

# Nazir P Kherani

## List of Publications by Year in descending order

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81  
papers

1,362  
citations

430874

18  
h-index

361022

35  
g-index

81  
all docs

81  
docs citations

81  
times ranked

1923  
citing authors

#	ARTICLE	IF	CITATIONS
1	Photoexcited Surface Frustrated Lewis Pairs for Heterogeneous Photocatalytic CO <sub>2</sub> Reduction. Journal of the American Chemical Society, 2016, 138, 1206-1214.	13.7	210
2	Black indium oxide a photothermal CO <sub>2</sub> hydrogenation catalyst. Nature Communications, 2020, 11, 2432.	12.8	192
3	Hydrogen Spillover to Oxygen Vacancy of TiO <sub>2</sub> /H <sub>2</sub> O <sub>2</sub> /Fe: Breaking the Scaling Relationship of Ammonia Synthesis. Journal of the American Chemical Society, 2020, 142, 17403-17412.	13.7	91
4	Enhanced photothermal reduction of gaseous CO <sub>2</sub> over silicon photonic crystal supported ruthenium at ambient temperature. Energy and Environmental Science, 2018, 11, 3443-3451.	30.8	83
5	Persistent CO <sub>2</sub> photocatalysis for solar fuels in the dark. Nature Sustainability, 2021, 4, 466-473.	23.7	74
6	Patterned Optoelectronic Tweezers: A New Scheme for Selecting, Moving, and Storing Dielectric Particles and Cells. Small, 2018, 14, e1803342.	10.0	41
7	Solar-Driven Interfacial Water Evaporation Using Open-Porous PDMS Embedded with Carbon Nanoparticles. ACS Applied Energy Materials, 2020, 3, 3378-3386.	5.1	37
8	High-quality surface passivation of silicon using native oxide and silicon nitride layers. Applied Physics Letters, 2012, 101, .	3.3	35
9	Light induced changes in the amorphous/crystalline silicon heterointerface. Journal of Applied Physics, 2013, 114, .	2.5	34
10	Power-scaling performance of a three-dimensional tritium betavoltaic diode. Applied Physics Letters, 2009, 95, .	3.3	33
11	Plasmonic Titanium Nitride Facilitates Indium Oxide CO <sub>2</sub> Photocatalysis. Small, 2020, 16, e2005754.	10.0	32
12	Absolute quantum yields in NaYF <sub>4</sub> :Er,Yb upconverters as a function of synthesis temperature and power dependence. Journal of Materials Chemistry, 2012, 22, 24330.	6.7	31
13	Quantized structuring of transparent films with femtosecond laser interference. Light: Science and Applications, 2014, 3, e157-e157.	16.6	30
14	Crystalline structure, electronic and lattice-dynamics properties of NbTe <sub>2</sub> . Scientific Reports, 2018, 8, 16984.	3.3	26
15	See-through amorphous silicon solar cells with selectively transparent and conducting photonic crystal back reflectors for building integrated photovoltaics. Applied Physics Letters, 2013, 103, 221109.	3.3	24
16	Design, fabrication and testing of a piezoelectric energy microgenerator. Microsystem Technologies, 2014, 20, 1035-1040.	2.0	24
17	Betavoltaics using scandium tritide and contact potential difference. Applied Physics Letters, 2008, 92, .	3.3	20
18	Post-illumination Photoconductivity Enables Extension of Photocatalysis after Sunset. Advanced Energy Materials, 2021, 11, 2101566.	19.5	20

#	ARTICLE	IF	CITATIONS
19	Gradient inverse opal photonic crystals via spatially controlled template replication of self-assembled opals. <i>Nanoscale</i> , 2011, 3, 4951.	5.6	19
20	Multiwavelength Surface-Enhanced Raman Spectroscopy Using Rainbow Trapping in Width-Graded Plasmonic Gratings. <i>Advanced Optical Materials</i> , 2018, 6, 1701136.	7.3	19
21	Ultrasoother ultrathin Ag films by AlN seeding and Ar/N2 sputtering for transparent conductive and heating applications. <i>APL Materials</i> , 2018, 6, .	5.1	19
22	Modeling the performance of a micromachined piezoelectric energy harvester. <i>Microsystem Technologies</i> , 2012, 18, 1035-1043.	2.0	18
23	The augmented saddle field discharge characteristics and its applications for plasma enhanced chemical vapour deposition. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	18
24	Reduction of Photoluminescence Quenching by Deuteration of Ytterbium-Doped Amorphous Carbon-Based Photonic Materials. <i>Materials</i> , 2014, 7, 5643-5663.	2.9	16
25	Tunable rainbow light trapping in ultrathin resonator arrays. <i>Light: Science and Applications</i> , 2020, 9, 194.	16.6	16
26	Gamma-Free Smoke and Particle Detector Using Tritiated Foils. <i>IEEE Sensors Journal</i> , 2007, 7, 917-918.	4.7	15
27	Passivation study of the amorphous-crystalline silicon interface formed using DC saddle-field glow discharge. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 539-543.	1.8	15
28	Assembly of Topographical Micropatterns with Optoelectronic Tweezers. <i>Advanced Optical Materials</i> , 2019, 7, 1900669.	7.3	14
29	Back Amorphous-Crystalline Silicon Heterojunction (bach) photovoltaic device. , 2009, , .		12
30	Integrated Assembly and Photopreservation of Topographical Micropatterns. <i>Small</i> , 2021, 17, e2103702.	10.0	12
31	Rainbows at the End of Subwavelength Discontinuities: Plasmonic Light Trapping for Sensing Applications. <i>Advanced Optical Materials</i> , 2021, 9, 2100695.	7.3	12
32	Multi-Functional Metasurface: Visibly and RF Transparent, NIR Control and Low Thermal Emissivity. <i>Advanced Optical Materials</i> , 2021, 9, 2100176.	7.3	11
33	Optimal hydrogenated amorphous silicon/silicon nitride bilayer passivation of n-type crystalline silicon using response surface methodology. <i>Applied Physics Letters</i> , 2012, 101, 171602.	3.3	8
34	Optically and radio frequency (RF) transparent meta-glass. <i>Nanophotonics</i> , 2020, 9, 3889-3898.	6.0	8
35	Ultrananocrystalline Diamond-Based High-Velocity SAW Device Fabricated by Electron Beam Lithography. <i>IEEE Nanotechnology Magazine</i> , 2012, 11, 979-984.	2.0	7
36	Harnessing second-order optical nonlinearities at interfaces in multilayer silicon-oxy-nitride waveguides. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	7

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37	Unimorph and bimorph piezoelectric energy harvester stimulated by $\beta^2$ -emitting radioisotopes: a modeling study. <i>Microsystem Technologies</i> , 2014, 20, 933-944.	2.0	7
38	Asymmetric Metal-Dielectric Metacylinders and Their Potential Applications From Engineering Scattering Patterns to Spatial Optical Signal Processing. <i>Physical Review Applied</i> , 2021, 15, .	3.8	7
39	Nuclear Batteries Using Tritium and Thin Film Hydrogenated Amorphous Silicon. <i>Fusion Science and Technology</i> , 2005, 48, 700-703.	1.1	6
40	Back amorphous-crystalline silicon heterojunction (BACH) photovoltaic device with facile-grown oxide PECVD SiN <sub>x</sub> passivation. <i>Progress in Photovoltaics: Research and Applications</i> , 2015, 23, 821-828.	8.1	6
41	Ultra-sensitive CubicITO/Silicon Photodiode via Interface Engineering of Native SiO <sub>2</sub> and Lattice-Strain-Assisted Atomic Oxidation. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	6
42	Raman scattering characterization of SF-PECVD-grown hydrogenated microcrystalline silicon thin films using growth surface electrical bias. <i>Journal of Materials Science: Materials in Electronics</i> , 2006, 17, 801-813.	2.2	5
43	Erbium-Doped Amorphous Carbon-Based Thin Films: A Photonic Material Prepared by Low-Temperature RF-PEMOCVD. <i>Materials</i> , 2014, 7, 1539-1554.	2.9	4
44	Adiabatic mode transformation in width-graded nano-gratings enabling multiwavelength light localization. <i>Scientific Reports</i> , 2021, 11, 669.	3.3	4
45	Dependence of Microcrystalline Silicon Growth on Ion Flux at the Substrate Surface in a Saddle Field PECVD. <i>Materials Research Society Symposia Proceedings</i> , 2005, 862, 1961.	0.1	3
46	Physical, electrical, and optical properties of SF-PECVD-grown hydrogenated microcrystalline silicon with growth surface electrical bias. <i>Journal of Materials Science: Materials in Electronics</i> , 2006, 17, 789-799.	2.2	3
47	Kinetic analysis of nanoparticle-protein interactions using a plasmon waveguide resonance. <i>Journal of Biophotonics</i> , 2017, 10, 271-277.	2.3	3
48	Solar Fuels: Tailoring Surface Frustrated Lewis Pairs of In <sub>2</sub> O <sub>3</sub> <sup>+</sup> (OH) <sub>y</sub> for Gas-Phase Heterogeneous Photocatalytic Reduction of CO <sub>2</sub> by Isomorphous Substitution of In <sup>3+</sup> with Bi <sup>3+</sup> (Adv. Sci. 6/2018). <i>Advanced Science</i> , 2018, 5, 1870034.	11.2	3
49	CO <sub>2</sub> Photoreduction: Heterostructure Engineering of a Reverse Water Gas Shift Photocatalyst (Adv. Sci. 22/2019). <i>Advanced Science</i> , 2019, 6, 1970134.	11.2	3
50	Photothermal Catalysis: Photothermal Catalyst Engineering: Hydrogenation of Gaseous CO <sub>2</sub> with High Activity and Tailored Selectivity (Adv. Sci. 10/2017). <i>Advanced Science</i> , 2017, 4, .	11.2	2
51	Integrated Assembly and Photopreservation of Topographical Micropatterns (Small 37/2021). <i>Small</i> , 2021, 17, 2170193.	10.0	2
52	Protein capture and SERS detection on multiwavelength rainbow-trapping width-graded nano-gratings. <i>Nanotechnology</i> , 2021, 32, 505207.	2.6	2
53	Use of Tritium in the Study of Defects in Amorphous Silicon. <i>Fusion Science and Technology</i> , 2005, 48, 712-715.	1.1	1
54	Photocarrier Radiometric Lifetime Measurements of Intrinsic Amorphous-Crystalline Silicon Heterostructure. <i>Materials Research Society Symposia Proceedings</i> , 2006, 910, 3.	0.1	1

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55	Operational regimes of the saddle field plasma enhanced chemical vapor deposition system. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 462-471.	2.1	1
56	Tritiation of Semiconductor Materials for Micropower Application. Fusion Science and Technology, 2008, 54, 627-630.	1.1	1
57	Infrared Ellipsometry Investigation of Hydrogenated Amorphous Silicon. Materials Research Society Symposia Proceedings, 2009, 1153, 1.	0.1	1
58	Self-irradiation enhanced tritium solubility in hydrogenated amorphous and crystalline silicon. Journal of Applied Physics, 2011, 109, .	2.5	1
59	Organic Light-Emitting Diodes: Silicon Nanocrystal OLEDs: Effect of Organic Capping Group on Performance (Small 23/2012). Small, 2012, 8, 3542-3542.	10.0	1
60	Nanocrystalline diamond/AlN structures for high efficient SAW nano-resonators. , 2012, , .		1
61	15 GHz SAW nano-transducers using ultrananocrystalline diamond/AlN thin films. , 2012, , .		1
62	Single mask fabrication process for movable MEMS devices. Microsystem Technologies, 2014, 20, 955-961.	2.0	1
63	Carbon Dioxide Reduction: Visible and Near-Infrared Photothermal Catalyzed Hydrogenation of Gaseous CO <sub>2</sub> over Nanostructured Pd@Nb <sub>2</sub> O <sub>5</sub> (Adv. Sci. 10/2016). Advanced Science, 2016, 3, .	11.2	1
64	Design, Fabrication and Optical Characterization of Photonic Crystal Patterned Ultra-Thin Silicon. , 2020, , .		1
65	Influence of metallo-dielectric optical properties on thermal resistance and solar heat gain coefficient of multi-pane glazing systems in hot and cold climates. Architectural Engineering and Design Management, 2022, 18, 894-910.	1.7	1
66	Harvesting Betavoltaic and Photovoltaic Energy with Three Dimensional Porous Silicon Diodes. Materials Research Society Symposia Proceedings, 2004, 836, L8.3.1.	0.1	0
67	Density of States in Tritiated Amorphous Silicon Measured Using CPM. Materials Research Society Symposia Proceedings, 2004, 836, L8.9.1.	0.1	0
68	On-chip laser-locking of tritium in silica film using deep UV laser irradiation. , 2006, , .		0
69	Amorphous-crystalline silicon interface prepared using DC saddle-field pecvd. , 2009, , .		0
70	Self-catalyzed Tritium Incorporation in Amorphous and Crystalline. Materials Research Society Symposia Proceedings, 2010, 1245, 1.	0.1	0
71	Analysis and modeling of a bimorph AlN piezoelectric autonomous microgenerator stimulated by $\beta$ -emitting radioisotopes. , 2011, , .		0
72	Influence of the Electrode Spacing on the Plasma Characteristics and Hydrogenated Amorphous Silicon Film Properties Grown in the DC Saddle Field PECVD System. Materials Research Society Symposia Proceedings, 2011, 1321, 399.	0.1	0

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73	&#x201C;Trapped Rainbow&#x201D; effect within graded gratings for localization and detection of THz frequency components. , 2012, , .		0
74	On controlling EBL parameters for nanoelectromechanical resonators fabricated on insulating/semiconducting structures. , 2013, , .		0
75	Novel method for fabricating high efficiency 10 &#x03BC;m thick c-Si solar cells. , 2013, , .		0
76	Stoichiometric amorphous hydrogenated silicon carbide thin film synthesis using DC-saddle plasma enhanced chemical vapour deposition. , 2013, , .		0
77	Facile nanometer thick native oxide based passivation of silicon for high efficiency photovoltaics. , 2013, , .		0
78	High frequency SAW nanotransducer utilizing ultrananocrystalline diamond/ AlN bimorph architecture. , 2013, , .		0
79	Low-temperature ozone-ambient grown native oxide passivation of crystalline silicon. , 2015, , .		0
80	Spectral plasmonic lensing of an array of metallic nanoslits. , 2017, , .		0
81	High minority carrier lifetime in amorphous-crystalline silicon heterostructure using triode rf PECVD. , 2020, , .		0