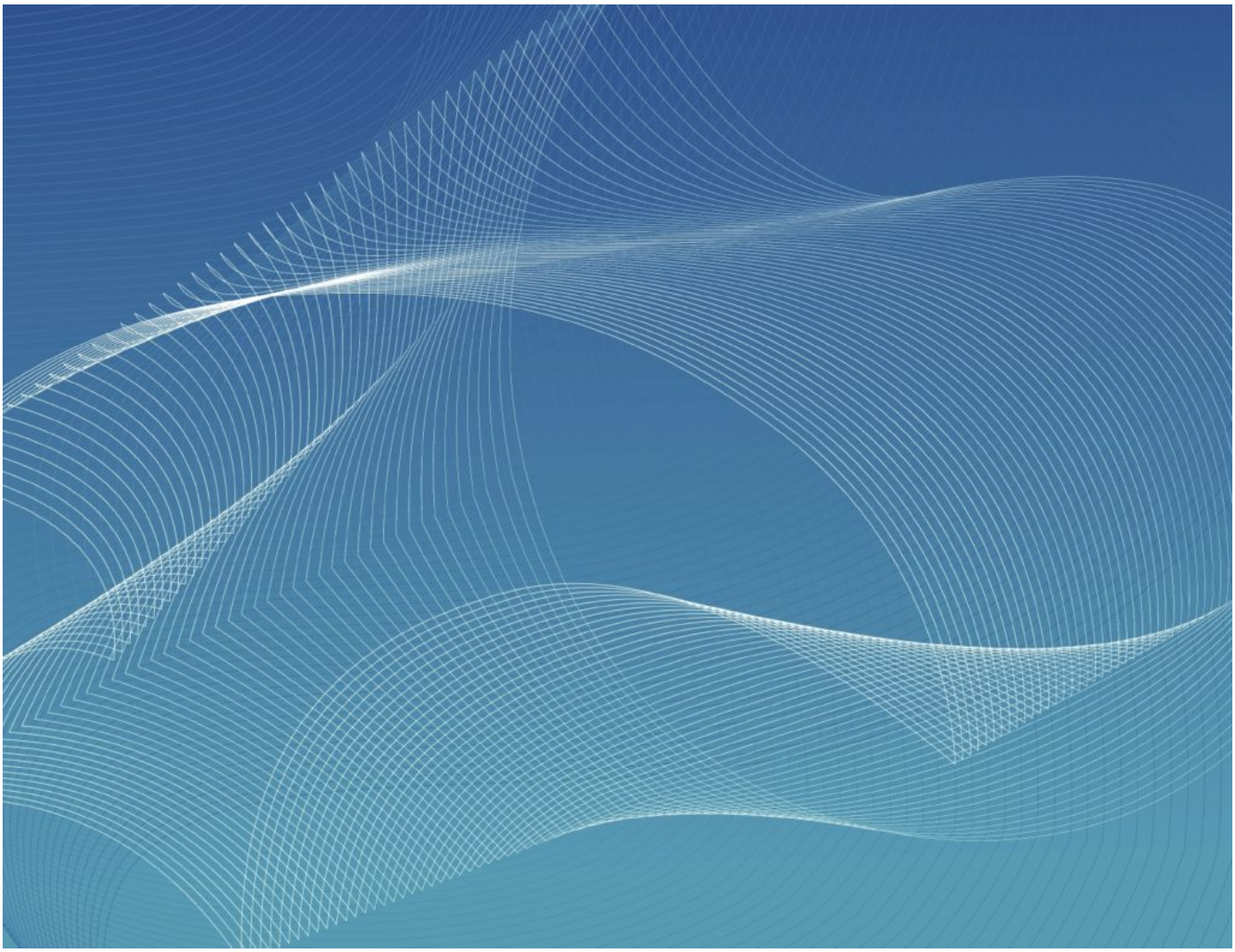
TOP CITED PAPER AWARD 2022



IOP Publishing congratulates the authors awarded with the Top Cited Papers India awards 2022

Congratulations to the 2022 Top Cited Paper Award winners from India. These awards are presented to corresponding

*We use data from Web of Science to identify the top cited papers during the period of 2019 to 2021.

Authors behind the top cited papers

We interviewed some authors from the 2021 awards to find out more about the people behind the research, and what they are working on now. Read the Q&A here.

Astronomy and Astrophysics

Corresponding Author	Affiliation	Journal	Link to Paper
Rahul Kumar	Centre for Theoretical Physics, Jamia Millia Islamia	ASTROPHYSICAL JOURNAL	Black Hole Parameter Estimation from Its Shadow
Sushant G Ghosh and Rahul Kumar	Jamia Millia Islamia	CLASSICAL AND QUANTUM GRAVITY	Generating black holes in 4D Einstein-Gauss-Bonnet gravity
Shafqat Ul Islam	Jamia Millia Islamia Centre for Theoretical Physics	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	Gravitational lensing by black holes in the 4D Einstein-Gauss-Bonnet gravity
Rahul Kumar	Jamia Millia Islamia Centre for Theoretical Physics	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS	Rotating black holes in 4D Einstein-Gauss-Bonnet gravity and its shadow

Biosciences

Corresponding Author	Affiliation	Journal	Link to Paper
Biman B Mandal	Indian Institute of Technology Guwahati	BIOFABRICATION	A three-dimensional printed silk-based biomimetic tri-layered meniscus for potential patient-specific implantation

Environmental Sciences

Corresponding Author	Affiliation	Journal	Link to Paper
Jayanarayanan Kuttippurath	Indian Institute of Technology Kharagpur	ENVIRONMENTAL RESEARCH LETTERS	Observed rainfall changes in the past century (1901-2019) over the wettest place on Earth

	Science		engineering for neuromorphic computing
Subrat Kumar Jena	National Institute of Technology Rourkela	MATERIALS RESEARCH EXPRESS	A novel fractional nonlocal model and its application in buckling analysis of Euler-Bernoulli nanobeam
Shobhit K Patel	Faculty of Engineering, MEFGI	MATERIALS RESEARCH EXPRESS	Broadband metasurface solar absorber in the visible and near-infrared region
V B Taxak	Maharshi Dayanand University Rohtak	MATERIALS RESEARCH EXPRESS	Crystal structure and photophysical features of greenish perovskite type $SrLa_2Al_2O_7:Er^{3+}$ nanocrystals for down conversion white LEDs
Akarsh Verma	Indian Institute of Technology, Roorkee	MATERIALS RESEARCH EXPRESS	Dynamic Mechanical Analysis and Creep-recovery behaviour of Polyvinyl Alcohol based cross-linked Biocomposite reinforced with Basalt fiber
Prof. (Dr.) Sanjeev Kumar	Sri Guru Granth Sahib World University	MATERIALS RESEARCH EXPRESS	Expanding horizon: green synthesis of TiO_2 nanoparticles using Carica papaya leaves for photocatalysis application
R. Chandiramouli	Shanmugha Arts Science Technology and Research Academy	MATERIALS RESEARCH EXPRESS	Germanene nanosheets as a novel anode material for sodium-ion batteries-a first-principles investigation
V Mohanavel	Kingston Engineering College	MATERIALS RESEARCH EXPRESS	Influence of AlN particles on microstructure, mechanical and tribological behaviour in AA6351 aluminum alloy
B Stalin	Anna University, Regional Campus Madurai	MATERIALS RESEARCH EXPRESS	Optimization of powder metallurgy parameters to obtain low corrosion rate and high compressive strength in Al-MoO_3 composites using SN ratio and ANOVA analysis
B Stalin	Anna University, Regional Campus Madurai	MATERIALS RESEARCH EXPRESS	Optimization of wear parameters using Taguchi grey relational analysis and ANN-TLBO algorithm for silicon nitride filled AA6063 matrix composites
A Radha	Loyola College	MATERIALS RESEARCH EXPRESS	Processing and characterization of mechanical and wear behavior of Al7075 reinforced with B_4C and nano graphene hybrid composite
Asif Afzal	PA College of Engineering	MATERIALS RESEARCH EXPRESS	Role of ultrasonication duration and surfactant on characteristics of ZnO and CuO nanofluids
S A Martin Britto Dhas	Sacred Heart College	MATERIALS RESEARCH EXPRESS	Structural, optical, and morphological stability of ZnO nano rods under shock wave loading conditions
S Manoharan	SSM College of	MATERIALS	Synergistic effect of red mud-iron sulfide particles on fade-recovery characteristics of non-asbestos organic brake friction

	Higher Education	RESEARCH EXPRESS	films grown by dc magnetron sputtering
Kartikey Thakar	Indian Institute of Technology Bombay	MATERIALS RESEARCH EXPRESS	Optoelectronic and photonic devices based on transition metal dichalcogenides
Sandeep B Somvanshi	Dr Babasaheb Ambedkar Marathwada University	MATERIALS RESEARCH EXPRESS	Spinel zinc ferrite nanoparticles: an active nanocatalyst for microwave irradiated solvent free synthesis of chalcones
Gaurav Manik	Indian Institute of Technology Roorkee	NANOTECHNOLOGY	Effect of sulfur doping on fluorescence and quantum yield of graphene quantum dots: an experimental and theoretical investigation
Sarita Yadav	University of Allahabad	NANOTECHNOLOGY	Facile synthesis of molybdenum disulfide (MoS2) quantum dots and its application in humidity sensing
Arun K Singh	PEC University of Technology	NANOTECHNOLOGY	A highly efficient bilayer graphene/ZnO/silicon nanowire based heterojunction photodetector with broadband spectral response

Mathematical Sciences

Corresponding Author	Affiliation	Journal	Link to Paper
Avinash Khare	Savitribai Phule Pune University	JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL	Family of potentials with power law kink tails
G P Samanta	Indian Institute of Engineering Science and Technology	JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL	Dynamics of a delayed predator-prey interaction incorporating nonlinear prey refuge under the influence of fear effect and additional food
Prashant Singh	International Centre for Theoretical Sciences,TIFR	JOURNAL OF STATISTICAL MECHANICS-THEORY AND EXPERIMENT	Generalised ‘Arcsine’ laws for run-and-tumble particle in one dimension
Deepak Gupta	Raman Research Institute, Bangalore	JOURNAL OF STATISTICAL MECHANICS-THEORY AND EXPERIMENT	Stochastic resetting in underdamped Brownian motion

B J Gireesha	Kuvempu Univ	COMMUNICATIONS IN THEORETICAL PHYSICS	Investigation of Ti6Al4V and AA7075 alloy embedded nanofluid flow over longitudinal porous fin in the presence of internal heat generation and convective condition
Mukesh Kumar	Indian Inst Technol Ropar	JOURNAL OF PHYSICS D-APPLIED PHYSICS	High performance, flexible and room temperature grown amorphous Ga_2O_3 solar-blind photodetector with amorphous indium-zinc-oxide transparent conducting electrodes
Ravendra K Varshney	Indian Inst Technol Delhi	JOURNAL OF PHYSICS D-APPLIED PHYSICS	Strong terahertz matter interaction induced ultrasensitive sensing in Fano cavity based stacked metamaterials
Pranab Sarkar	Visva Bharati Univ	JOURNAL OF PHYSICS-CONDENSED MATTER	Engineering the magnetic properties of $PtSe_2$ monolayer through transition metal doping
Dillip K Pradhan	NIT Rourkela	JOURNAL OF PHYSICS-CONDENSED MATTER	Structural transformations and physical properties of (1-x) $Na_{0.5}Bi_{0.5}TiO_3$ – x $BaTiO_3$ solid solutions near a morphotropic phase boundary
Sarika Jalan	Indian Institute of Technology Indore —Simrol	NEW JOURNAL OF PHYSICS	Delay regulated explosive synchronization in multiplex networks

Reviews

Corresponding Author	Affiliation	Journal	Link to Paper
Prasansha Rastogi	Defence Institute of Advanced Technology	BIOFABRICATION	Review of alginate-based hydrogel bioprinting for application in tissue engineering
Hardik J Pandya	Indian Institute of Science	JOURNAL OF BREATH RESEARCH	Electronic nose: a non-invasive technology for breath analysis of diabetes and lung cancer patients
Neeraj Khare	Indian Institute of Technology Delhi	JOURNAL OF PHYSICS D-APPLIED PHYSICS	Advances in resistive switching based memory devices
Ananya Ghatak	Indian Institute of Science	JOURNAL OF PHYSICS-CONDENSED MATTER	New topological invariants in non-Hermitian systems
Amit Kumar Mandal	Biosynthesis of silver nanoparticles and their versatile	MATERIALS	Biosynthesis of silver nanoparticles and their versatile

	a review		
Dr. Amit Bansal	Microwave heating and its applications in surface engineering: a review	MATERIALS RESEARCH EXPRESS	Microwave heating and its applications in surface engineering: a review
Mohit Agarwal	A review on MXene for energy storage application: effect of interlayer distance	MATERIALS RESEARCH EXPRESS	A review on MXene for energy storage application: effect of interlayer distance
Jayaraman Theerthagiri	A review on ZnO nanostructured materials: energy, environmental and biological applications	NANOTECHNOLOGY	A review on ZnO nanostructured materials: energy, environmental and biological applications

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