Synthesis of chitosan incorporated neem seed extract (*Azadirachta indica*) for medical textiles, *International Journal of Biological Macromolecules*. 104, 1890–1896, Elsevier, USA, (Impact factor: 6.953).
- 14.Karpuraranjith M, Thambidurai S, (2017), Chitosan/zinc oxide-polyvinylpyrrolidone (CS/ZnO-PVP) nanocomposite for better thermal and antibacterial activity, *International Journal of Biological Macromolecules*. 104, 1753–176, Elsevier, USA, (Impact factor: 6.953).
- 15.Karthik R, Thambidurai S, (2017), Synthesis of RGO–Co doped ZnO/PANI hybrid composite for supercapacitor application, *Journal of Materials Science: Materials in Electronics*, Springer, USA, 28, 9836–9851. (Impact factor: 2.478).
- 16.Karpuraranjith M, Thambidurai S, (2017), Design and synthesis of graphene-SnO₂ particles architecture with polyaniline and their better photodegradation performance, *Synthetic Metals*, Elsevier, UK, 229, 100-111. (Impact factor: 3.266).
- 17.Karpuraranjith M, Thambidurai S, (2017), Hybrid structure of biotemplate-zinc-tin oxide for better optical, morphological and photocatalytic properties, *Semiconductor Science and Technology*, IOP Publishing, England, 32, 035014-035029. (Impact factor: 2.352).
- 18.Rajaboopathi S, Thambidurai S, (2017), Heterostructure of CdO-ZnO nanoparticles intercalated on PANI matrix for better thermal and electrochemical performance, *Materials Science in Semiconductor Processing*, Elsevier, UK, 59, 56–67. (Impact factor: 3.927).

19. Karpuraranjith M, Thambidurai S, (2016), Biotemplate-SnO₂ particles intercalated PANI matrix: Enhanced photocatalytic activity for degradation of MB and RY-15 dye, *Polymer Degradation and Stability*, Elsevier, USA, 133, 108-118. (Impact factor: 5.03).
20. Pandimurugan R, Thambidurai S, (2016), Novel seaweed capped ZnO nanoparticles for effective dye photodegradation and antibacterial activity, *Advanced Powder Technology*, Elsevier, Netherlands, 27, 1062–1072. (Impact factor: 4.833).
21. Karpuraranjith M, Thambidurai S, (2016), Twist fibrous structure of CS–SnO₂–PANI ternary hybrid composite for electrochemical capacitance performance, *RSC Advances*, RSC Publishing, England, 6, 40567–40576. (Impact factor :3.361).
22. Pandimurugan R, Thambidurai S, (2016), Synthesis of seaweed-ZnO-PANI hybrid composite for adsorption of methylene blue dye, *Journal of Environmental Chemical Engineering*, Elsevier, Netherlands, 4, 1332–1347. (Impact factor:5.909).
23. Pandiselvi K, Thambidurai S, (2016), Synthesis of adsorption cum photocatalytic nature of polyaniline-ZnO/chitosan composite for removal of textile dyes, *Desalination and Water Treatment*, Taylor & Francis, United Kingdom, 57, 8343-8357. (Impact Factor: 1.631).
24. Pandimurugan R, Thambidurai S, (2015), Seaweed-polyaniline nanofibre modified electrode for sensing of uric acid, *Analytical Methods*, RSC Publishing, United Kingdom 7, 10422–10432. (Impact factor:2.073).
25. Pandiselvi K, Thambidurai S, (2015), Synthesis, characterization, and antimicrobial activity of Chitosan-zinc oxide/polyaniline composites, *Material Science in Semiconductor Processing*, Elsevier, USA, 31, 573-581. (Impact Factor: 3.927).
26. Pandiselvi K, Thambidurai S, (2014), Chitosan-ZnO/Polyaniline nanocomposite modified glassy carbon electrode for selective detection of dopamine, *International Journal of Biological Macromolecules*, Elsevier, USA, 67, 270-278, (Impact Factor: 6.953).
27. Pandimurugan R, Thambidurai S, (2014), Seaweed-ZnO composite for better antibacterial properties, *Journal of Applied Polymer Science*, John Wiley & Sons Inc, USA, 131, DOI: 10.1002/app.40948. (Impact Factor: 3.125)
28. Pandiselvi K, Thambidurai S, (2014), Chitosan-ZnO/polyaniline ternary nanocomposite for high performance supercapacitor, *Ionics*, Springer, Germany, 20, 551-561. (Impact Factor: 2.817).
29. Baburaj T, Thambidurai S, (2014), Corrigendum to 'N-amination of amino acids and its derivatives using N-Boc-O-tosyl hydroxylamine as an efficient NH-Boc transfer reagent: electrophilic amination' [*Tetrahedron Lett.* 53 (2012) 2292–2294], *Tetrahedron Letters*, Elsevier, UK, 55, 561-563. (Impact Factor: 2.415).

30. Pandiselvi K, Manikumar A, Thambidurai S, (2014), Synthesis of novel polyaniline/MgO composite for enhanced adsorption of reactive dye, *Journal of Applied Polymer Science*, John Wiley & Sons Inc, USA, 131, DOI: 10.1002/app.40210. (Impact Factor: 3.125).
31. Pandiselvi K, Thambidurai S, (2013), Synthesis of porous chitosan–polyaniline/ZnO hybrid composite and application for removal of reactive orange 16 dye, *Colloids and Surfaces B: Biointerfaces*, Elsevier, Netherlands, 108, 229-238. (Impact Factor: 5.268).
32. Krishnaveni R, Thambidurai S, (2013), Industrial method of cotton fabric finishing with chitosan–ZnO composite for anti-bacterial and thermal stability, *Industrial Crops and Products*, Elsevier, USA, 47, 160-167. (Impact Factor: 5.645).
33. Pandiselvi K, Thambidurai S, (2013), Chitosan-ZnO/polyaniline hybrid composites: Polymerization of aniline with chitosan-ZnO for better thermal and electrical property, *Polymer Degradation and Stability*, Elsevier, USA, 98, 988-996. (Impact Factor: 5.03).
34. Anadhavelu S, Thambidurai S, (2013), Single step synthesis of chitin/chitosan-based graphene oxide–ZnO hybrid composites for better electrical conductivity and optical properties, *Electrochimica Acta*, Elsevier, UK, 90, 194– 202. (Impact Factor: 6.901).
35. Anadhavelu S, Thambidurai S, (2013), Preparation of eco-friendly chitosan-ZnO composite for chromium complex dye adsorption, *Coloration Technology*, Wiley Blackwell, USA, 129, 187-192. (Impact Factor: 1.614).
36. Anadhavelu S, Thambidurai S, (2013), Effect of annealing temperature on optical and electrochemical properties of chitosan-ZnO nanostructure, *Ionics*, Springer-Verlag, Germany, 19, 903-909. (Impact Factor: 2.354).
37. Umasangari T, Anadhavelu S, Thambidurai S, (2013), Eco-friendly preparation of zinc oxide nanoparticles with jackfruit seed flour template and microwave assist heating, *Advanced Science, Engineering and Medicine*, American Scientific Publishers, USA, 5, 841-845. (Impact Factor: 0.987).
38. Baburaj T, Thambidurai S, (2012), *N*-Amination of amino acids and its derivatives using *N*-Boc-*O*-tosyl hydroxylamine as an efficient NH-Boc transfer reagent: Electrophilic amination, *Tetrahedron Letters*, Elsevier, UK 53, 2292-2294. (Impact Factor: 2.415).
39. Krishnaveni R, Thambidurai S, (2012), Modification of Enzyme Pretreated Cotton Fabric using Acrylonitrile, Acrylonitrile/ Solvent Mixture and its Characterization, *Fibre and Polymers*, Springer, Korea, 13, 1132-1338. (Impact Factor: 1.797).
40. Anadhavelu S, Thambidurai S, (2011), Effect of zinc chloride and sodium hydroxide concentration on the optical property of chitosan-ZnO nanostructure prepared in chitin deacetylation, *Materials Chemistry and Physics*, Elsevier, Taiwan, 131, 449-454. (Impact Factor: 4.094).

41. Baburaj T, Thambidurai S, (2011), N-Boc-O-Tosyl Hydroxylamine as a Safe and Efficient Nitrogen Source for the N-Amination of Aryl and Alkyl Amines: Electrophilic Amination, Synlett, Georg Thieme Verlag Stuttgart, USA, 14, 1993-1996. (Impact Factor: 2.006).
42. Krishnaveni R, Thambidurai S, (2011), Effect of Solvents on Cyanoethylation of Cotton Cellulose and its Properties, Journal of Applied Polymer Science, John Wiley & Sons Inc, USA, 122, 1622-1627. (Impact Factor: 3.125)
43. Anadhavelu S, Thambidurai S, (2011), Preparation of Chitosan-Zinc oxide Complex during chitin deacetylation, Carbohydrate Polymers, Elsevier, USA, 83, 1565-1569. (Impact Factor: 9.381).
44. Vijay Anand A, Thambidurai S (2009) Modification of Bioscoured Cotton Cellulose by Grafting and Hydrolysis Process, Iranian Polymer Journal, IPPI, Iran 18, 393-400. (Impact Factor: 1.707)
45. Mercy Sheeba J, Thambidurai S (2009) Extraction, Characterization and Application of Seaweed Nano Particles on Cotton Fabrics, Journal of Applied Polymer Science, John Wiley & Sons Inc, USA, 113, 2287-2292 (Impact Factor: 3.125)
46. Selva Subha A, Thambidurai S (2008) Effect of Solvent Induced Hydroxylation of Cyanoethyl group on dye uptake of cotton fabrics, Journal of Applied Polymer Science, John Wiley & Sons Inc, USA, 108, 1373-1377. (Impact Factor: 3.125)
47. Anita Hebsiba G, Thambidurai S (2007) Properties of Cotton yarns after slack swollen and stretched in Presence or Absence of Alkali II, Journal of Applied Polymer Science, John Wiley & Sons Inc, USA, 106, 3111-3118. (Impact Factor: 3.125)
48. Selva Subha A, Thambidurai S (2006) Effect of Solvent induced one Step Partial Cyanoethylation Process on Properties of Cotton Fabric, International Journal of Polymeric Materials, Taylor & Francis, 55, 957-974. (Impact Factor: 1.982)
49. Selva Subha A, Thambidurai S (2006) Solvent Induced Partial Cyanoethylation and Hydroxylation of Cyanoethyl group, Journal of Applied Polymer Science, John Wiley & Sons Inc, USA, 102, 183-191. (Impact Factor: 3.125)