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**Publication List -2025- Department of Mechanical Engineering**  
**Publication Details**

1. "Alamri, Sagr" Gradient large-scale configuration of VGCF/Fe<sub>3</sub>Si/Poly(PDA-co-XY) nanocomposite with layered design and Boosted microwave absorption performance in C-band frequency, CERAMICS INTERNATIONAL, MAY 2025 51 12 15846 15856 10.1016/j.ceramint.2025.01.422
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3. "Javali, Mukhtar Ahmed; Sanadi, Rizwan M.; Badruddin, Irfan Anjum; Alqahtani, Saad M.; Khader, Mohasin Abdul; Ibrahim, Weam Sharif Abdelrazag; Khalid, Imran" "Comparative analysis of occlusal stresses on bone around natural teeth, platform matched and switched implants abutments: a finite element study" SCIENTIFIC REPORTS JUN 4 2025 15 1 10.1038/s41598-025-02570-2
4. "Salam, Mohamed Yasin Abdul; Ogunmuyiwa, Enoch Nifise; Manisa, Victor Kitso; Yahya, Abid; Badruddin, Irfan Anjum" Enhancing phase characterization of AlCuCrFeNi high entropy alloys using hybrid machine learning models: A comprehensive XRD analysis JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY-JMR&T MAY-JUN 2025 36 592 605 10.1016/j.jmrt.2025.03.147
5. "Halayal, Rekha Y.; Bagewadi, Zabin K.; Khan, T. M. Yunus; Shamsudeen, Shaik Mohamed" "Investigating compounds from Basella alba for their antioxidant, anti-inflammatory, and anticancer properties through in vitro and network pharmacology, molecular simulation approach" GREEN CHEMISTRY LETTERS AND REVIEWS DEC 31 2025 18 1 10.1080/17518253.2025.2481945
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7. "Chikkatti, Bipin S.; Sajjan, Ashok M.; Banapurmath, Nagaraj R.; Ayachit, Narasimha H.; Jazaa, Yosef; Khan, T. M. Yunus; Umarfarooq, M. A." Novel polymer gel electrolytes comprising montmorillonite embedded in sodium alginate and their electrochemical performance for future lead acid batteries NEW JOURNAL OF CHEMISTRY FEB 24 2025 49 9 3654 3660 10.1039/d4nj05557h
8. "Rajhi, Ali A.; Duhduh, Alauldeen A." Rational construction of decorated CoFeCuNiCr HEA and hierarchical mesoporous Cu<sub>3</sub>P in gradient double-layer nanocomposite configuration with highly efficient microwave absorption performance JOURNAL OF ALLOYS AND COMPOUNDS FEB 5 2025 1014 10.1016/j.jallcom.2025.178652
9. "Hussain, Zawar; Kamangar, Sarfaraz; Arabi, Amir Ibrahim Ali" Numerical analysis of MHD micropolar hybrid nanofluid flow past a porous stretching sheet with slips and convective boundary conditions JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY MAY 2025 150 10 7971 7984 10.1007/s10973-025-14215-7
10. "Faisal, Muhammad; Ahmad, Ifthikhar; Badruddin, Irfan Anjum; Javid, Musarat; Zedan, Ahmed Said Abdel Hafez" On Maxwell slip flow of radiative ternary hybrid nanofluid subject to Smoluchowski-Nield's constraints using an iterative numerical simulation INTERNATIONAL



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14. "Wategave, S. P.; Banapurmath, N. R.; Nivedhitha, K. S.; Sajjan, Ashok M.; Sawant, M. S.; Badruddin, Irfan Anjum; Kamangar, Sarfaraz; Hosmath, R. S." Combustion and emission characteristics of RCCI engine fueled with hydrogen and karanja biodiesel renewable fuels INTERNATIONAL JOURNAL OF HYDROGEN ENERGY APR 29 2025 123 184 193 10.1016/j.ijhydene.2025.03.409
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18. "Prassanth, C., V; Samavedam, Aditya Sai; Sreekanth, Manavalla; Tamilselvan, P.; Khan, T. M. Yunus; Feroskhan, M." Influence of carbon dioxide addition on hydrogen-enriched diesel-WPO Blends in CI engines RESULTS IN ENGINEERING SEP 2025 27 10.1016/j.rineng.2025.106787
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