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Natural Composites Research Group Lab,
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<https://scholar.google.co.in/citations?user=TrIM87YAAAAI&hl=en>

EDUCATIONAL BACKGROUND

- Ph.D. Anna University** **Dec 2015**
Department of Mechanical Engineering
Dissertation: "Comprehensive characterization of Cissus quadrangularis fiber as an alternative reinforcement for polymer composite"
Advisor: Dr. R. Edwin Raj (IIT-Roorkee)
- M.Tech. Park college of Engineering and Technology, Coimbatore (9.4/10) May 2011**
Engineering Design, Department of Mechanical Engineering **(Gold Medalist)**
Dissertation: "Tribological characterization of carbon epoxy composite materials with particulate sic fillers"
Advisor: Dr. K. Kumaresen
- B.E. St.Xavier's Catholic College of Engineering, Nagercoil (83 %) May 2009**
Department of Mechanical Engineering **(First class with Distinction)**
- HSC, Sarojini Memorial Higher Secondary School, Orappanavilai (86 %) May 2005**
- SSLC, Government Higher Secondary School, Koduppaikuzhi (90 %) May 2003**

MACHINES HANDLED

Compression Molding Machine, Pin on Disc Tribometer, Three body Abrasive Wear Test Rig, Instron Testing Machine, Digital Hardness testing machine, Differential Scanning Calorimeter, Optical Microscope, Fourier transform infrared spectroscopy, X-ray Diffraction, DSC/TGA, Scanning Electron Microscope (SEM) machine.

SKILLS DEVELOPED

Auto CAD, Creo, Ansys, Matlab, OriginLab, Latex, Over leaf, Mendeley, Edraw-max.

RESEARCH INTERESTS

Biomaterials, Nano-Composites, Advanced Strength of Materials, Material Characterization, Tribology, Polymer processing, Product Design and Development, Natural fibers and its polymer composites preparation and characterization.

HONORS AND FELLOWSHIPS

Dedicated Teaching Award 2019
Rohini College of Engineering and Technology, Palkulam, Kanyakumari.
2019 - Annual day Award Function.

Dedicated Researcher Award 2018
Rohini College of Engineering and Technology, Palkulam, Kanyakumari.
2018 - Annual day Award Function.

Dedicated Teaching Award 2017
Rohini College of Engineering and Technology, Palkulam, Kanyakumari.
2017 - Annual day Award Function.

Innovative Technological Research & Dedicated Teaching Professional Award 2017
2017 JETR Convention on Innovative Technological Scientific Research Strategies in Science, Engineering and Medical Technology – Organized by Innovative scientific Research Professional Malaysia (ISRPM), held at Kuala Lumpur, Malaysia.

DST - INSPIRE Fellowship 2012
Awarded fellowship by Department of Science and Technology, Govt. of India (DST).

GOLD Medalist 2011
Anna University – Coimbatore, Engineering Design, Department of Mechanical Engineering, Park college of Engineering and Technology, Coimbatore.

School First, SSLC, Government Higher Secondary School, Koduppaikuzhi 2003

YOUNG SCIENTIST 2000

Attended Three Year intensive training program for **YOUNG SCIENTIST**, sponsored by the Ministry of Human Resource and Development, Govt. of India, the **Tamil Nadu State Council for Science and Technology, Govt. of Tamil Nadu** and the Noorul Islam Educational Trust, Thuckalay.

PEER-REVIEWED JOURNAL ARTICLES (Published)

1. Sergius Joe, M., Prince Sahaya Sudherson, Indran Suyambulingam, Suchart Siengchin (2023). Extraction and characterization of novel biomass-based cellulosic plant fiber from *Ficus benjamina* L. stem for a potential polymeric composite reinforcement, *Biomass Conversion and Biorefinery*, 2022, Springer, (Impact Factor: 4.050).
2. Jenish Iyyadurai, Felix Sahayaraj Arockiasamy, Tamilselvan Manickam, Srinivasan Rajaram, Indran Suyambulingam, Suchart Siengchin (2023). Experimental Investigation on Mechanical, Thermal, Viscoelastic, Water Absorption, and Biodegradability Behavior of *Sansevieria Ehrenbergii* Fiber Reinforced Novel Polymeric Composite with the Addition of Coconut Shell Ash Powder, *Journal of Inorganic and Organometallic Polymers and Materials*, Springer, (Impact Factor: 3.518).
3. Indran, S., Divya, D., Raja, S., Suchart Siengchin (2023). Physico-Chemical, Mechanical and Morphological Characterization of *Furcraea Selloa* K. Koch Plant Leaf Fibers-An Exploratory Investigation, *Journal of Natural Fibers*, Vol. 7, 1-17, Taylor & Francis, (Impact Factor: 3.507).
4. Ranteesh, J., Indran, S., Raja, S., Divya, D., Suchart Siengchin (2022). Isolation and characterization of novel microcellulose from *Sesamum indicum* agro-industrial residual waste oil cake: conversion of biowaste to wealth approach, *Biomass Conversion and Biorefinery*, 2022, Springer, (Impact Factor: 4.050).
5. Ranteesh, J., Indran, S., Divya, D., Suchart Siengchin (2022). Novel sesame oil cake biomass waste derived cellulose micro-fillers reinforced with basalt/banana fibre-based hybrid polymeric composite for lightweight applications, *Biomass Conversion and Biorefinery*, 2022, Springer, (Impact Factor: 4.050).
6. Ranteesh, J., Indran, S., Raja, S., Suchart Siengchin (2022). Isolation and characterization of novel micro cellulose from *Azadirachta indica* A. Juss agro-industrial residual waste oil cake for futuristic applications, *Biomass Conversion and Biorefinery*, 2022, Springer, (Impact Factor: 4.050).
7. R ArunRamnath, S Murugan, MR Sanjay, A Vinod, S Indran, Ashraf Y Elnaggar, Ahmed M Fallatah, Suchart Siengchin (2022). Characterization of novel natural cellulosic fibers from *Abutilon Indicum* for potential reinforcement in polymer composites, *Polymer Composites*, 2022, Wiley Online Library, (Impact Factor: 3.171).

8. Joseph Selvi Binoj, Natarajan Manikandan, Bright Brailson Mansingh, Vadivel Nayanar Anbazhagan, Govindarajan Bharathiraja, Suchart Siengchin, Mavinkere Rangappa Sanjay, Suyambulingam Indran (2022). Taguchi's Optimization of Areca Fruit Husk Fiber Mechanical Properties for Polymer Composite Applications, *Fibers and Polymers*, 2022, Springer, (Impact Factor: 2.347).
9. Sergius Joe Mohan, Prince Sahaya Sudherson Devasahayam, Indran Suyambulingam, Suchart Siengchin (2022). Suitability characterization of novel cellulosic plant fiber from *Ficus benjamina* L. aerial root for a potential polymeric composite reinforcement, *Polymer Composites*, 2022, Wiley Online Library, (Impact Factor: 3.171).
10. Siva Ramasamy, Amutha Karuppuchamy, Jeya Jeevahan Jayaraj, Indran Suyambulingam, Suchart Siengchin, Steffen Fischer (2022). Comprehensive characterization of novel Robusta (AAA) banana bracts fibers reinforced polylactic acid based biocomposites for lightweight applications, *Polymer Composites*, 2022, Wiley Online Library, (Impact Factor: 3.171).
11. Narayana Perumal Sunesh, Suyambulingam Indran, Divakaran Divya, Siengchin Suchart (2022). Isolation and characterization of novel agrowaste-based cellulosic micro fillers from *Borassus flabellifer* flower for polymer composite reinforcement, *Polymer Composites*, 2022, Wiley Online Library, (Impact Factor: 3.171).
12. D Divya, Indran Suyambulingam, MR Sanjay, Suchart Siengchin (2022). Suitability examination of novel cellulosic plant fiber from *Furcraea selloa* K. Koch peduncle for a potential polymeric composite reinforcement, *Polymer Composites*, 2022, Wiley Online Library, (Impact Factor: 3.171).
13. KN Bharath, D Roopa, S Indran, S Basavarajappa, MR Sanjay, Suchart Siengchin (2022). Influence of the stacking sequence and coconut husk micro fillers on the drilling parameters of coconut leaf sheath/glass/jute fiber hybrid phenol formaldehyde composites, *Materials Today: Proceedings*, Vol. 52, 2427–2431, Elsevier.
14. Raja, S., Rajesh, R., Indran, S., Divya, D., Sanjay, M. R., Suchart Siengchin (2022). Utilization of discarded *Cymbopogon flexuosus* root waste as a novel lignocellulosic fiber for lightweight polymer composite application, *Polymer Composites*, 2022, Wiley Online Library, (Impact Factor: 3.171).
15. Sathish Gandhi, V. C., Jenish, I., Indran, S., Yugendra Rajan, D., (2022). Mechanical and Thermal Analysis of *Cissus Quadrangularis* Stem Fiber/Epoxy Composite with Micro-

Red Mud Filler Composite for Structural Application, Transactions of the Indian Institute of Metals, Vol. 7, 1-17, Springer, (Impact Factor: 1.499).

16. Bharath, K.N., Roopa, Indran, D., Indran, S., Basavarajappa, S., Sanjay Mavinkere Rangappa, Suchart Siengchin, (2021). Influence of the stacking sequence and coconut husk micro fillers on the drilling parameters of coconut leaf sheath/glass/jute fiber hybrid phenol formaldehyde composites, Materials Today: Proceedings, Vol. 1, 1-42, Elsevier.
17. Raja, S., Rajesh, R., Indran, S., Rimal Isaac, Divya, D. (2021). Synthesis and characterization of cost-effective industrial discarded natural ceramic particulates from Cymbopogon flexuosus plant shoot for potential polymer/metal matrix reinforcement, Polymer Bulletin, Vol. 1, 1-42, Springer, (Impact Factor: 2.870).
18. Jenish, I., Sathish Gandhi, V. C., Indran, S., Rajeshkumar, G., (2021). Sustainable Development of *Cissus quadrangularis* Stem Fiber/Epoxy Composite on Abrasive Wear Rate, Journal of Natural Fibers, Vol. 7, 1-17, Taylor & Francis, (Impact Factor: 5.323).
19. S Indran, D Divya, Sanjay Mavinkere Rangappa, Suchart Siengchin, P Merlin Christy, LR Gopinath (2021). Perspectives of anaerobic decomposition of biomass for sustainable biogas production: A Review, Journal of Industrial Textiles, Vol. 302, 1-15, E3S Web of Conferences, <https://doi.org/10.1051/e3sconf/202130201015>.
20. Manimekalai, G., Kavitha, S., Divya, D., Indran, S., Binoj, J.S (2021). Characterization of enzyme-treated cellulosic stem fiber from *Cissus quadrangularis* plant: An exploratory investigation, Current Research in Green and Sustainable Chemistry, Vol. 4, 1-12, Elsevier.
21. Raja, S., Rajesh, R., Indran, S., & Rimal Isaac (2021). Comprehensive Characterization of Industrially Discarded Cymbopogon Flexuosus Stem Fiber Reinforced Unsaturated Polyester Composites: Effect of Fiber Length and Weight Fraction, Journal of Natural Fibers, Vol. 6, 1-17, Taylor & Francis, (Impact Factor: 5.323).
22. Nasmi Herlina Sari, Suteja Suteja, Ilyas, R.A., Edi Syafri, & Indran, S. (2021). Characterization of the density and mechanical properties of corn husk fiber reinforced polyester composites after exposure to ultraviolet light, Functional Composites and Structures, Vol. 3(3), 1-15, The Korean Society for Composite Materials and IOP Publishing Limited, (Impact Factor: 2.1).

23. Jayanthi, B., Divya, D., Indran, S., Aruna, M., Karthika, R., Arjunan, S., Selvankumar, T., Manikandan, E., & Santhi, R. (2021). Influence of freeze-drying and fresh cooking on starch morphology and physicochemical and thermal properties of various tropical tubers, *International Journal of Biological Macromolecules*, Vol. 183, 1794-1806, Elsevier, (Impact Factor: 6.953).
24. Raja, S., Rajesh, R., Indran, S., Divya, D., & Suganya Priyadharshini, G. (2021). Characterization of industrial discarded novel *Cymbopogon flexuosus* stem fiber: A potential replacement for synthetic fiber, *Journal of Industrial Textiles*, Vol. 1, 1-12, Sage, (Impact Factor: 2.010).
25. Sumesh, K.R., Kavimani, V., Rajeshkumar, G., Indran, S. & Anish Khan (2021). Effect of banana, pineapple and coir fly ash filled with hybrid fiber epoxy based composites for mechanical and morphological study, *Journal of Material Cycles and Waste Management*, Vol. 1, 1-12, Sage, (Impact Factor: 2.193).
26. Rajeshkumar, G., Hariharan, V., Indran, S., Sanjay, M.R., Suchart Siengchin, Prakash Maran, J., Naif Abdullah Al-Dhabi & Ponmurugan Karuppiyah. (2021). Influence of Sodium Hydroxide (NaOH) Treatment on Mechanical Properties and Morphological Behaviour of Phoenix sp. Fiber /Epoxy Composites, *Journal of Polymers and the Environment*, Vol. 1, 1-10, Springer, (Impact Factor: 2.060).
27. Muthu chozha rajan, B., Indran,S., D. Divya, D., Narayanasamy, P., Anish Khan, Abdullah M. Asirie,f., & Nagarajan, S.(2020). Mechanical and Thermal Properties of Chloris barbata flower fiber/Epoxy Composites: Effect of Alkali treatment and Fiber weight fraction, *Journal of Natural Fibers*, Vol. 6, 1-15, Taylor & Francis, (Impact Factor: 5.323).
28. Jenish, I., Sathish Gandhi, V. C., Edwin Raj,R., Basavarajappa, S., Indran, S., Divya, D., Kumaravelan, R.(2020). A New Study on Tribological Performance of Cissus Quadrangularis Stem Fiber/Epoxy with Red Mud Filler Composite, *Journal of Natural Fibers*, Vol. 6, 1-15, Taylor & Francis, (Impact Factor: 5.323).
29. Jenish, I., Sathish Gandhi, V. C., Basavarajappa, S., Indran, S., Divya, D.,Yucheng Liu, Sanjay, M.R. & Suchart Siengchin (2020). Tribo-Mechanical characterization of carbonized coconut shell micro particle reinforced with Cissus quadrangularis stem fiber/ epoxy novel composite for structural application, *Journal of Natural Fibers*, Vol. 6, 1-17, Taylor & Francis, (Impact Factor: 5.323).

30. Sumesh, K.R., Kavimani, V., Rajeshkumar, G., Ravikumar,P. & Indran, S. (2020). An Investigation into the Mechanical and Wear Characteristics of Hybrid Composites: Influence of Different Types and Content of Biodegradable Reinforcements, *Journal of Natural Fibers*, Vol. 6, 1-13, Taylor & Francis, (Impact Factor: 5.323).
31. Sumesh, K.R., Kavimani, V., Rajeshkumar, G., Indran, S. & Anish Khan (2020). Mechanical, water absorption and wear characteristics of novel Mechanical, water absorption and wear characteristics of novel polymeric composites: Impact of hybrid natural fibers and oil cake filler addition, *Journal of Industrial Textiles*, Vol. 1, 1-12, Sage, (Impact Factor: 2.010).
32. Moshi, AAM., Ravindran,D., Sundara Bharathi, S.R., Padma, S.R., Indran, S. & D. Divya, D.(2020). Characterization of natural cellulosic fiber extracted from *Grewia damine* flowering plant's stem, *International Journal of Biological Macromolecules*, Vol. 156, 997-1006, Elsevier, (Impact Factor: 6.953).
33. Gurukarthik Babu, B., Princewinston, D., Saravanakumar, S.S., Anish Khan, P.V. Aravind Bhaskar, P.V., Indran, S. & Divya, D. (2020) Investigation on the Physicochemical and Mechanical Properties of Novel Alkali-treated *Phaseolus vulgaris* Fibers, *Journal of Natural Fibers*, Vol. 6, 1-12, Taylor & Francis, (Impact Factor: 5.323).
34. Moshi, AAM., Ravindran, D., Sundara Bharathi, S.R., Indran, S & Suganya Priyadharshini G. (2020). Characterization of surface-modified natural cellulosic fiber extracted from the root of *Ficus religiosa* tree, *International Journal of Biological Macromolecules*, Vol. 156, 997-1006, Elsevier, (Impact Factor: 6.953).
35. Moshi, AAM., Ravindran, D., Sundara Bharathi, S.R., Indran, S., Saravanakumar, S.S. & Liu, Y. (2020). Characterization of a new cellulosic natural fiber extracted from the root of *Ficus religiosa* tree, *International Journal of Biological Macromolecules*, Vol. 142, 212-221, Elsevier, (Impact Factor: 6.953).
36. Divya, D. Gopinatha, L. R. & Indran, S. (2019) Analysis of the effect of enzyme substitution on feedstock to enhance biogas production, *International Journal of Research and Analytical Reviews*, Vol. 6(2), pp. 964-973. (UGC Approved - Impact Factor: 5.75)
37. Indran, S., Edwin Raj, R., Daniel, B.S.S. & Binoj, J.S., (2018), "Comprehensive characterization of natural *Cissus Quadrangularis* stem fiber composites as an alternate for conventional FRP composites", *Journal of Bionic Engineering*, Vol. 15(5), PP. 914-923. Springer, (Impact Factor: 2.325)

38. Divya, D., Gopinath, L. R., Sreeremya, S., Indran, S., (2018), "Enhancement of Substrate Decomposition through Potential Hydrolytic Bacteria for Cumulative Biogas Production" International Journal of Applied Science and Biotechnology, Vol. 6(4), PP. 386-396 (Cosmos Impact Factor : 4.215)
39. Binoj, J.S., Edwin Raj, R., & Indran, S., (2018). "Characterization of *Tamarindus Indica* fruit fibers as potential alternate for man-made vitreous fibers in polymer composites", Process Safety and Environmental Protection, Vol. 116, PP. 527-534. Elsevier, (Impact Factor: 2.905).
40. Indran, S., Edwin Raj, R., Divya, D. & Darish Jeswin Dhas, S. (2016) Mechanical characterization of *Cissus quadrangularis* stem/glass fiber hybrid composites, Global Journal for Research Analysis, Vol. 5, pp. 209-211. (Impact Factor: 4.547)
41. Indran, S., Edwin Raj, R., Daniel, B.S.S. & Saravanakumar, S.S. (2015) Cellulose powder treatment on *Cissus quadrangularis* stem fiber-reinforcement in unsaturated polyester matrix composites, Journal of Reinforced Plastics and Composites, Vol. 35(3), pp. 212-227. SAGE, (Impact Factor: 1.503)
42. Divya, D. Gopinatha, L. R., Indran, S. & Merlin Christy, P. (2015) Enhancement of Biogas Production through Sustainable Feedstock Utilization by Co-Digestion, International Journal of Plant, Animal and Environmental Sciences, Vol. 5(3), pp. 88-94. (Impact Factor: 1.028)
43. Indran, S. & Edwin Raj, R. (2015) Characterization of new natural cellulosic fiber from *Cissus quadrangularis* stem. Carbohydrate Polymers, Vol. 117, pp. 392-399. Elsevier, (Impact Factor: 9.381)
44. Indran, S., Edwin Raj, R., & Sreenivasan, V. S. (2014). Characterization of new natural cellulosic fiber from *Cissus quadrangularis* root. Carbohydrate Polymers, Vol. 110, pp. 423 - 429. Elsevier, (Impact Factor: 9.381)
45. Prabhu Stalin, J. R., Jenish, I. & Indran, S. (2014). Tribological characterization of carbon epoxy composite materials with particulate silane treated SiC fillers. Advanced Materials Research, Vol. 984-985, pp. 331-335.
46. Kumaresan, K., Chandramohan, G., Senthilkumar, M., Suresha, B., & Indran, S. (2011). Dry Sliding Wear Behaviour of Carbon Fabric-Reinforced Epoxy Composite with and without Silicon Carbide. Composite Interfaces, Vol. 18, pp. 509-526. Taylor & Francis, (Impact Factor: 2.952)

BOOK/BOOK CHAPTER PUBLISHED:

1. Indran Suyambulingam, S Raja, Divya Divakaran, MR Sanjay, Suchart Siengchin, R Santhi (2022). Green Methods for Surface Modification of Bast Fibers. **Springer Nature Singapore**. G. Rajeshkumar et al. (eds.), Bast Fibers and Their Composites: Processing, Properties and Applications, Springer Series on Polymer and Composite Materials, Chapter 4, pp. 81–94.
ISBN: 978-981-19-4865-7 / ISBN: 978-981-19-4866-4 (eBook)
<https://doi.org/10.1007/978-981-19-4866-4>
2. S Indran, S Raja, D Divya, G Rajeshkumar (2022). Novel plant, their composites and applications. **Elsevier - Woodhead Publishing**. Sanjay M.R. et al. (eds.), Plant Fibers, their Composites, and Applications, The Textile Institute Book Series-2022, Chapter 19, pp. 437–456.
ISBN: 978-0-12-824528-6
<https://doi.org/10.1016/C2020-0-01735-4>
3. D Divya, S Yamuna Devi, S Indran, S Raja, KR Sumesh (2022). Extraction and modification of natural plant fibers – A comprehensive review. **Elsevier - Woodhead Publishing**. Sanjay M.R. et al. (eds.), Plant Fibers, their Composites, and Applications, The Textile Institute Book Series-2022, Chapter 2, pp. 25–50.
ISBN: 978-0-12-824528-6
<https://doi.org/10.1016/C2020-0-01735-4>
4. B Brailson Mansingh, JS Binoj, N Manikandan, N Prem Sai, Suchart Siengchin, Sanjay Mavinkere Rangappa, KN Bharath, S Indran (2022). Kenaf fibers, their composites and applications. **Elsevier - Woodhead Publishing**. Sanjay M.R. et al. (eds.), Plant Fibers, their Composites, and Applications, The Textile Institute Book Series-2022, Chapter 12, pp. 283–304.
ISBN: 978-0-12-824528-6
<https://doi.org/10.1016/C2020-0-01735-4>
5. Bharath, K.N., Dileepkumar, S.G., Manjunatha, G.B., Amith Kumar, S.J., Indran, S., Binoj, J.S.(2021). Optimization of parametric study on drilling characteristics of sheep wool reinforced composites. Springer Nature Singapore. Sanjay M.R et al. (eds.), Advances in Bio-Based Fiber: Moving Towards a Green Society, The Textile Institute Book Series - 2022, Pages 237-248, Chapter 10, pp. 237–248.
ISBN: 978-0-12-824543-9
<https://doi.org/10.1016/B978-0-12-824543-9.00018-9>
6. Raja, S., Rajesh, R., Indran, S., & Divya, D. (2021). Effect of Fiber Loading Rate on Various Properties of the Fiber Reinforced Polymer Composites. Springer Nature Singapore. Sanjay M.R et al. (eds.), Fracture Failure Analysis of Fiber Reinforced Polymer Matrix Composites, First Edition, Chapter 2, pp. 27–45.
ISBN: 9781119641797 / ISBN: 9781119641803 (eBook)
https://doi.org/10.1007/978-981-16-0642-7_2
7. Divya, D., Indran, S., Sanjay, M.R., Suchart Siengchin (2021). Forecasts of Natural Fiber Reinforced Polymeric Composites and Its Degradability Concerns – A Review. **Wiley Online Library**. A. Khan et al. (eds.), Biobased Composites: Processing,

Characterization, Properties, and Applications, First Edition, Chapter 13, pp. 175–196.

ISBN: 978-981-16-0641-0 / ISBN: 978-981-16-0642-7 (eBook)

<https://doi.org/10.1002/9781119641803>

8. Bharath, K. N., Basavarajappa, S., **Indran, S.**, & Binoj, J. S. (2020). Effect of Surface Modification on Characteristics of Naturally Woven Coconut Leaf Sheath Fabric as Potential Reinforcement of Composites. **Springer Nature - Switzerland**. A. Khan et al. (eds.), *Biofibers and Biopolymers for Bio-composites: Synthesis, Characterization and Properties*, Vol. 18, pp. 285–294.

ISBN: 978-3-030-40300-3 / ISBN: 978-3-030-40301-0 (eBook)

<https://doi.org/10.1007/978-3-030-40301-0>

9. Divakaran Divya, **Suyambulingam Indran**, & Kurki Nagaraja Bharath (2020). Bamboo: A Potential Natural Material for Bio-composites, **Springer Nature - Switzerland**. M. Jawaid et al. (eds.), *Bamboo Fiber Composites: Processing, Properties and Applications*, *Composites Science and Technology*. pp. 15–37.

ISBN 978-981-15-8488-6 / ISBN 978-981-15-8489-3 (eBook)

https://doi.org/10.1007/978-981-15-8489-3_2

10. Semalaiappan Yamuna Devi, **Suyambulingam Indran**, & Divakaran Divya (2020). Futuristic Prospects of Bamboo Fiber in Textile and Apparel Industries: Fabrication and Characterization, **Springer Nature - Switzerland**. M. Jawaid et al. (eds.), *Bamboo Fiber Composites: Processing, Properties and Applications*, *Composites Science and Technology*. pp. 15–37.

ISBN 978-981-15-8488-6 / ISBN 978-981-15-8489-3 (eBook)

https://doi.org/10.1007/978-981-15-8489-3_2

PATENT FILLED:

Reference Number	: 27734 (Indian Patent)
Application Number	: 201941034448
Title/Remarks	: A cellulose fibre and method for extracting the same
Dated	: 28/08/2019.

PEER-REVIEWED JOURNAL ARTICLES (Under preparation / Review)

1. Effect of three – body Abrasive Wear properties on nano red mud micro particle reinforced novel natural fiber/epoxy composite.
2. Review on natural fiber and its composites: 2000-2022.
3. Single fiber bonding study of various natural fibers with polymer matrix.
4. Effect of nano silica on properties of novel natural fiber mat/polyester composites.
5. Plant based novel bio-plastics: Extraction and characterization.

ONLINE SEMINARS [WEBINARS]/ FDP / INTERNATIONAL CONFERENCE / WORKSHOP ATTENDED

1. Participated in 12 Hours of Faculty Development Program on Product Design using Fusion 360 (Online LIVE FDP) conducted by ICT Academy on 19 Apr 2021 to 24 Apr 2021 everyday afternoon 2PM to 4PM .
2. Attended Six-day faculty development programme entitled "Machine Tools Building, Finishing Processes and Export Management" organized by Karpagam Academy of Higher Education, Faculty of Engineering, Department of Mechanical Engineering and University Industry Interaction Centre from 19.04.2021 to 24.04.2021 everyday morning 10AM to 12PM .
3. Webinar on “Mathematical Models in Biomedical Applications”, 3-June- 2020, Rohini College of Engineering and Technology, Kanyakumari, Tamilnadu.
4. International webinar on “Modern And Effective Methods In The Development Of Natural Products”, 10-June-2020, Organized by Nandha College of Pharmacy, Erode, Tamilnadu.
5. National webinar on “Use of Elsevier Tools In Research Workflow”, 5-May-2020, University of Madras, Chennai, Tamilnadu.
6. National webinar on “Research Tools for Writing Scientific Articles”, 4-6 May 2020, Rohini College of Engineering and Technology, Kanyakumari, Tamilnadu.
7. Faculty development programme on “Your Research Visibility- Research Impacts And Matrics”, 11-13 May 2020, Velalar College of Engineering and Technology, Erode, Tamilnadu.
8. Webinar on “Sustainable Materials, IPR, Research Tools, Art of Writing Scientific Articles”, 13-16 May 2020, Kamaraj College of Engineering and Technology, Tamilnadu.
9. Published “Mechanical properties of laminated natural fibers reinforced composites for prosthesis application - a trial study”, Proceedings of the International Conference on “Advances in Mechanical Engineering and Research - ICAMER 2019” held at Rohini College of Engineering and Technology, Kanyakumari-TN/INDIA, April 5-6, 2019.
10. Published “Design and Analysis of Modified three wheeler for Handicapped people”, Proceedings of the International Conference on “Advances in Mechanical Engineering and Research - ICAMER 2019” held at Rohini College of Engineering and Technology, Kanyakumari-TN/INDIA, April 5-6, 2019.
11. Published “Fabrication benchmarks for Modified three wheeler for Handicapped people”, Proceedings of the International Conference on “Advances in Mechanical Engineering and Research - ICAMER 2019” held at Rohini College of Engineering and Technology, Kanyakumari-TN/INDIA, April 5-6, 2019.
12. Published “Prospects of plant fiber reinforced polymer composites for biodigester construction -a review”, Proceedings of the International Conference on “Advances in

Mechanical Engineering and Research - ICAMER 2019" held at Rohini College of Engineering and Technology, Kanyakumari-TN/INDIA, April 5-6, 2019.

13. Published "Characterization of Tamarind Fruit Fibers (*Tamarindus Indica* L.) as Potential Alternate for Man-made Vitreous Fibers in polymer composites", Proceedings of 8th International Conference on Advancements in Polymeric Materials (APM2017), February 11-13th at Centre for Scientific and Industrial Consultancy, IISc Bangalore, Page no 177, 2017.
14. Published "An investigation on the variation of Mechanical and Chemical properties of *Borassus Flabellifer* fruit fiber depends on its plantation environment", Proceedings of the International Conference on Advanced Innovations in Engineering and Technology - ICAIET 2017, Rohini College of Engineering and Technology, Kanyakumari-TN/INDIA, February 14-15, 2017.
15. Published "Mechanical characterization of *Cissus quadrangularis* root / glass fiber hybrid composites", Proceedings of the INDO-BRAZIL Bilateral International Conference on Advanced Materials and Manufacturing - ICAMM 2015 Cape Institute of Technology, Tirunelveli-TN/INDIA, March 27-28, 2015.
16. Published "Tribological Behavior of Carbon Epoxy Composite Materials with SiC and Graphite Fillers - An Investigation", Proceedings of the International Conference on "Innovative Research in Engineering and Technology ICIRET 2010" held at Park College of Engineering and Technology, Kaniyur, Coimbatore, Tamilnadu on 13th August 2010.

NATIONAL CONFERENCE / FDP/ FDTP/ WORKSHOP ATTENDED

1. Presented the paper in National Level Technical Symposium MEGX'06 titled 'SOLAR RGB DRIVERS' at St.Xavier's Catholic College of Engineering, Nagercoil, held on 15-09-2006.
2. Participated in the one-day seminar on "Renewable Energy - Energy for the Future" Conducted by Energy Club of St.Xavier's Catholic College of Engineering, Chunkankadai held on 18th August 2007.
3. Presented the paper in National seminar on New & Renewable Energy Sources titled "SOLAR SORPTION AIRCONDITIONING" at Ponjesly College of Engineering, Alamparai, Nagercoil held on 21-08-2008.
4. Presented the paper in National Level Technical Symposium Travail'08 titled 'NUCLEAR DEALS IN INDIA' held at NMC College, Marthandam, 29th September 2008.
5. Presented the paper in National Level Technical Symposium MEGX'06 titled 'Vehicle Crash Analysis' at St.Xavier's catholic College of Engineering, Nagercoil, held on 02-02-2009.

6. Participated in the one-day seminar on “Energy Auditing and Energy Management in Domestic and Bulk Utilities” conducted on 10th February 2009 by ISTE Chapter TN 133.
7. Published “Study and Tribological Analysis of Carbon Epoxy Composite Materials with SiC Fillers - An Investigation”, Proceedings of the two-day National Conference on “Advances in Manufacturing Systems” held at Karpagam University, Coimbatore-Tamilnadu on 25 January 2011.
8. Published “Study and Tribological Analysis of Carbon Epoxy Composite Materials with Graphite Fillers - An Investigation”, Proceedings of the two-day National Conference on “Advances in Manufacturing Systems” held at Karpagam University, Coimbatore-Tamilnadu on 25 January 2011.
9. Published “Study and Tribological Analysis of Carbon Epoxy Composite Materials with particulate Fillers - An Investigation”, Proceedings of the National Conference on “Recent Trends in Manufacturing Technology RTMT - 2011” held at College of Engineering Guindy Campus, Anna University, Chennai- Tamilnadu during 12 March 2011.
10. Attended one-day workshop on “Optimization and Artificial Intelligence Techniques in Composite Materials” at The Rajas Engineering College, Vadakkangulam, on 30th March 2012.
11. Attended two-day workshop on “Composite Materials (curriculum based program)” at KPR Institute of Engineering and Technology, Arasur, Coimbatore, on 24 and 25th August 2012.
12. Attended DRDO and CSIR sponsored two days’ Workshop on “Recent trends in natural composites and its hybrids for structural applications” held at Sri Venkateswara College of Engineering, Chennai on 25th and 26th September 2013.
13. Participated in an ISTE Kerala section and CSI Cochin chapter sponsored two-daye-Seminar on “STEPS 2 RESEARCH” organized by Department of Computer Science, Amal Jyothi College of Engineering, Kanjirapally on 19th and 20th September 2014
14. Participated in a two-day workshop on “APPLICATION OF GENETIC ALGORITHM USING MATLAB” organized by Research Centre, St. Xavier’s Catholic College of Engineering, Chunkankadai on 21st and 22nd August 2014.
15. Attended a one - week AICTE Margdarshan Scheme, faculty development program - FDP on ‘OBE implementation towards accreditation’ organized by Kalasalingam Academy of Research and Education, Anand Nagar, Krishankoil from 08th - 14th December 2019.
16. Participated in a one - week Faculty Development Training Programme (FDTP) on “Outcome Based Pedagogical Principles for Effective Teaching, Learning & Research”

Organized by Technical Association of Rohini College of Engineering and Technology (TARCET), Rohini College of Engineering and Technology, Palkulam, Kanyakumari, from 12th – 18th January 2020.

TEACHING EXPERIENCE

Organization: Rohini College of Engineering & Technology, Kanyakumari, Tamil Nadu, India.

Position : Research Director

Period : October 2016 to December 2021.

Organization : Loyola Institute of Technology and Science, Thovalai, Tamil Nadu, India.

Position : Assistant Professor, Department of Mechanical Engineering.

Period : July 2011 to December 2011.

Rejoined - August 2015 to September 2016.

RESEARCH EXPERIENCE

Organization: Natural Composites Research Group Lab, KMUTNB – Bangkok, Thailand.

Position : Research Scientist (Specialist 2)

Period : **January 2022 to Till Date.**

Organization: Anna University, Chennai, Tamil Nadu, India

Position : DST, Inspire Fellow -JRF

Period : January 2012 to July 2015.

JOURNAL REVIEWER / EDITORIAL BOARD MEMBERSHIP

1. Carbohydrate Polymers – Elsevier
2. Journal of Engineering Technological Research
3. Journal of Engineering Technology & Management Science
4. Journal of Industrial Textiles - SAGE
5. Journal of Reinforced Plastics and Composites - SAGE
6. Journal of Natural Fibers - Taylor & Francis
7. Sustainable Chemistry & Engineering - American Chemical Society publication

8. International Journal of Polymers and Environment - Springer
9. Wear – Elsevier
10. Polymer Composites – Wiley
11. Biomass Conversion and Biorefinery – Springer
12. Biocatalysis and Agricultural Biotechnology - Elsevier
13. Current Research in Green and Sustainable Chemistry – Elsevier
14. Heliyon – Elsevier
15. International Journal of Biological Macromolecules – Elsevier

SUBJECTS HANDLED

- | | |
|----------------------------|--------------------------------------|
| 1. Engineering Graphics | 6. Finite Element Analysis |
| 2. Engineering Mechanics | 7. Dynamics of Machinery |
| 3. Kinematics of machinery | 8. Design of Machine Elements |
| 4. Strength of Materials | 9. Power plant Engineering |
| 5. Mechatronics | 10. Unconventional Machining Process |

STUDENTS RESEARCH ACTIVITY YOUTUBE VIDEO LINK

https://www.youtube.com/watch?v=VVvYc_f5jbw&t=10s

PROJECTS UNDER PROGRESS FOR INDIAN PATENT FILLING

1. A New Innovation for the Benefit of Farmers “Monkey Air Gun”
2. Innovative Product for Coconut/Palm Tree Claiming Machine
3. Design and Manufacturing of Novel bio-fiber reinforced artificial limb

COORDINATING PROGRAM/CENTER/EVENT/COURSE

1. TARCET - Technical Association of Rohini College of Engineering and Technology
2. RGAME - Rohini GATE academy for Mechanical Engineering Students
3. Virtual Lab - IIT Kanpur Rohini College - Nodal center Coordinator
4. Coordinator of Unnat Bharat Abhiyan (UBA) Project - IIT Delhi - working for 5 rural area development with appropriate technology
5. Rohini Research Center Coordinator.

PERSONAL INFORMATION

Name : S. Indran
Father's Name : P. Suyambulingam
Gender : Male
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Kanyakumari district, Tamilnadu - 629806.
Marital status : Married
Languages Known : English, Tamil and Malayalam.
Nationality : Indian
Hobbies : Playing Volley ball and Cricket.
Passport No. : M7751829, Date of Expiry 23-03-2025.
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REFEREES/REFERENCES

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