**البحوث المنشورة للتدريسي**

**ا.م.د. احمد فالح حسن**

| o | Title of research | Journal name | Publisher or hosting | ISSN |
| --- | --- | --- | --- | --- |
| 1 | Numerical study on the thermal energy storage employing phase change material with honeycomb structure: the effect of heat transfer fluid configuration and honeycomb cell angles  <https://doi.org/10.1002/est2.396> | Energy Storage  2022 | John Wiley & Sons, Ltd. | 2578-4862 |
| 2 | Computational optimum design of natural convection in a concentric and eccentric annular cylinder using nanofluids  <https://doi.org/10.1177/09576509221117936> | Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy 2022 | SAGE Publications | * ISSN: 0957-6509 * Online ISSN: 2041-2967 |
| 3 | Numerical study and experimental validation of the effects of orientation and configuration on melting in a latent heat thermal storage unit.  <https://doi.org/10.1016/j.est.2019.04.013> | Journal of Energy Storage, 2019. | Elsevier | ISSN: 2352-152X |
| 4 | CFD modelling of friction stir welding (FSW) process of AZ31 magnesium alloy using volume of fluid method.  <https://doi.org/10.1016/j.jmrt.2018.11.016> | Journalof Materials Research and Technology  2019 | Elsevier | ISSN: 2238-7854 |
| 5 | Numerical study on the effect of the location of the phase change material in a concentric double pipe latent heat thermal energy storage unit  <https://doi.org/10.1016/j.tsep.2019.03.007> | Thermal Science and Engineering Progress,2019 | Elsevier | ISSN:2451-9049 |
| 6 | A numerical methodology for predicting tool wear in Friction Stir Welding.  <https://doi.org/10.1016/j.jmatprotec.2016.11.009> | Journal of Materials Processing Technology. 2017. 241: p.129-140. | Elsevier | 0924-0136 |
| 7 | A numerical comparison of the flow behaviour in Friction Stir Welding (FSW) using unworn and worn tool geometries.  <https://doi.org/10.1016/j.matdes.2015.08.016> | Materials & Design, 2015. 87: p. 1037-1046. | Elsevier | 0264-1275 |
| 8 | *The Role Of Composite Phase Change Material On The Thermal Performance Of A Latent Heat Storage System: Experimental Investigation 2019* | *Journal of Harbin Institute of Technology (New Series).*Issue 1, 2020 | Published by *Harbin Institute of Technology* | ISSN 1005-9113 |
| 9 | Experimental study of melting of composite phase change materials used in honeycomb energy storage system  <https://doi.org/10.22061/jcarme.2022.8741.2175> | Journal of Computational & Applied Research in Mechanical Engineering (JCARME) 2022 | Shahid Rajaee Teacher Training University (SRTTU) | [Volume 12, Issue 1 - Serial Number 23](https://jcarme.sru.ac.ir/issue_291_292.html) Pages 31-40  [2228-7922](https://portal.issn.org/resource/ISSN/2228-7922) |
| 10 | Solidification enhancement of phase change material implemented in latent heat thermal energy storage  <https://doi.org/10.1063/5.0000091> | AIP Conference Proceedings  2020 | AIP | * [Volume 2213, Issue 1](https://aip.scitation.org/toc/apc/2213/1) * 10.1063/5.0000091 |
| 11 | Characterization of Mechanical and Electrical Properties of Polystyrene Composite Reinforced by Hybrid Reinforcement Filler | Diyala Journal of Engineering Sciences 2022 | Diyala University | Vol.15, No 3, September 2022  1999-8716 |
| 12 | A. Effect of cooling rate on the mechanical properties of dual phase steel welding. | Journal of development and engineering, Vol.14, No.1, 2010. | Published by Al Mustansiriyah University, Iraq | 2520-0917 |
| 13 | A. Use of Artificial Neural Network for Estimation of the Dissolved of Rutile Ore. | Diyala Journal for pure sciences, Vol 7, No. 2, 2010. | Published by Diyala University, Iraq | 2222-8373 |
| 14 | A. State some mechanical properties for Al- alloy welded by seam welding technique. | Diyala journal of engineering sciences, Vol. 3, No.1, 2010. | Published by Diyala University, Iraq | 19998716 |
| 15 | A. Experimental study for preparation and evaluation the mechanical properties of composite material | Diyala journal for applied researchers, Vol.4, No. 1, 2008. | Published by Diyala University, Iraq | 1992-0784 |
| 16 | Preparation acid resistance ceramic from Iraq ore. | Diyala Journal of applied researchers, Vol.2, No.1, 2006. | Published by Diyala University, Iraq | 1992-0784 |
| 17 | A. Manufacturing of high frequency transformer core from Nickel ferrite. | Journal of Diyala education, No.22, 2006. | Published by Diyala University, Iraq |  |
| 18 | A. Effect of mullite phase on some properties of hard porcelain. | AL-Fatih Journal, No.27 | Published by Diyala University, Iraq. | 1996-8752 |

**Conferences .**

| **No** | **Conference** | **Paper title** | **Proceeding or journal name** |
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| 1 | 1st- International Scientific Conference of Engineering Sciences - 3rd Scientific Conference of Engineering Science (ISCES)  2018. Iraq | Comparison and optimization design methodology for open-loop subsonic wind tunnel | DOI:  10.1109/ISCES.2018.8340551  Publisher: IEEE  <https://ieeexplore.ieee.org/document/8340551> |
| 2 | AIP conference preceding The 4th International Conference on Sustainable Engineering Techniques | INVESTIGATION OF USING HYBRID REINFORCEMENT FILLER ON THE MECHANICAL AND ELECTRICAL PROPERTIES OF HIGH-DENSITY POLYETHYLENE (HDPE) COMPOSITE  2022 | Accepted |
| 3 | TriboUK 2015  . | A numerical Methodology for calculating tool wear in Friction Stir Welding “A”. | In Tribo UK conference. 2015. Loughborough University |
| 4 | First Scientific Conference in Engineering Sciences, Dailya University, College of Engineering, Dec. 22-23, 2010. Iraq. | A. State strain and deformation for polymer composite material by using numerical solution. | Diyala Journal for Engineering Sciences, special issue.  ISSN 1999-8716. |
| 5 | AME2007 conference. 2007. UKM- Malaysia. | Computer added predication of advance ceramic laser sealing “ | AME2007 conference. UKM |
| 6 | IConMEAS  25/09/2019, UoT Baghdad - Iraq | Solidification Enhancement of Phase Change Material Implemented in Latent Heat Thermal Energy Storage | IConMEAS 2019,Iraq |