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List of Publications

International Journal Publications

1. **Athijayamani A.**, Thiruchitrambalam M., Natarajan U. and Pazhanivel B., ‘Effect of moisture absorption on the mechanical properties of randomly oriented natural fibers/polyester hybrid composites’, Materials Science and Engineering: A, Vol.517, pp.344-353, 2009.
2. **Athijayamani A.**, Thiruchitrambalam M., Natarajan U. and Pazhanivel B., ‘Influence of alkali-treated fibers on the mechanical properties and machinability of roselle and sisal fiber hybrid polyester composite’, Journal of Polymer composites, Vol.31(4), pp.723 – 731, 2010.
3. **Athijayamani A.**, Thiruchitrambalam M., Winowlin Jappes J.T. and Alavudeen A., ‘Analysis of Chopped Roselle and Sisal Fiber Hybrid Polyester Composite’, International Journal of Plastic Technology, Vol. 12, pp. 1031-1038, 2008.
4. Alvadeen A., Thiruchitrambalam M., Winowlin Tappes J.T., Ganapathy Shankar S., Bhagavath Singh A.G. and **Athijayamani A.**, ‘Investigation on Mechanical Properties of Roselle Fiber Composites’, International Journal of Material Research, Electronics and Electrical System, Vol.2, No.1-2, pp.53-64, 2009.
5. Alvadeen A., Thiruchitrambalam M., Winowlin Tappes J.T., Sivasubramanian P. and **Athijayamani A.**, ‘Influence of Hybridization of Natural Fiber Composites on Mechanical Properties’, International Journal of Material Research, Electronics and Electrical System, Vol.2, No.1-2, pp.85 -94, 2009.
6. M Thiruchitrambalam, A Alavudeen, **A Athijayamani**, N Venkateshwaran, AE Perumal, Improving Mechanical Properties Of Banana/Kenaf Polyester

Hybrid Composites Using Sodium Lauryl Sulfate Treatment., Materials Physics and Mechanics, Vol.8, Issue.2, 2009.

7. M Thiruchitrambalam, **A Athijayamani**, S Sathiyamurthy, ASA Thaheer, A Review on the Natural Fiber-Reinforced Polymer Composites for the Development of Roselle Fiber-Reinforced Polyester Composite, Journal of Natural Fibers 7 (4), 307-323, 2010.
8. A Alavudeen, M Thiruchitrambalam, N Venkateshwaran, **A Athijayamani**, Review of Natural Fiber Reinforced woven Composite, Review on Advanced Materials Science, 27, 146-150, 2011.
9. **A Athijayamani**, M Thiruchitrambalam, V Manikandan, B Pazhanivel, Mechanical properties of natural fibers reinforced polyester hybrid composite International Journal of Plastics Technology 14 (1), 104-116, 2010.
10. A Alavudeen, M Thiruchitrambalam, N Venkateshwaran, A Elayaperumal, **A Athijayamani**, Improving Mechanical Properties of Eco-Friendly Polymer Hybrid Composites, International Journal of Performability Engineering, Volume 7, Number 2, pp. 172-178, 2011.
11. A Alavudeen, M Thiruchitrambalam, **A Athijayamani**, Clutch plate using woven hybrid composite materials, Materials Research Innovations 15 (4), 229-234, 2011.
12. A Alavudeen, M Thiruchitrambalam, JTW Jappes, **A Athijayamani**, Investigation on the effect of alkaline treatment on mechanical properties of banana fiber polymer composite, International Journal of Computer Aided Engineering and Technology, 3(5),434-442, 2011.
13. **A Athijayamani**, M Thiruchitrambalam, JTW Jappes, A Alavudeen, Effects of fibre content on the mechanical properties of short roselle/sisal fiber polyester hybrid composite, International Journal of Computer Aided Engineering and Technology, 3(5), 538-546, 2011.
14. C. Manickam, J. Kumar, **A. Athijayamani** and J. Easter Samuel, Effect of various water immersions on mechanical properties of roselle fiber–vinyl ester composites, Polymer Composites, Volume 36, Issue 9, 2015, Pages 1638–1646.
15. M. Prabhu, **A.Athijayamani**, Development of Box-Behnken model and optimization of drilling parameter for AISI410 using desirability function analysis, International Journal of Applied Engineering Research- Vol. 9, No.23, 2014, pp. 21365-21370.

16. S.Navaneethakrishnan, **A.Athijayamani**, Analysis of the tensile properties of natural fiber and particulate reinforced polymer composites using statistical approach, Journal of Polymer Engineering- Article first published online- February 2015. DOI: 10.1515/polyeng-2014-0218.
17. C.Manickam , K.Hariharan , **A.Athijayamani**, Experimental investigation of tribological behavior of hybrid fiber and particulate reinforced vinyl ester composite, International Journal of Applied Engineering Research, Vol. 10, No.13, 2015, pp. 11001-11004.
18. C. Manickam, J. Kumar, **A. Athijayamani** and N. Diwahar, Mechanical and wear behaviors of untreated and alkali treated roselle fiber-reinforced vinyl ester composite, Journal of Engineering Research, Vol. 3 No. (3) September 2015, pp. 97-109.
19. C. Manickam, J. Kumar, **A. Athijayamani**, K. Karthik, Modeling and multi-response optimization of the mechanical properties of roselle fiber reinforced vinyl ester composite, Polymer-Plastics Technology and Engineering, 54(16), Pages 1694-170, 2015.
20. **A.Athijayamani**, B.Stalin, S.Sidhardhan and A.Alavudeen, Mechanical properties of uni-directional aligned bagasse fibers/vinyl ester composite, Journal of Polymer Engineering, 36(2), pp. 157-163, 2015.
21. S.Navaneethakrishnan, **A.Athijayamani**, Taguchi method for optimization of fabrication parameters with mechanical properties in Sisal fiber-vinyl ester composites, Australian Journal of Mechanical Engineering, Published online: 18 Nov 2015, pp. 1-10, <http://dx.doi.org/10.1080/14484846.2015.1093258>.
22. B. Stalin, **A. Athijayamani** and V. Ayyar, Evaluation of Mechanical properties of Bio-Waste Fibers and Alumina Particulate Reinforced Vinyl ester Composite, International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.55 (2015), pp.3454-3457.
23. B.Stalin, **A.Athijayamani**, R.Sridhar and D.S.Samuvel Prem Kumar, Investigation of Physical and Mechanical Characteristics of Bio – FRP Composites, International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.55 (2015), pp.4008-4012.
24. B. Stalin and **A. Athijayamani**, Investigation on the Mechanical Behavior of Randomly Oriented Coir and Bagasse Fibers Reinforced Vinyl Ester Hybrid Composite, International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.55 (2015), pp.4035-4038.

25. **A. Athijayamani**, R.Ganesamoorthy and J.Gobinath, Effect of reinforcement of chopped agave sisalana variegata/banana hybrid fibers on the mechanical properties of vinyl ester resin, *International Journal of Mechanical Engineering and Research*, 5(1), 2015, pp.20-23.
26. **A.Athijayamani**, B.Stalin, G.Sundararajan and K.Sathish Kumar, A comparative study of non-linear regression, artificial neural network and neuro-fuzzy for the prediction of thrust force in drilling of bagasse fiber-reinforced vinyl ester composite sheet, *International Journal of Mechanical Engineering and Research*, 5(1), 2015, pp.24-31.
27. **Navaneethakrishnan.S**, Athijayamani, A, 2015, Taguchi method for optimization of fabrication parameters with mechanical properties in fiber and particulate reinforced composites - *International Journal of Plastics Technology*, DOI 10.1007/s12588-015-9128-x, 2015.
28. **Ashraff Ali, KS**, Marimuthu, P & Athijayamani, A 2015, ‘ Investigations on temperature distribution in welding of Aluminium alloys to steel using FEM’, *Carbon Science and Technology*, vol. 7,no. 1, pp.89-97.
29. **A.Athijayamani**, B.Stalin, S.Sidhardhan, and C.Boopathi, Parametric analysis of mechanical properties of bagasse fiber-reinforced vinyl ester composites, *Journal of Composite Materials*, Vol 50, Issue 4, pp. 481 - 493, 2016.
30. M. Gerald Arul Selvan, A. Athijayamani, Mechanical properties of fragrant screw pine fiber reinforced unsaturated polyester composite: Effect of fiber length, fiber treatment and water absorption, *Fibers and Polymers*, January 2016, Volume 17, Issue 1, pp. 104–116.
31. B. Stalin and **A. Athijayamani**, The performance of bio waste fibers reinforced polymer hybrid composite, *International Journal of Materials Engineering Innovation*, Vol. 7, No. 1, pp. 15-25, 2016.
32. **A Athijayamani**, R Ganesamoorthy, K T Loganathan and S Sidhardhan, Modeling and Analysis of Mechanical Properties of Agave Sisalana Variegata Fiber / Vinyl Ester Composites Using Box-Behnken Design of Response Surface Methodology, *Journal of Mechanical Engineering*, Vol 62, No 5, 273-280, 2016.
33. Navaneethakrishnan.S, **Athijayamani, A**, 2016, ‘Mechanical Properties and absorption behavior of CSP Filled Roselle Fiber Reinforced Hybrid composites-*Journal of Materials and Environmental Science*, Vol.07, Issue-05,pp.1674-1680.
34. A. Athijayamani, R. Ganesamoorthy, K. T. Loganathan, and S. Sidhardhan, Physical and Mechanical Properties of Unidirectional Aligned Agave Sisalana

- Variegata Fiber-Reinforced Vinyl Ester Composite, Polymer(Korea), Vol. 40, No. 1, pp. 1-8 (2016)
35. **Athijayamani, A**, Chrispin Das, M, Sekar, S & Ramanathan, K 2017, “Mechanical Properties of Phenol Formaldehyde Hybrid Composites Reinforced with Natural Cellulose Fibers”, BioResources, vol.12, no.1, 1960-1967.
 36. A.Sujin Jose, **A. Athijayamani**, K. Ramanathan and S. Sidhardhan, Effects of Addition of Prosopis Juliflora Fiber on the Physical and Mechanical Properties of Wood Dust and Coir Pith Particle Reinforced Phenol Formaldehyde Hybrid Composite, Journal of Advances in Chemistry, 13 (10), 6558-6562, 2017.
 37. C Jayaseelan, P Padmanabhan, **A Athijayamani**, and K Ramanathan, Comparative investigation of Mechanical properties of epoxy composites reinforced with short fibers, macro particles, and micro particles, BioResources, 12(2), 2864-2871, 2017.
 38. A.Sujin Jose, **A. Athijayamani** , K. Ramanathan, and S. Sidhardhan, Effects of Aspect Ratio and Loading on the Mechanical Properties of *Prosopis Juliflora* Fiber-reinforced Phenol Formaldehyde Composites, Fibres & Textiles in Eastern Europe, 25, 4(124): 59-64, 2017.
 39. **A. Athijayamani**, S.Sekar, S. Sidhardhan and K. Ramanathan, Mechanical Properties of Randomly Oriented Calotropis Gigantea Fiber-Reinforced Phenol Formaldehyde Biocomposite, Journal of Advances in Chemistry, 13 (11), pp. 6043-6050, 2017.
 40. A Sujin Jose, **A Athijayamani**, K Ramanathan, S Sidhardhan, Effects of addition of coir pith particles on the mechanical and erosive wear behavior of wood dust particle reinforced phenol formaldehyde composite, Materiali In Tehnologije / Materials and Technology, 2017 -Accepted.
 41. **A. Athijayamani**, B. Stalin, K. T. Loganathan and S. Sidhardhan, Effect of aspect ratio and content of bio waste cellulosic bagasse fibers on the mechanical properties of vinyl ester composites, cellulose chemistry and technology, Revision submitted.
 42. S Sekar, A Athijayamani , K Ramanathan , S Sidhardhan, Effects of Chemical Modification on the Mechanical Properties of Calotropis Gigantea Fiber-reinforced Phenol Formaldehyde Biocomposites, Materials Science (MEDŽIAGOTYRA) –Accepted 2017.
 43. Chrispin Das M, Athijayamani A, Sidhardhan S, Ramanathan K, Analysis of the effects of fabrication parameters on the mechanical properties of Areca fine fiber-reinforced phenol formaldehyde composite using Taguchi technique,

Journal of Applied Research and Technology, Available online 24 August 2017.

44. **Ashraff Ali Kaveripakkam Suban**, Marimuthu Perumal, Athijayamani Ayyanar & ArungalaiVendan Subbiah 2017, 'Microstructural analysis of B4C and SiC reinforced Al alloy metal matrix composite joints', The International Journal of Advanced Manufacturing Technology, Volume 93, Issue 1–4, pp 515–525, October 2017.

National Journal Publications

1. **Athijayamani A.**, Thiruchitrambalam M., Prasanna Venkatesh R. and Natarajan U. (2009), 'Mechanical properties of short roselle and sisal fiber hybrid polyester composite: modeling and optimization', Journal of Manufacturing Engineering, Vol.4, Issue 2, pp 111-118.
2. **Athijayamani A.**, Thiruchitrambalam M. and Winowlin Jappes J.T. (2009), "Wear resistance and dimensional accuracy of drilled holes of short roselle / sisal fiber hybrid polyester composite", Journal of Manufacturing Engineering, Vol.4, Issue 3, pp 192-196.

Paper Presented in International Conferences

1. **Athijayamani A.**, Thiruchitrambalam M., Winowlin Jappes J.T., Saravanan S. and Alavudeen A., 'Effect of Fiber Content on Mechanical Properties of Short Roselle and Sisal Fiber Hybrid Polyester Composite', International Conference on Advanced Manufacturing and Automation (INCAMA - 2009), Kalasalingam University, Krishnankovil, March 26-28, 2009.
2. **Athijayamani A.**, Thiruchitrambalam M., Winowlin Jappes J.T., Lakshmanan S. and Alavudeen A., 'Prediction of Tensile Strength of Short Roselle and Sisal Fiber Hybrid Polyester Composite using Artificial Neural Network', International Conference on Advanced Manufacturing and Automation (INCAMA - 2009), Kalasalingam University, Krishnankovil, March 26-28, 2009.
3. **Athijayamani A.**, Thiruchitrambalam M., and Saravanan S., 'Effect of Fiber treatment and concentration on Mechanical Properties of Natural Fiber Reinforced Hybrid Polyester Composite', 2nd International Conference on Recent Advances in Material Processing Technology, National Engineering College, Kovilpatti, February 25-27, 2009.