

Publications

Mechanical and Aerospace Engineering

Year 2021

Journal

1. Christy, J. V., Mourad, A-H. I., Sherif, M. M., & Shivamurthy, B. (2021). Review of recent trends in friction stir welding process of aluminum alloys and aluminum metal matrix composites. *Transactions of Nonferrous Metals Society of China*, 31(11), 3281-3309.
2. Idrisi, A. H., & Mourad, A-H. I. (2021). Fiber reinforced polymer composites sustainability under prolonged exposure to hot seawater: Experimental and prediction study. *Materials Letters*, 304, 130689.
3. Abu-Jdayil, B., Barkhad, M. S., Mourad, A-H. I., & Iqbal, M. Z. (2021). Date palm wood waste-based composites for green thermal insulation boards. *Journal of Building Engineering*, 43, 103224.
4. El Houda Aouadi, N., Hellati, A., Cherupurakal, N., Guessoum, M., & Mourad, A-H. I. (2021). Investigation of mechanical properties and biodegradability of compatibilized thermoplastic starch/high impact polystyrene blends reinforced by organophilic montmorillonite. *Polymers and Polymer Composites*, 09673911211046803.
5. Thekkuden, D. T., Mourad, A-H. I., & Bouzid, A. H. (2021). Failures and leak inspection techniques of tube-to-tubesheet joints: a review. *Engineering Failure Analysis*, 105798.
6. Abu-Jdayil, Basim, Mohamed Saeed Barkhad, Abdel-Hamid I. Mourad, and Muhammad Z. Iqbal. "Date palm wood waste-based composites for green thermal insulation boards." *Journal of Building Engineering* 43 (2021): 103224.
7. Raji, R. K., Ramachandran, T., Muralidharan, M., Suriakarthick, R., Dhilip, M., Raja, A., Mourad, A-H. I. (2021). Twitching the inherent properties: the impact of transition metal Mn-doped on LaFeO₃-based perovskite materials. *Journal of Materials Science: Materials in Electronics*, 1-17.
8. Stephen, C., Mourad, A-H. I., Shivamurthy, B., & Selvam, R. (2021). Energy absorption and damage assessment of non-hybrid and hybrid fabric epoxy composite laminates: experimental and numerical study. *Journal of Materials Research and Technology*, 14, 3080-3091.
9. Stephen, C., Shivamurthy, B., Mourad, A-H. I., & Selvam, R. (2021). High-velocity impact behavior of hybrid fiber-reinforced epoxy composites. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 43(9), 1-16.
10. Babaghayou, M. I., Mourad, A-H. I., Ochoa, A., Beltrán, F., & Cherupurakal, N. (2021). Study on the thermal stability of stabilized and unstabilized low-density polyethylene films. *Polymer Bulletin*, 78(9), 5225-5241.
11. Abbas, Mokhtaria, Aicha Hachemaoui, Ahmed Yahiaoui, Abdel-Hamid I. Mourad, Abdelkader Belfedal, and Nizamudeen Cherupurakal. "Chemical synthesis of nanocomposites via in-situ polymerization of aniline and iodoaniline using exchanged montmorillonite." *Polymers and Polymer Composites* 29, no. 7 (2021): 982-991.
12. Babaghayou Meriam Imane, Abdel-Hamid Ismail Mourad (2021) Comparative Morphological Investigation between Natural Photo-Aged of Two Different Low Density Polyethylene Green House Covers . *SOJ Mater Sci Eng* 8(1): 1-4.

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13. Cherupurakal, N., Mozumder, M. S., Mourad, A-H. I., & Lalwani, S. (2021). Recent advances in superhydrophobic polymers for antireflective self-cleaning solar panels. *Renewable and Sustainable Energy Reviews*, 151, 111538.
14. Idrisi, A. H., & Mourad, A- H. I. (2021). Fiber reinforced polymer composites sustainability under prolonged exposure to hot seawater: Experimental and prediction study. *Materials Letters*, 130689.
15. Krishnapriya, R., Nizamudeen, C., Saini, B., Mozumder, M. S., Sharma, R. K., & Mourad, A-H. I. (2021). MOF-derived Co²⁺-doped TiO₂ nanoparticles as photoanodes for dye-sensitized solar cells. *Scientific reports*, 11(1), 1-12.
16. Zaareer, M., & Mourad, A-H. I. (2021). Effect of Vehicle Side Mirror Base Position on Aerodynamic Forces and Acoustics. *Alexandria Engineering Journal*.
17. Mairpady, A., Mourad, A-H. I., & Mozumder, A. M. S. (2021). Accelerated Discovery of the Polymer Matrix for Cartilage Repair Through Machine Learning Algorithms.
18. Aouadi, N. H., Hellati, A., Guessoum, M., Mourad, A-H. I., & Nizamudeen, C. (2021). Impact of Samarium Acetylacetonate Catalyst on the Compatibilization of Poly (lactic acid)/Poly (ethylene-co-vinyl acetate) Blends: Thermomechanical, Chemical, and Viscoelastic Characterizations. *Polymer Science, Series B*, 63(3), 218-231.
19. Hittini, W., Abu-Jdayil, B. and Mourad, A-H. I, (2021). Development of date pit–polystyrene thermoplastic heat insulator material: mechanical properties. *Journal of Thermoplastic Composite Materials*, 34(4), pp.472-489.
20. Darabseh, T., Al-Yafeai, D., & Mourad, A-H. I. (2021). Energy harvesting from car suspension system: Mathematical approach for half car model. *Journal of Mechanical Engineering and Sciences*, 15(1), 7695-7714.
21. Darabseh, T., Al-Yafeai, D., Mourad, A-H. I., & Almaskari, F. (2021). Piezoelectric method-based harvested energy evaluation from car suspension system: Simulation and experimental study. *Energy Science & Engineering*, 9(3), 417-433.
22. Hittini, W., Mourad, A-H. I., & Abu-Jdayil, B. (2021). Utilization of devulcanized waste rubber tire in development of heat insulation composite. *Journal of Cleaner Production*, 280, 124492.
23. Shivakumar, T., B. Shivamurthy, B. H. S. Thimmappa, and Abdel-Hamid I. Mourad. "Tribo-mechanical properties of epoxy-cashew nut shell liquid-crumb rubber-friction dust-banana fiber composites." *Cogent Engineering* 8, no. 1 (2021): 1968743.
24. Mejia, Edgar, Nizamudeen Cherupurakal, Abdel-Hamid I. Mourad, Sultan Al Hassanieh, and Mohamed Rabia. "Effect of Processing Techniques on the Microstructure and Mechanical Performance of High-Density Polyethylene." *Polymers* 13, no. 19 (2021): 3346.
25. Mairpady, Anusha, Abdel-Hamid I. Mourad, and Mohammad Sayem Mozumder. "Statistical and Machine Learning-Driven Optimization of Mechanical Properties in Designing Durable HDPE Nanobiocomposites." *Polymers* 13, no. 18 (2021): 3100.
26. Idrisi, Amir Hussain, Abdel-Hamid I. Mourad, Beckry M. Abdel-Magid, and B. Shivamurthy. "Investigation on the durability of E-Glass/Epoxy composite exposed to seawater at elevated temperature." *Polymers* 13, no. 13 (2021): 2182.
27. Idrisi, Amir Hussain, Abdel-Hamid I. Mourad, and Muhammad M. Sherif. "Impact of prolonged exposure of eleven years to hot seawater on the degradation of a thermoset composite." *Polymers* 13, no. 13 (2021): 2154.

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28. Sabry, Ibrahim, Abdel-Hamid Ismail Mourad, Amir Hussain Idrisi, and Mohamed ElWakil. "Forecasting COVID-19 Cases in Egypt Using ARIMA-Based Time-Series Analysis." *Eurasian Journal of Medicine and Oncology* 5, no. 2 (2021): 123.
29. Kumar, K. N., Sanjeev Sharma, Abdel-Hamid I. Mourad, and P. B. Sharma. "A Literature Review for Development of Advanced Composites Materials by Reinforcement of Epoxy Composites with Graphene and Natural Silk." *Advances in Engineering Materials* (2021): 341-353.
30. Abdel Hamid Ismail Mourad, YE Selim Mohamed, Al-Maqdi Shafaa, Abueleyan Ghadi, Moudi Aya, Mansour, Alamer, Alantali Maryam (2021), Effect of Students' Attendance on their Academic Performance in Some Engineering Courses at the United Arab Emirates, *International Journal for Innovation Education and Research*, 9(4), 249-262.
31. Iftikhar, S. H., Mourad, A-H. I., Sheikh-Ahmad, J., Almaskari, F., & Vincent, S. (2021). A Comprehensive Review on Optimal Welding Conditions for Friction Stir Welding of Thermoplastic Polymers and Their Composites. *Polymers*, 13(8), 1208.
32. Zahid Ahmed Qureshi, Salah Addin Burhan Al Omari*, Emad Elnajjar, Farooq Mahmoud, Oraib Al-Ketan, Rashid Abu Al-Rub, Thermal characterization of 3D-Printed lattices based on triply periodic minimal surfaces embedded with organic phase change material, *Case Studies in Thermal Engineering*, 27, 101315, 2021 (Q1; Top 25%); (Note: I am main PhD advisor of first author).
33. Zahid Ahmed Qureshi, Emad Elnajjar, Oraib Al-Ketan, Rashid Abu Al-Rub, Salah Addin Burhan Al Omari*, Heat Transfer Performance of a Finned Metal Foam-Phase Change Material (FMF-PCM) System incorporating Triply Periodic Minimal Surfaces (TPMS), *International Journal of Heat and Mass Transfer*, 170, 121001, 2021 (Q1; Top 5%); (Note: I am main PhD advisor of first author).
34. SAB Al Omari*, AM Ghazal, E Elnajjar, ZA Qureshi, Vibration-enhanced direct contact heat exchange using gallium as a solid phase change material, *International Communications in Heat and Mass Transfer*, 120, 104990, 2021; (Q1; Top 10%).
35. Zahid Ahmed Qureshi, Salah Addin Burhan Al-Omari*, Emad Elnajjar, Oraib Al-Ketan, Rashid Abu Al-Rub, Using triply periodic minimal surfaces (TPMS)-based metal foams structures as skeleton for metal-foam-PCM composites for thermal energy storage and energy management applications, *International Communications in Heat and Mass Transfer*, 124, 105265, 2021 (Q1; Top 10%); (Note: I am main PhD advisor of first author).
36. E. Elnajjar, Mahmmod M. Syam, SAB Al-Omari, Experimental investigations of bio-syngas production using microwave pyrolysis of UAE'S palm date seed pits, *Fuel*, 303, 121348, 2021 (Q1; Top 10%).
37. M Elgendi, MYE Selim, A Aldhaheeri, W Alshehhi, H Almarshoodi, Alyaa Alhefeiti, Design procedures for a passive pyramid solar still with an automatic feed water system, *Alexandria Engineering Journal*, Volume 61, Issue 8, Pages 6419-643, August 2021. Q1
38. M Elgendi, MYE Selim, Determination of the effect of water depth on the yield of a solar still using an automatic feedwater system, *Environmental Science and Pollution Research*, 1-9, 2021. Q2
39. E Elnajjar, SAB Al Omari, MO Hamdan, M Ghannam, MYE Selim, Characteristics of external furnace combustion of used lube oil with different percentages of diethyl ether additives burned with liquefied petroleum gas, *Biofuels* 12 (10), 1233-1243, 2021. Q2
40. Mamdouh T.Ghannam, Mohamed Y.E.Selim, The flow behavior of raw Jojoba oil in comparison with some traditional lube oils, *Industrial Crops and Products*, Volume 161, March 2021, 113164.
<https://doi.org/10.1016/j.indcrop.2020.113164> Q1 Corresponding author

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41. Mamdouh T. Ghannam, Mohamed Y.E. Selim* , Mona A.M. Khedr, Noor A.G. Bin Taleb, Norah R. Kaalan , Investigation of the rheological properties of waste and pure lube oils, Fuel, Volume 298 (2021) 120774. <https://doi.org/10.1016/j.fuel.2021.120774> Q1 <top 10% journals> Corresponding author.
42. Ghannam, M.T.; Selim, M.Y.E. Rheological Properties of the Jojoba Biofuel. Sustainability 2021, 13, 6047. <https://doi.org/10.3390/su13116047>. Q1 Corresponding author.

Conferences

1. Shitole, S., & Mourad, A-H. I. (2021, July). Review on the Current Progress of Thixoforming Process. In Pressure Vessels and Piping Conference (Vol. 85345, p. V004T06A015). American Society of Mechanical Engineers.
2. Bodkhe, M., Sharma, S., Mourad, A-H. I., & babu Sharma, P. (2021). A review on SPD processes used to produce ultrafine-grained and multilayer nanostructured tubes. *Materials Today: Proceedings*.
3. Bodkhe, M., Sharma, S., Mourad, A-H. I., & Sharma, P. B. (2021). An overview of the microstructure and mechanical properties of copper tube by SPD process. *Materials Today: Proceedings*.
4. Christy, J. V., Mourad, A-H. I., & Arunachalam, R. (2021, February). Taguchi Optimization for the Production of Optimized Sustainable Novel Aluminium MMC Using Squeeze Stir Casting Process. In *2021 6th International Conference on Renewable Energy: Generation and Applications (ICREGA)* (pp. 205-210). IEEE.
5. Christy, J. V., & Mourad, A-H. I. (2021, February). Biomass Gasification of Pongamia char in a Fluidized Bed Reactor. In *2021 6th International Conference on Renewable Energy: Generation and Applications (ICREGA)* (pp. 147-152). IEEE.
6. Sabry, Ibrahim, Abdel-Hamid I. Mourad, and Dinu Thomas Thekkuden. "Vibration-Assisted Friction Stir Welding of AA 2024-T3 Plates." In Pressure Vessels and Piping Conference, vol. 85345, p. V004T06A014. American Society of Mechanical Engineers, 2021.
7. Shitole, Shubhra, and Abdel-Hamid I. Mourad. "Review on the Current Progress of Thixoforming Process." In Pressure Vessels and Piping Conference, vol. 85345, p. V004T06A015. American Society of Mechanical Engineers, 2021.
8. Almomani, Abdulla Fawzi, Hazem Alhaj, and Abdel-Hamid Ismail Mourad. "The Influence of Low Melting Point Elements on Hot-Cracking of 310 Austenitic Stainless Steel." In Pressure Vessels and Piping Conference, vol. 85345, p. V004T06A013. American Society of Mechanical Engineers, 2021.
9. Almomani, Abdulla Fawzi, Hazem Alhaj, and Abdel-Hamid Ismail Mourad. "The Impact of Silicon Content on the Corrosion Resistance of Nickel-Molybdenum Alloy in High Concentration Sulfuric Acid Transport." In Pressure Vessels and Piping Conference, vol. 85345, p. V004T06A012. American Society of Mechanical Engineers, 2021.
10. Victor Christy, John, Abdel-Hamid I. Mourad, and Jaber Abu Qudeiri. "Tribological Analysis of Squeeze Stir Cast Recycled Aluminum MMC's." In Pressure Vessels and Piping Conference, vol. 85345, p. V004T06A018. American Society of Mechanical Engineers, 2021.
11. Subhan, Abdul, and Abdel-Hamid I. Mourad. "Manufacturing and Performance Assessment of Solar Photo-Voltaic Modules by Adopting Various Heat Dissipation Techniques: A Review." In ASME International Mechanical Engineering Congress and Exposition, vol. 85673, p. V011T11A065. American Society of Mechanical Engineers, 2021.

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12. Zahoor, Asima, and Abdel-Hamid I. Mourad. "Ultrasound Assisted Production of Metal Foam From Polyurethane Precursor." In ASME International Mechanical Engineering Congress and Exposition, vol. 85574, p. V003T03A037. American Society of Mechanical Engineers, 2021.
13. Sabry, Ibrahim, Abdel-Hamid I. Mourad, and Dinu Thomas Thekkuden. "Study on Underwater Friction Stir Welded AA 2024-T3 Pipes Using Machine Learning Algorithms." In ASME International Mechanical Engineering Congress and Exposition, vol. 85550, p. V02AT02A033. American Society of Mechanical Engineers, 2021.
14. Sureshkumar, Vyshak, and Abdel-Hamid I. Mourad. "Investigation of New Alternate and Conventional Materials for Manufacturing High Pressure Turbine Disk." In ASME International Mechanical Engineering Congress and Exposition, vol. 85567, p. V02BT02A038. American Society of Mechanical Engineers, 2021.
15. Zahoor, Asima, and Abdel-Hamid I. Mourad. "Recent Developments in Processing and Characterization of Metal Foam." In ASME International Mechanical Engineering Congress and Exposition, vol. 85574, p. V003T03A038. American Society of Mechanical Engineers, 2021.
16. Suresh Babu, Sandeep, and Abdel-Hamid I. Mourad. "Multiscale Modelling of Multifunctional Composites: A Review." In ASME International Mechanical Engineering Congress and Exposition, vol. 85574, p. V003T03A054. American Society of Mechanical Engineers, 2021.
17. Suresh Babu, Sandeep, and Abdel-Hamid I. Mourad. "Assessment of Interlaminar Stress Components in Laminated Composites Manufactured by Ply-Drop Technique." In ASME International Mechanical Engineering Congress and Exposition, vol. 85550, p. V02AT02A074. American Society of Mechanical Engineers, 2021.
18. Stephen, Clifton, B. Shivamurthy, Rajiv Selvam, Sai Rohit Behara, Abdel-Hamid I. Mourad, and Satish Kannan. "Design and finite element study of Kevlar based combat helmet for protection against high-velocity impacts." *Materials Today: Proceedings* (2021).
19. Mahmoud Elgendi; Alyaa AlHefeiti; Houreyah Almarshoodi; Aysha Aldhaheeri; Wafa Alshehhi; Mohamed YE Selim, Embodiment Design and Detailed Design of a Pyramid Solar Still with an Automatic Feedwater System, 2021 6th International Conference on Renewable Energy: Generation and Applications (ICREGA), 2-4 Feb. 2021, Publisher: IEEE. DOI: 10.1109/ICREGA50506.2021.9388218
20. Anas Alkhazaleh, Mohamed Y E Selim, Fadi Alnaimat, Bobby Mathew, Computational Fluid Dynamics Based Investigation of the Performance of Hybrid Heat Sinks, Proceedings of the ASME 2021 Heat Transfer Summer Conference, HT2021, June 16-18, 2021, Virtual, Online, HT2021-63099.
21. Anas Alkhazaleh, Mohamed Y E Selim, Fadi Alnaimat, Bobby Mathew, Thermo-Hydraulic Performance of Heat Sinks With Microchannel Embedded With Pin-Fins, Proceedings of the ASME 2021 Heat Transfer Summer Conference, HT2021, June 16-18, 2021, Virtual, Online, HT2021-62804.
22. A Alkhazaleh, F Alnaimat, MYE Selim, B Mathew, Thermohydraulic Performance of Heat Sink with Sinusoidal Microchannels Embedded with Pin-Fins for Liquid Cooling of Microelectronic Chips, 2021 37th Semiconductor Thermal Measurement, Modeling & Management Symposium (SEMI-THERM), 65-71, IEEE

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Patents

1. Mwafy, Asel Mohamed, Abdel-Hamid Ismail Mourad, Mouza Saeed Al Mansoori, Farah Ashraf Genena, and Shahd Aahed Anshasy. "Cable cleaning and rolling system." U.S. Patent 10,974,287, issued April 13, 2021.
2. SAB Al Omari – Heat Sink With Condensing Fins And Phase Change Material, US 11,156,408 B2, Oct. 26, 2021.
3. SAB Al Omari, E Elnajjar – Heat Sinks With Vibration Enhanced Heat Transfer, US 10,890,387 B2, Jan . 12 , 2021.