

MONTHLY EDITION  
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# 2024 CURRENT AWARENESS BULLETIN

(List of Research papers /Articles published by  
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|----|--|--|---|
| 1. | <u>A comprehensive analysis on cost, combustion, performance and emissions for diesel engine fueled with preheated esters of waste cooking oil</u>                 | Yadav, P.S.,<br>Kumar, S.,<br>Gautam, R.   | Clean Technologies and Environmental Policy.                              |
| 2. | <u>A hybrid metaheuristic optimised ensemble classifier with self organizing map clustering for credit scoring</u>   | Singh, I.,<br>Kothari, D.P.,<br>Aditya, S., (...),<br>Agarwal, C.,<br>Gautam, V. | Operational Research, 24(4), art. no. 57.                                 |
| 3. | <u>A Novel Acetylcholinesterase-Based Electrochemical Biosensor Using g-C<sub>3</sub>N<sub>4</sub>@MoS<sub>2</sub> Nanohybrid for the Detection of Trichlorfon</u> | Chatterjee, S.,<br>Singh, H.,<br>Hudda, D.,<br>Sweety,<br>Kumar, D.              | Applied Organometallic Chemistry.   |
| 4. | <u>A novel spectral-spatial 3D auxiliary conditional GAN integrated convolutional LSTM for hyperspectral image classification</u>                                  | Ranjan, P.,<br>Girdhar, A.,<br>Ankur,<br>Kumar, R.                               | Earth Science Informatics.  |
| 5. | <u>A review on reinforcement and its effect on aluminium-based composites</u>  | Thakur, A.,<br>Khanna, V.,<br>Murtaza, Q.  | Metal Matrix Composites: A Modern Approach to Manufacturing, pp. 176-199. |



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| 6.  | <u><b>A Survey of Artificial Intelligence Applications in Wind Energy Forecasting</b></u>   | Dhaka, P.,<br>Sreejeth, M.,<br>Tripathi, M.M.                          | Archives of<br>Computational Methods<br>in Engineering.   |
| 7.  | <u><b>Advancing sentiment classification through a population game model approach</b></u><br><u><b>Open Access</b></u>  | Punetha, N.,<br>Jain, G.   | Scientific Reports, 14(1),<br>art. no. 20540.   |
| 8.  | <u><b>An Experimental Study on Estimation of Reliability of a Computer Network for the Network of Delhi Development Authority: A Study on Challenges, Experiment and Its Results, Potential Future Avenues and Significance of Ongoing Research</b></u> | Tomar, V.S.,<br>Ranga, V.  | Communications in<br>Computer and<br>Information Science,<br>2090 CCIS, pp. 240-<br>256.                  |
| 9.  | <u><b>An Overview on Image Segmentation Techniques for Reversible Data Hiding</b></u>   | Gupta, R.  | International Journal of<br>Mathematical, Engineering<br>and Management Sciences,<br>9(5), pp. 1163-1184. |
| 10. | <u><b>Artificial intelligence for dietary management: Transforming nutrition through intelligent systems</b></u>  | Gami, S.J.,<br>Sharma, M.,<br>Bhatia, A.B.,<br>Bhatia, B.,<br>Whig, P. | Nutrition<br>Controversies and<br>Advances in<br>Autoimmune Disease,<br>pp. 276-307.                      |



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| 11. | <u>Assessment of a beeswax-packed domestic solar dryer for sustainable bitter gourd drying: An experimental study</u>                                  | Shimpy,<br>Kumar, M.,<br>Kumar, A.   | Food and Bioproducts Processing, 148, pp. 72-87.   |
| 12. | <u>Augmented GAN: Advancing Generative Adversarial Networks Through Enhanced Discriminator Training and Generator Stability</u>                        | Prakash, A.,<br>Varghese, R.B.,<br>Tanwar, L.  | 2024 International Conference on Signal Processing, Computation, Electronics, Power and Telecommunication, IConSCEPT 2024 - Proceedings. |
| 13. | <u>Constraining the parameters of generalized and viscous modified Chaplygin gas and black hole accretion in Einstein-Aether gravity (Open Access)</u> | Mukherjee, P.,<br>Debnath, U.,<br>Chaudhary, H.,<br>Mustafa, G.                              | European Physical Journal C, 84(9), art. no. 930.  |
| 14. | <u>Cosmological tests of the dark energy models in Finsler-Randers space-time (Open Access)</u>  | Nekouee, Z.,<br>Chaudhary, H.,<br>Narasimhamurthy, S.K.,<br>Pacif, S.K.J.,<br>Malligawad, M. | Journal of High Energy Astrophysics, 44, pp. 19-44.  |
| 15. | <u>Crosslinking of polyvinyl alcohol with di, tri, and tetracarboxylic acids: an experimental investigation</u>  | Gautam, L.,<br>Jain, M.,<br>Warkar, S.G.   | Colloid and Polymer Science.   |



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| 16. | <u>Cutting edge technology for wastewater treatment using smart nanomaterials: recent trends and futuristic advancements</u>   | Sharma, A.,<br>Goel, H.,<br>Sharma, S., (...),<br>Kesari, K.K.,<br>Kashyap, B.K. | Environmental Science and Pollution Research.                                  |
| 17. | <u>Decision-making in multi-objective DG planning for distribution system via Shannon's entropy.</u>   | Gupta, S.,<br>Yadav, V.K.,<br>Singh, M.,<br>Giri, A.K.                           | Electrical Engineering.  |
| 18. | <u>Derivation Analysis and Control of Multiport Flyback Converter with Lyapunov Function-Based Controller in Renewable Energy Systems Considering Circuit Parasitics</u> | Urooj, S.,<br>Joshi, D.,<br>Gupta, A.,<br>BaQais, A.                             | Arabian Journal for Science and Engineering.                                   |
| 19. | <u>Development of flexible piezoelectric nanogenerator based on PVDF/KNN/ZnO nanocomposite film for energy harvesting application</u>                                    | Verma, K.,<br>Kumar, A.,<br>Sharma, R.   | Journal of Materials Science: Materials in Electronics, 35(26), art. no. 1732. |
| 20. | <u>Early and late observational tension: dark energy parametrizations in horava-lifshitz gravity via baryon acoustic oscillations</u>                                    | Chaudhary, H.,<br>Debnath, U.,<br>Rahaman, F.,<br>Mustafa, G.,<br>Atamurotov, F. | Physica Scripta, 99(10), art. no. 105037.                                      |



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| 21. | <u>Effect of load frequency and amplitude of displacement on soft synthetic rock joints under cyclic shear loads</u>  | Niktabar, S.M.M.,<br>Rao, K.S.,<br>Shrivastava,<br>A.K., Ščučka, J.              | Bulletin of Engineering<br>Geology and the<br>Environment, 83(10),<br>art. no. 389. |
| 22. | <u>Essential oils loaded carboxymethylated Cassia fistula gum-based novel hydrogel films for wound healing</u>  | Tanwar, M.,<br>Rani, A.,<br>Gautam, N.,<br>Talegaonkar, S.,<br>Gupta, R.K.       | International Journal<br>of Biological<br>Macromolecules, 278,<br>art. no. 134682.  |
| 23. | <u>Evolutionary Neuro-Fuzzy Network and Novel Hybrid Adaptive Crow Search-Modified Glowworm Swarm Optimization for Credit Card Fraud Detection</u>                          | Singh, I.,<br>Malhotra, H.,<br>Shruti, (...),<br>Kumar Jha, S.,<br>Kumar Pal, Y. | Lecture Notes in Networks<br>and Systems, 1088 LNNS,<br>pp. 309-318.                |
| 24. | <u>Experimental and Numerical Investigations of Formability of Two-Ply Clad Sheet of Stainless Steel and Aluminium Alloy</u>  | Prasad, B.,<br>Gautam, V.  | Mapan - Journal of<br>Metrology Society of<br>India.                                |
| 25. | <u>Experimental investigation to evaluate thermal performance of a solar cooker with evacuated tube solar collector using different heat transfer fluids</u><br>Open Access | Khan, Y.,<br>Tevatia, A.,<br>Apparao, D.,<br>Singh, N.,<br>Mishra, S.            | Journal of Thermal<br>Engineering, 10(5), pp.<br>1335-1346.                         |



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| 26. | <u>Exploring Natural Compounds as Potential CDK4 Inhibitors for Therapeutic Intervention in Neurodegenerative Diseases through Computational Analysis</u> | Rani, N.,<br>Kumar, P.   | Molecular Biotechnology.   |
| 27. | <u>Exploring the cutting edge: Recent trends in cold metal transfer welding</u>   | Bhardwaj, V.,<br>Singh, I.J.,<br>Murtaza, Q.                             | Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. |
| 28. | <u>Fabrication of carboxymethyl tamarind kernel gum-based hydrogel and its applicability in different types of soils for agronomy</u>                     | Malik, R.,<br>Khatri, K.,<br>Saxena, R.,<br>Warkar, S.G.                 | International Journal of Biological Macromolecules, 280, art. no. 135616.                                  |
| 29. | <u>Fallen leaves to sustainable energy solution: review on hydrogen production</u><br>(Open Access)   | Tin, K.K.,<br>Taweepreda, W.,<br>Singh, A.,<br>Wagri, N.K.,<br>Kumar, A. | RSC Sustainability.  |
| 30. | <u>Impact of flexible vegetation on hydraulic characteristics in compound channels with converging floodplains</u><br>(Open Access)                       | Awasthi, N.,<br>Kumar, M.,<br>Raj, R.                                    | Water Supply, 24(8), pp. 2720-2736.  |



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| 31. | <u>In Silico Design of Detonation-Free High- Performance Dual-Thrust Solid and Hybrid Propellant Rockets through the Application of the Chapman-Jouguet Condition</u> | Panchal, D.,<br>Vinay, D.,<br>Sreeshanth, B.S.,<br>(...), Singh, S.,<br>Sanal Kumar, V.R. | AIAA Aviation Forum and<br>ASCEND, 2024.                    |
| 32. | <u>Inverse Airfoil Design for Hydrokinetic Turbine Blades Using Non-intrusive Reduced Order Modeling</u>  | Bhatt, P.,<br>Mittal, P.,<br>Taneja, P.,<br>Singh, R.K.                                   | Lecture Notes in<br>Mechanical Engineering,<br>pp. 205-224. |
| 33. | <u>Investigation of circularly polarized MIMO antenna with enhanced isolation for sub-6 GHz application</u>   | Kansal, P.,<br>Mandpura, A.K.,<br>Kumar, N.   | Physica Scripta,<br>99(10), art. no.<br>105536.             |
| 34. | <u>Measurement of Heavy Metals Content in Suspended Sediment of Ganges River Using Atomic Absorption Spectrometry</u>   | Aggarwal, M.,<br>Anbukumar, S.,<br>Vijaya Kumar, T.                                       | Mapan - Journal of<br>Metrology Society of India.           |
| 35. | <u>Microstructural and mechanical properties analysis of SS 316L structure fabricated using CMT-wire arc additive manufacturing</u>                                   | Jain, S.K.,<br>Murtaza, Q.,<br>Singh, P.  | Journal of Adhesion<br>Science and<br>Technology.           |





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| 36. | <u>Multi-blended granular columns encased with geosynthetics</u>   | Singh, I.,<br>Sahu, A.K.  | Zeitschrift der Deutschen Gesellschaft für Geowissenschaften, 175(1), pp. 73-88.  |
| 37. | <u>Multi-Keyword Ranked Search in Cloud Environment</u>  | Sharma, V.,<br>Sharma, K.,<br>Kumar, A.,<br>Pawan.                    | Journal of Engineering Science and Technology Review, 17(4), pp. 23-30.           |
| 38. | <u>Multimodal Sentiment Analysis: Perceived vs Induced Sentiments (Open Access)</u>  | Aggrawal, A.,<br>Varshney, D.   | 2024 Silicon Valley Cybersecurity Conference, SVCC 2024.                          |
| 39. | <u>Nanoscale Trench Gate Engineered JAM Gate-All-Around (TGE-JAM-GAA) Label-Free BioFET for Charged/Neutral Biomolecules Detection</u> | Yadav, S.,<br>Rewari, S.  | 2024 Silicon Valley Cybersecurity Conference, SVCC 2024.                          |
| 40. | <u>Nanoscience in controlled drug release in the gastrointestinal tract</u>  | Ritu, Bharmjeet,<br>Nida-e-Falak, (...),<br>Gupta, R.,<br>Chandra, P. | Nanobiotechnology and Artificial Intelligence in Gastrointestinal Diseases, p. 3. |



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| 41. | <u>Novel adaptive MPPT technique for enhanced performance of grid integrated solar photovoltaic system</u>   | Prajapati, S.,<br>Garg, R.,<br>Mahajan, P.  | Computers and Electrical Engineering, 120, art. no. 109648.       |
| 42. | <u>Observational signature of QPOs with particle motion around non-commutative Schwarzschild black hole surrounded by perfect fluid dark matter</u>  | Mustafa, G.,<br>Demir, E.,<br>Davlatoliev, A., (...),<br>Atamurotov, F.,<br>Güdekli, E. | Physics of the Dark Universe, 46, art. no. 101644.                |
| 43. | <u>Optical characteristics, Judd-Ofelt analysis of enhanced luminescence by flux in thermally stable, novel Eu<sup>3+</sup>-doped BaZr(PO<sub>4</sub>)<sub>2</sub> phosphor for indoor lighting applications</u> | Yadav, S.,<br>Rao, A.S.,<br>Meena, D.   | Physica B: Condensed Matter, 695, art. no. 416522.                |
| 44. | <u>Overview of pro-inflammatory and pro-survival components in neuroinflammatory signalling and neurodegeneration</u>  | Kardam, S.,<br>Ambasta, R.K.,<br>Kumar, P.  | Ageing Research Reviews, 100, art. no. 102465.                    |
| 45. | <u>Patient-to-patient value co-creation in online health communities: a systematic literature review and research agenda</u>   | Ahuja, H.,<br>Shree, D.   | International Journal of Pharmaceutical and Healthcare Marketing. |



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| 46. | <b><u>PHIGrader: Evaluating the effectiveness of Manifest file components in Android malware detection using Multi Criteria Decision Making techniques</u></b>                                 | Sharma, Y.,<br>Arora, A.   | Journal of Network and Computer Applications, 232, art. no. 104021.                                |
| 47. | <b><u>Prediction of Air Quality Index Using Random Forest and Prophet Tool</u></b>   | Walia, A.,<br>Paliwal, A.,<br>Patidar, S.,<br>Mahto, R.                | 2024 19th Annual System of Systems Engineering Conference, SoSE 2024, pp. 275-280.                 |
| 48. | <b><u>Rare earth-doped ceramic coatings: Analysis of microstructure, mechanical properties, and slurry Erosion resistance using high pressure-high velocity oxy-liquid fuel deposition</u></b> | Vishnoi, M.,<br>Murtaza, Q.,<br>Kumar, P.,<br>Bansal, A.,<br>Singh, V. | <b><u>International Journal of Refractory Metals and Hard Materials, 125, art. no. 106873.</u></b> |
| 49. | <b><u>Review on design, development, and implementation of an unmanned aerial vehicle for various applications</u></b>   | Mubina Shekh.,<br>Rani, S.,<br>Datta, R.                               | International Journal of Intelligent Robotics and Applications.                                    |
| 50. | <b><u>Rising bond yield spreads in the times of Pandemic: A study of 20 affected economies</u></b>   | Sikka, R.,<br>Kumar, M.,<br>Thukral, S.                                | Multidisciplinary Science Journal, 6, art. no. e2024ss0431.  |



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| 51. | <u>Sensitivity Investigation of Underlap Gate Cavity-Based Reconfigurable Silicon Nanowire Schottky Barrier Transistor for Biosensor Application</u> | Kumar, A.,<br>Thakur, V.,<br>Kumar, S.,<br>Kale, S.,<br>Singh, K.R. | Silicon.  |
| 52. | <u>Size resolved particle contribution to vehicle induced ultrafine particle number concentration in a metropolitan curbside region</u>              | Rajagopal, K.,<br>Ramachandran, S.,<br>Mishra, R.K.                 | Atmospheric Environment, 337, art. no. 120773.                                      |
| 53. | <u>Solar PV integrated simplified multilevel inverter configuration for power quality improvement using multilayer Gamma filter</u>                  | Bansal, P.,<br>Singh, A.  | Electrical Engineering.   |
| 54. | <u>Stacked Denoising Variational Auto Encoder Model for Extractive Web Text Summarization</u>  | Yadav, M.,<br>Katarya, R.   | Iranian Journal of Science and Technology - Transactions of Electrical Engineering. |
| 55. | <u>Supercontinuum generation in Ga-Sb-S chalcogenide-based PCF using optofluidic approach</u>  | Garg, D.,<br>Khamaru, A.,<br>Kumar, A.                              | Microwave and Optical Technology Letters, 66(9), art. no. e34316.                   |



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| 56. | <u>Sustainable biotransformation of lignocellulosic biomass to microbial enzymes: An overview and update</u>                        | Kukreti, N.,<br>Kumar, P.,<br>Kataria, R.                                  | Industrial Crops and Products, 222, art. no. 119432. |
| 57. | <u>Synthesis and Assessment of Acacia Gum-Based Hydrogel as a Promising Novel Biopolymeric Matrix for Delivery of Ciprofloxacin</u> | Anshul, Tomar, G.,<br>Meena, P.,<br>Warkar, S.G.                           | ChemistrySelect, 9(34), art. no. e202401639.         |
| 58. | <u>The potential of magnesium oxide nanoparticles (MgONPs) in the transesterification of lipids produced by Rhodotorula minuta</u>  | Srivastava, R.,<br>Srivastava, N.,<br>Kaur, S.,<br>Kant, K.,<br>Gaurav, K. | Environmental Science and Pollution Research.        |
| 59. | <u>Toeplitz determinants for a subclass of quasi convex mappings in higher dimensions</u>   | Giri, S.,<br>Kumar, S.S.   | Journal of Analysis, 32(4), pp. 2099-2112.           |
| 60. | <u>Toeplitz determinants in one and higher dimensions</u>   | Giri, S.,<br>Kumar, S.S.   | Acta Mathematica Scientia, 44(5), pp. 1931-1944.     |



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| 61. | <u>Triple band self-decoupled MIMO antenna pair for 5G communication</u>   | Kansal, P.,<br>Mandpura, A.K.,<br>Kumar, N.   | Physica Scripta, 99(9),<br>art. no. 095532.            |
| 62. | <u>Tunable structural, optical and bioactive properties of magnesium and bismuth co-doping on bioactive glass nanoparticles for biomedical applications</u>                | Goel, D.,<br>Santhiya, D.   | Journal of Materials Research.                         |
| 63. | <u>Ultrasonic Assisted Synthesis of CuFe<sub>2</sub>O<sub>4</sub>-Ag infused Gum Hydrogels Nanocomposite for photocatalytic Degradation of Organic Dye from Wastewater</u> | Meenu, Sharma, P.,<br>Purwar, R., (...),<br>Majumder, S.,<br>Srivastava, C.M.       | Water, Air, and Soil Pollution, 235(11), art. no. 690. |
| 64. | <u>Uncertainty and Noise Aware Decision Making for Autonomous Vehicles - A Bayesian Approach</u>   | Sachdeva, R.,<br>Gakhar, R.,<br>Awasthi, S., (...),<br>Pandey, A.,<br>Parihar, A.S. | IEEE Transactions on Vehicular Technology.             |
| 65. | <u>Underwater image enhancement using contrast correction</u>  | Singh, N.,<br>Bhat, A.  | Expert Systems.  |



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| 66. | <u>Vertically aligned 2D tin sulfide (SnS) nanoplates for selective detection of ethanol gas at room temperature</u>                | Arora, H.K.,<br>Jain, N.,<br>Kumar, S.,<br>Puri, N.K. | Semiconductor Science and Technology, 39(10), art. no. 105002. |
| 67. | <u>Warm white light emitting thermally stable Dy<sup>3+</sup> activated antimony fluoroborate glasses for n-UV based white LEDs</u> | Siwach, V.,<br>Jayasimhadri, M.                       | Physica Scripta, 99(10), art. no. 105009.                      |
| 68. | <u>“You’re Just So Weird and Crazy”:<br/>Recounting My Lived Experiences as a PhD Scholar in India</u>                              | Sagar, E.   | Autism in Adulthood.   |