

# Arun Kumar Tiwari

## List of Publications by Year in descending order

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75  
papers

4,844  
citations

101384

36  
h-index

95083

68  
g-index

77  
all docs

77  
docs citations

77  
times ranked

2775  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Effects of Minimum Quantity Lubrication (MQL) in machining processes using conventional and nanofluid based cutting fluids: A comprehensive review. <i>Journal of Cleaner Production</i> , 2016, 127, 1-18.              | 4.6  | 398       |
| 2  | Progress of nanofluid application in solar collectors: A review. <i>Energy Conversion and Management</i> , 2015, 100, 324-346.   | 4.4  | 269       |
| 3  | Rheological behaviour of nanofluids: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2016, 53, 779-791.  | 8.2  | 258       |
| 4  | Experimental evaluation of flat plate solar collector using nanofluids. <i>Energy Conversion and Management</i> , 2017, 134, 103-115.  | 4.4  | 222       |
| 5  | Recent advances on the fundamental physical phenomena behind stability, dynamic motion, thermophysical properties, heat transport, applications, and challenges of nanofluids. <i>Physics Reports</i> , 2022, 946, 1-94. | 10.3 | 179       |
| 6  | Performance evaluation of alumina-graphene hybrid nano-cutting fluid in hard turning. <i>Journal of Cleaner Production</i> , 2017, 162, 830-845.   | 4.6  | 170       |
| 7  | Progress of Nanofluid Application in Machining: A Review. <i>Materials and Manufacturing Processes</i> , 2015, 30, 813-828.  | 2.7  | 162       |
| 8  | Performance analysis of hybrid nanofluids in flat plate solar collector as an advanced working fluid. <i>Solar Energy</i> , 2018, 167, 231-241.  | 2.9  | 152       |
| 9  | Performance comparison of the plate heat exchanger using different nanofluids. <i>Experimental Thermal and Fluid Science</i> , 2013, 49, 141-151.  | 1.5  | 151       |
| 10 | Application of nanofluids in plate heat exchanger: A review. <i>Energy Conversion and Management</i> , 2015, 105, 1017-1036.   | 4.4  | 144       |
| 11 | Novel uses of alumina/graphene hybrid nanoparticle additives for improved tribological properties of lubricant in turning operation. <i>Tribology International</i> , 2018, 119, 99-111.                                 | 3.0  | 135       |
| 12 | Heat transfer and pressure drop characteristics of CeO <sub>2</sub> /water nanofluid in plate heat exchanger. <i>Applied Thermal Engineering</i> , 2013, 57, 24-32.  | 3.0  | 128       |
| 13 | Heat transfer mechanisms in heat pipes using nanofluids – A review. <i>Experimental Thermal and Fluid Science</i> , 2018, 90, 84-100.  | 1.5  | 120       |
| 14 | Performance augmentation in flat plate solar collector using MgO/water nanofluid. <i>Energy Conversion and Management</i> , 2016, 124, 607-617.  | 4.4  | 111       |
| 15 | Numerical investigation of heat transfer and fluid flow in plate heat exchanger using nanofluids. <i>International Journal of Thermal Sciences</i> , 2014, 85, 93-103.   | 2.6  | 107       |
| 16 | Novel uses of alumina-MoS <sub>2</sub> hybrid nanoparticle enriched cutting fluid in hard turning of AISI 304 steel. <i>Journal of Manufacturing Processes</i> , 2017, 30, 467-482.                                      | 2.8  | 101       |
| 17 | Preparation, characterization, stability, and thermal conductivity of rGO-Fe <sub>3</sub> O <sub>4</sub> -TiO <sub>2</sub> hybrid nanofluid: An experimental study. <i>Powder Technology</i> , 2020, 372, 235-245.       | 2.1  | 99        |
| 18 | Heat transfer, entropy generation, economic and environmental analyses of linear fresnel reflector using novel rGO-Co <sub>3</sub> O <sub>4</sub> hybrid nanofluids. <i>Renewable Energy</i> , 2021, 165, 420-437.       | 4.3  | 98        |

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|----|--|-----|-----------|
| 19 | Particle concentration levels of various nanofluids in plate heat exchanger for best performance. International Journal of Heat and Mass Transfer, 2015, 89, 1110-1118.  | 2.5 | 97        |
| 20 | Heat transfer enhancement with nanofluids in plate heat exchangers: A comprehensive review. European Journal of Mechanics, B/Fluids, 2020, 81, 173-190.  | 1.2 | 94        |
| 21 | Characterization and experimental investigation of Al <sub>2</sub> O <sub>3</sub> nanoparticle based cutting fluid in turning of AISI 1040 steel under minimum quantity lubrication (MQL). Materials Today: Proceedings, 2016, 3, 1899-1906.                                   | 0.9 | 88        |
| 22 | A review on the application of hybrid nanofluids for parabolic trough collector: Recent progress and outlook. Journal of Cleaner Production, 2021, 292, 126031.  | 4.6 | 86        |
| 23 | 4S consideration (synthesis, sonication, surfactant, stability) for the thermal conductivity of CeO <sub>2</sub> with MWCNT and water based hybrid nanofluid: An experimental assessment. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 610, 125918. | 2.3 | 85        |
| 24 | Energy, exergy, economic and environmental (4E) analysis of a parabolic trough solar collector using MXene based silicone oil nanofluids. Solar Energy Materials and Solar Cells, 2022, 239, 111633.   | 3.0 | 85        |
| 25 | Effect of chevron angle on heat transfer performance in plate heat exchanger using ZnO/water nanofluid. Energy Conversion and Management, 2016, 118, 142-154.  | 4.4 | 77        |
| 26 | Effect of variable spacing on performance of plate heat exchanger using nanofluids. Energy, 2016, 114, 1107-1119.  | 4.5 | 72        |
| 27 | Tribological Investigation of TiO <sub>2</sub> Nanoparticle based Cutting Fluid in Machining under Minimum Quantity Lubrication (MQL). Materials Today: Proceedings, 2016, 3, 2155-2162.   | 0.9 | 69        |
| 28 | Application of novel framework based on ensemble boosted regression trees and Gaussian process regression in modelling thermal performance of small-scale Organic Rankine Cycle (ORC) using hybrid nanofluid. Journal of Cleaner Production, 2022, 360, 132194.                | 4.6 | 64        |
| 29 | Experimental Study of Thermal Performance of Nanofluid-Filled and Nanoparticles-Coated Mesh Wick Heat Pipes. Journal of Heat Transfer, 2018, 140, .  | 1.2 | 59        |
| 30 | 3S (Sonication, surfactant, stability) impact on the viscosity of hybrid nanofluid with different base fluids: An experimental study. Journal of Molecular Liquids, 2021, 329, 115455.   | 2.3 | 54        |
| 31 | Measurement of machining forces and surface roughness in turning of AISI 304 steel using alumina-MWCNT hybrid nanoparticles enriched cutting fluid. Measurement: Journal of the International Measurement Confederation, 2020, 150, 107078.                                    | 2.5 | 52        |
| 32 | 4E (Energy, Exergy, Economic, and Environment) examination of a small LFR solar water heater: An experimental and numerical study. Case Studies in Thermal Engineering, 2021, 27, 101277.  | 2.8 | 47        |
| 33 | Exploring the specific heat capacity of water-based hybrid nanofluids for solar energy applications: A comparative evaluation of modern ensemble machine learning techniques. Journal of Energy Storage, 2022, 54, 105230.   | 3.9 | 47        |
| 34 | Experimental and numerical investigation on the thermal performance of triple tube heat exchanger equipped with different inserts with WO <sub>3</sub> /water nanofluid under turbulent condition. International Journal of Thermal Sciences, 2021, 164, 106861.               | 2.6 | 46        |
| 35 | A comprehensive review analysis on advances of evacuated tube solar collector using nanofluids and PCM. Sustainable Energy Technologies and Assessments, 2021, 47, 101417.   | 1.7 | 43        |
| 36 | Mechanism of Nanoparticles Functioning and Effects in Machining Processes: A Review. Materials Today: Proceedings, 2015, 2, 3539-3544.   | 0.9 | 41        |

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|----|--|-----|-----------|
| 37 | Improved Machining Performance with Nanoparticle Enriched Cutting Fluids under Minimum Quantity Lubrication (MQL) Technique: A Review. <i>Materials Today: Proceedings</i> , 2015, 2, 3545-3551.                                       | 0.9 | 38        |
| 38 | Efficacy evaluation of oxide-MWCNT water hybrid nanofluids: An experimental and artificial neural network approach. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 620, 126562.                       | 2.3 | 38        |
| 39 | Prediction of temperature distribution over cutting tool with alumina-MWCNT hybrid nanofluid using computational fluid dynamics (CFD) analysis. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 97, 427-439. | 1.5 | 32        |
| 40 | Investigation into Performance of SiO <sub>2</sub> Nanoparticle Based Cutting Fluid in Machining Process. <i>Materials Today: Proceedings</i> , 2017, 4, 133-141.  | 0.9 | 31        |
| 41 | Experimental investigation of thermal conductivity and specific heat of nanoparticles mixed cutting fluids. <i>Materials Today: Proceedings</i> , 2017, 4, 8587-8596.  | 0.9 | 31        |
| 42 | An evaluative observation on impact of optical properties of nanofluids in performance of photo-thermal concentrating systems. <i>Solar Energy</i> , 2018, 176, 709-724.   | 2.9 | 30        |
| 43 | Viscosity of hybrid nanofluids: Measurement and comparison. <i>Journal of Mechanical Engineering and Sciences</i> , 2018, 12, 3614-3623.   | 0.3 | 29        |
| 44 | Characterization and performance of nanofluids in plate heat exchanger. <i>Materials Today: Proceedings</i> , 2017, 4, 4070-4078.  | 0.9 | 28        |
| 45 | Experimental comparison of specific heat capacity of three different metal oxides with MWCNT/water-based hybrid nanofluids: proposing a new correlation. <i>Applied Nanoscience (Switzerland)</i> , 2023, 13, 189-199.                 | 1.6 | 28        |
| 46 | Influence of the geometrical parameters and particle concentration levels of hybrid nanofluid on the thermal performance of axial grooved heat pipe. <i>Thermal Science and Engineering Progress</i> , 2021, 21, 100762.               | 1.3 | 28        |
| 47 | A COMPARATIVE STUDY OF THERMAL PERFORMANCE OF A HEAT PIPE USING WATER AND NANOFLUID, AND A NANOPARTICLE-COATED WICK HEAT PIPE USING WATER. <i>Heat Transfer Research</i> , 2019, 50, 1767-1779.  | 0.9 | 27        |
| 48 | Current Trends in Electric Discharge Machining Using Micro and Nano Powder Materials- A Review. <i>Materials Today: Proceedings</i> , 2015, 2, 3302-3307.  | 0.9 | 25        |
| 49 | Characterization of TiO <sub>2</sub> , Al <sub>2</sub> O <sub>3</sub> and SiO <sub>2</sub> Nanoparticle based Cutting Fluids. <i>Materials Today: Proceedings</i> , 2016, 3, 1890-1898.  | 0.9 | 24        |
| 50 | Influence of graphene and multi-walled carbon nanotube additives on tribological behaviour of lubricants. <i>International Journal of Surface Science and Engineering</i> , 2018, 12, 207.   | 0.4 | 23        |
| 51 | Application of Nanoparticles in Solar collectors: A Review. <i>Materials Today: Proceedings</i> , 2015, 2, 3638-3647.  | 0.9 | 19        |
| 52 | Numerical study of CeO <sub>2</sub> /H <sub>2</sub> O nanofluid application on thermal performance of heat pipe. <i>Materials Today: Proceedings</i> , 2019, 18, 1006-1016.  | 0.9 | 19        |
| 53 | EXPERIMENTAL INVESTIGATION OF THE THERMAL PERFORMANCE OF MESH WICK HEAT PIPE. <i>Heat Transfer Research</i> , 2018, 49, 1793-1811.   | 0.9 | 18        |
| 54 | Exergy analysis of hybrid nanofluids with optimum concentration in a plate heat exchanger. <i>Materials Research Express</i> , 2018, 5, 065022.  | 0.8 | 17        |

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|----|--|-----|-----------|
| 55 | Machining performance enhancement of powder mixed electric discharge machining using Green dielectric fluid. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2020, 42, 1.   | 0.8 | 17        |
| 56 | A review of thermo physical properties of nanofluids. <i>Materials Today: Proceedings</i> , 2019, 18, 968-978.   | 0.9 | 16        |
| 57 | Solar organic Rankine cycle and its poly-generation applications – A review. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 49, 101732.  | 1.7 | 15        |
| 58 | Characterization of Nanofluids as an advanced heat transporting medium for Energy Systems. <i>Materials Today: Proceedings</i> , 2017, 4, 4095-4103.   | 0.9 | 13        |
| 59 | Combined energy and exergy analysis of a corrugated plate heat exchanger and experimental investigation. <i>International Journal of Exergy</i> , 2014, 15, 395.   | 0.2 | 12        |
| 60 | Solicitation of nanoparticles/fluids in solar thermal energy harvesting: A review. <i>Materials Today: Proceedings</i> , 2020, 26, 2289-2295.  | 0.9 | 12        |
| 61 | Discharging of PCM for ventilation system incorporating nanoparticles. <i>Journal of Molecular Liquids</i> , 2020, 315, 113696.  | 2.3 | 10        |
| 62 | 4E (energy, exergy, economic and environmental) investigation of LFR using MXene based silicone oil nanofluids. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 49, 101715.   | 1.7 | 10        |
| 63 | An Investigation on Tool Flank Wear Using Alumina/MoS <sub>2</sub> Hybrid Nanofluid in Turning Operation. <i>Lecture Notes in Mechanical Engineering</i> , 2019, , 213-219.  | 0.3 | 9         |
| 64 | Thermal Performance Enhancement of Flat-Plate Solar Collector Using CeO <sub>2</sub> -Water Nanofluid. <i>Springer Proceedings in Energy</i> , 2020, , 109-118.  | 0.2 | 6         |
| 65 | Analysis of Mechanical and Sliding Wear Performance of Hybrid AA7075-SiC/Gr/Cu Alloy Composites Fabricated by High Vacuum Stir Casting Process. <i>Journal of Bio- and Tribo-Corrosion</i> , 2022, 8, 1.   | 1.2 | 6         |
| 66 | Solar Power Development: A Root for Sustainable Development of India. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 691, 012084.   | 0.3 | 4         |
| 67 | Theoretical analysis and correlations for predicting properties of hybrid nanofluids. , 2022, , 149-170.   |     | 4         |
| 68 | Effects of surfactant and MoO <sub>3</sub> nanofluid on tribological and machining characteristics in minimum quantity lubrication (MQL)-turning of AISI 304 steel. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 0, , 095440892211059. | 1.4 | 4         |
| 69 | Synthesis, characterization, and measurement techniques for the thermophysical properties of nanofluids. , 2022, , 59-93.  |     | 3         |
| 70 | Recent advances in machine learning research for nanofluid heat transfer in renewable energy. , 2022, , 203-228.   |     | 3         |
| 71 | Rheological Behaviour of Hybrid Nanofluids: A Review. <i>Materials Forming, Machining and Tribology</i> , 2020, , 77-94.   | 0.7 | 2         |
| 72 | Influence of nanoparticles and porous plates on discharging of ventilation unit. <i>Powder Technology</i> , 2020, 375, 513-520.  | 2.1 | 1         |

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|----|--|-----|-----------|
| 73 | Nanofluids as coolants. , 2022, , 713-735.   |     | 1         |
| 74 | Synthesis and Characterization of Nanocomposites for the Application in Hybrid Solar Cell. Advances in Computational Intelligence and Robotics Book Series, 2021, , 250-266. | 0.4 | 0         |
| 75 | Radiative transport of hybrid nanofluid. , 2022, , 131-147.  |     | 0         |