Keshav Dani

List of Publications by Year
in descending order

86 papers	2,203 citations	236925 25 h-index	233421 45 g-index
87 all docs	87 docs citations	87 times ranked	3834 citing authors

#	Article	IF	Citations
1	Performance-limiting nanoscale trap clusters at grain junctions in halide perovskites. Nature, 2020, 580, 360-366.	27.8	255
2	Directly visualizing the momentum-forbidden dark excitons and their dynamics in atomically thin semiconductors. Science, 2020, 370, 1199-1204.	12.6	149
3	Chemical Vapor Deposition Synthesized Atomically Thin Molybdenum Disulfide with Optoelectronic-Grade Crystalline Quality. ACS Nano, 2015, 9, 8822-8832.	14.6	132
4	Imaging the motion of electrons across semiconductor heterojunctions. Nature Nanotechnology, 2017, 12, 36-40.	31.5	124
5	Subpicosecond Optical Switching with a Negative Index Metamaterial. Nano Letters, 2009, 9, 3565-3569.	9.1	115
6	Ultrafast Enhancement of Ferromagnetism via Photoexcited Holes in GaMnAs. Physical Review Letters, 2007, 98, 217401.	7.8	90
7	Local nanoscale phase impurities are degradation sites in halide perovskites. Nature, 2022, 607, 294-300.	27.8	89
8	Nanoscale chemical heterogeneity dominates the optoelectronic response of alloyed perovskite solar cells. Nature Nanotechnology, 2022, 17, 190-196.	31.5	75
9	Ultrafast Charge Transfer and Enhanced Absorption in MoS₂â€“Organic van der Waals Heterojunctions Using Plasmonic Metasurfaces. ACS Nano, 2016, 10, 9899-9908.	14.6	71
10	Protecting the properties of monolayer MoS2 on silicon based substrates with an atomically thin buffer. Scientific Reports, 2016, 6, 20890.	3.3	64
11	High-Temperature Terahertz Optical Diode Effect without Magnetic Order in Polar <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>FeZnMo</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mrow><mml:mn>8</mml:mn></mml:mrow></mml:mrow></mml:math>. Physical Review Letters, 2018, 120, 037601.	7.8	60
12	20 THz broadband generation using semi-insulating GaAs interdigitated photoconductive antennas. Optics Express, 2014, 22, 26358.	3.4	58
13	Ultrafast Intrinsic Photoresponse and Direct Evidence of Sub-gap States in Liquid Phase Exfoliated MoS2Thin Films. Scientific Reports, 2015, 5, 11272.	3.3	57
14	The 2021 ultrafast spectroscopic probes of condensed matter roadmap. Journal of Physics Condensed Matter, 2021, 33, 353001.	1.8	55
15	Structure of the moirÃ© exciton captured by imaging its electron and hole. Nature, 2022, 603, 247-252.	27.8	51
16	Experimental measurement of the intrinsic excitonic wave function. Science Advances, 2021, 7, .	10.3	49
17	Deterministic optical Fock-state generation. Physical Review A, 2003, 67, .	2.5	47
18	Tracing Ultrafast Separation and Coalescence of Carrier Distributions in Graphene with Time-Resolved Photoemission. Journal of Physical Chemistry Letters, 2012, 3, 64-68.	4.6	42

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19	Observing the interplay between surface and bulk optical nonlinearities in thin van der Waals crystals. Scientific Reports, 2016, 6, 22620.	3.3	42
20	Intraband conductivity response in graphene observed using ultrafast infrared-pump visible-probe spectroscopy. Physical Review B, 2012, 86, .	3.2	35
21	Unraveling the varied nature and roles of defects in hybrid halide perovskites with time-resolved photoemission electron microscopy. Energy and Environmental Science, 2021, 14, 6320-6328.	30.8	34
22	Similar ultrafast dynamics of several dissimilar Dirac and Weyl semimetals. Journal of Applied Physics, 2017, 122, .	2.5	33
23	Ultrafast nonlinear optical spectroscopy of a dual-band negative index metamaterial all-optical switching device. Optics Express, 2011, 19, 3973.	3.4	32
24	Photoconductive emitters for pulsed terahertz generation. Journal of Optics (United Kingdom), 2021, 23, 064001.	2.2	30
25	Pulling apart photoexcited electrons by photoinducing an in-plane surface electric field. Science Advances, 2018, 4, eaat9722.	10.3	29
26	Visualization of two-dimensional transition dipole moment texture in momentum space using high-harmonic generation spectroscopy. Physical Review B, 2021, 103, .	3.2	25
27	Jahn-Teller-induced femtosecond electronic depolarization dynamics of the nitrogen-vacancy defect in diamond. Nature Communications, 2016, 7, 13510.	12.8	23
28	Ultrafast dynamics and subwavelength periodic structure formation following irradiation of GaAs with femtosecond laser pulses. Physical Review B, 2018, 98, .	3.2	22
29	Ultrafast Frequency-Shift Dynamics at Temporal Boundary Induced by Structural-Dispersion Switching of Waveguides. Physical Review Letters, 2021, 127, 053902.	7.8	22
30	Ultrafast properties of femtosecond-laser-ablated GaAs and its application to terahertz optoelectronics. Optics Letters, 2015, 40, 3388.	3.3	19
31	Charge transfer dynamics in conjugated polymer/MoS₂organic/2D heterojunctions. Molecular Systems Design and Engineering, 2019, 4, 929-938.	3.4	18
32	Engineering Photophenomena in Large, 3D Structures Composed of Selfâ€Assembled van der Waals Heterostructure Flakes. Advanced Optical Materials, 2015, 3, 1551-1556.	7.3	17
33	Ultrafast Dynamics of Coherences in a Quantum Hall System. Physical Review Letters, 2006, 97, 057401.	7.8	16
34	Ultrafast Control of the Dimensionality of Exciton-Exciton Annihilation in Atomically Thin Black Phosphorus. Physical Review Letters, 2020, 124, 057403.	7.8	16
35	Using coherent phonons for ultrafast control of the Dirac node of SrMnSb2. Physical Review B, 2018, 98, .	3.2	14
36	Directly photoexcited Dirac and Weyl fermions in ZrSiS and NbAs. Applied Physics Letters, 2018, 113, .	3.3	13

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37	Terahertz-frequency magnetoelectric effect in Ni-doped <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>CaBaCo</mml:mi><mml:mn>4</mml:mn></ mathvariant="normal">O</mml:mi><mml:mn>7</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 96, .	3.2	12
38	Bianisotropic negative-index metamaterial embedded in a symmetric medium. Journal of the Optical Society of America B: Optical Physics, 2009, 26, B34.	2.1	11
39	Obtaining Cross-Sections of Paint Layers in Cultural Artifacts Using Femtosecond Pulsed Lasers. Materials, 2017, 10, 107.	2.9	11
40	Dominating Interlayer Resonant Energy Transfer in Type-II 2D Heterostructure. ACS Nano, 2022, 16, 3861-3869.	14.6	11
41	Boseâ€“Einstein condensation in a mm-scale Ioffeâ€“Pritchard trap. Applied Physics B: Lasers and Optics, 2006, 82, 533-538.	2.2	10
42	Mimicking subsecond neurotransmitter dynamics with femtosecond laser stimulated nanosystems. Scientific Reports, 2014, 4, 5398.	3.3	10
43	Interfacing with Neural Activity via Femtosecond Laser Stimulation of Drug-Encapsulating Liposomal Nanostructures. ENeuro, 2016, 3, ENEURO.0107-16.2016.	1.9	10
44	Observation of an inter-Landau level quantum coherence in semiconductor quantum wells. Physical Review B, 2008, 78, .	3.2	9
45	Symmetry and optical selection rules in graphene quantum dots. Physical Review B, 2018, 97, .	3.2	9
46	Strong Electronic Correlation Effects in Coherent Multidimensional Nonlinear Optical Spectroscopy. Journal of Physical Chemistry B, 2011, 115, 5634-5647.	2.6	8
47	Terahertz photoconductivity and photocarrier dynamics in few-layer hBN/WS2 van der Waals heterostructure laminates. Semiconductor Science and Technology, 2018, 33, 084001.	2.0	8
48	Examining the surface phase diagram of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>IrTe</mml:mi><mml:mn>2</mml:mn></mml:msub></mm with photoemission. Physical Review B, 2020, 101, .	3.2	8
49	Nonlinear optical studies of the transient coherence in the Quantum Hall system. Solid State Communications, 2006, 140, 72-82.	1.9	7
50	Transient three-pulse four-wave mixing spectra of magnetoexcitons coupled with an incompressible quantum liquid. Physical Review B, 2010, 82, .	3.2	7
51	Monolithic Patch-Antenna THz Lasers with Extremely Low Beam Divergence and Polarization Control. ACS Photonics, 2021, 8, 412-417.	6.6	7
52	Patch antenna microcavity terahertz sources with enhanced emission. Applied Physics Letters, 2016, 109, .	3.3	5
53	An On-Demand Drug Delivery System for Control of Epileptiform Seizures. Pharmaceutics, 2022, 14, 468.	4.5	5
54	Through the Lens of a Momentum Microscope: Viewing Lightâ€Induced Quantum Phenomena in 2D Materials. Advanced Materials, 2023, 35, .	21.0	4

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55	Correlation effects in the ultrafast dynamics of the Quantum Hall system close tov = 1. Physica Status Solidi (B): Basic Research, 2006, 243, 2397-2404.	1.5	3
56	Dynamics of the collective excitations of the quantum Hall system. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 34, 206-209.	2.7	3
57	Optically induced magnetic moments in symmetric graphene quantum dots. Physical Review B, 2015, 91, .	3.2	3
58	Oxidation of Planar and Plasmonic Ag Surfaces by Exposure to O2/Ar Plasma for Organic Optoelectronic Applications. MRS Advances, 2016, 1, 943-948.	0.9	3
59	Strong Plasmonâ€“Exciton Coupling in Ag Nanoparticleâ€”Conjugated Polymer Core-Shell Hybrid Nanostructures. Polymers, 2020, 12, 2141.	4.5	3
60	Investigation of nanoscale energy transport with time-resolved photoemission electron microscopy. , 0, , 10-1-10-33.		3
61	Lavrentiev's phenomenon for totally unconstrained variational problems in one dimension. Nonlinear Differential Equations and Applications, 2000, 7, 435-446.	0.8	2
62	Engineering the Losses and Beam Divergence in Arrays of Patch Antenna Microcavities for Terahertz Sources. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1321-1330.	2.2	2
63	Investigation of Trap States and Their Dynamics in Hybrid Organic-inorganic Mixed Cation Perovskite Films Using Time Resolved Photoemission Electron Microscopy. , 2018, , .		2
64	Probing Charge Transfer States in Polymer:Fullerene â€“ MoS2 van der Waals Heterostructures. , 2018, , .		1
65	Patch Antenna Microcavities THz Quantum Cascade Lasers. , 2019, , .		1
66	Harmonic generation in confinement. Nature Physics, 0, , .	16.7	1
67	Parametric scattering in semiconductor microcavities probed by four-wave mixing. Chemical Physics, 2005, 318, 147-155.	1.9	0
68	Coherent dynamics of the coupled light — Quantum Hall system. , 2006, , .		0
69	Ultrafast innter-Landau-level coherent dynamics of undoped quantum well magnetoexcitons. , 2006, , .		0
70	Ultrafast nonlinear optical response of the quantum Hall system. , 2007, , .		0
71	Ultrafast photoinduced ferromagnetism in GaMnAs. , 2007, , .		0
72	Ultrafast Pump-Probe Spectroscopy of a Dual-Band Negative-Index Metamaterial. , 2010, , .		0

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73	Optoelectronic properties in the terahertz of femtosecond-laser-ablated GaAs. , 2016, , .		0
74	Applicability of Femtosecond Lasers in the Cross-section Sampling of Works of Art. MRS Advances, 2017, 2, 1801-1804.	0.9	0
75	Commentary: Pursuing science across nationalities and disciplines. Physics Today, 2017, 70, 10-11.	0.3	0
76	Improving Signal and Photobleaching Characteristics of Temporal Focusing Microscopy with the Increase in Pulse Repetition Rate. Methods and Protocols, 2019, 2, 65.	2.0	0
77	Transition dipole moment structure revealed by high harmonic generation spectroscopy in thin layer black phosphorus. , 2021, , .		0
78	Charge Transfer and Enhanced Absorption in MoS2 - Organic Heterojunctions Using Plasmonic Metasurfaces. , 2017, , .		0
79	Modulating Nanoscale Defect States in Halide Perovskite Films. , 0, , .		0
80	Nanoscale Heterogeneities Limit Optoelectronic Performance in Halide Perovskites. , 0, , .		0
81	Control of Nanoscale Surface Defects and the Relation to Local Structural Properties in Halide Perovskite Films. , 0, , .		0
82	Exploring Defects in Triple Cation Mixed Halide Perovskite Thin Films Using Time-Resolved Photoemission Electron Microscopy. , 0, , .		0
83	Understanding the role of nanoscale defect clusters in hybrid perovskite photovoltaics with time-resolved photoemission electron microscopy. , 0, , .		0
84	Terahertz Emission Properties from Fe/Pt Metallic Spintronic Hetero-Structures. , 2020, , .		0
85	The varied nature and roles of nanoscale defects in solution processed triple cation mixed halide perovskite thin films. , 0, , .		0
86	Nanoscale Chemical Landscape Dominates Optoelectronic Response in Alloyed Halide Perovskites. , 0, , .		0