

# Prashant Nagpal

## List of Publications by Citations

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60  
papers

3,050  
citations

23  
h-index

55  
g-index

64  
ext. papers

3,428  
ext. citations

9.2  
avg, IF

5.32  
L-index

#	Paper	IF	Citations
60	Ultrasmooth patterned metals for plasmonics and metamaterials. <i>Science</i> , <b>2009</b> , 325, 594-7	33.3	668
59	Engineering metallic nanostructures for plasmonics and nanophotonics. <i>Reports on Progress in Physics</i> , <b>2012</b> , 75, 036501	14.4	366
58	Role of mid-gap states in charge transport and photoconductivity in semiconductor nanocrystal films. <i>Nature Communications</i> , <b>2011</b> , 2, 486	17.4	212
57	Photoexcited quantum dots for killing multidrug-resistant bacteria. <i>Nature Materials</i> , <b>2016</b> , 15, 529-34	27	179
56	Template-stripped smooth Ag nanohole arrays with silica shells for surface plasmon resonance biosensing. <i>ACS Nano</i> , <b>2011</b> , 5, 6244-53	16.7	177
55	Plasmon-enhanced energy transfer for improved upconversion of infrared radiation in doped-lanthanide nanocrystals. <i>Nano Letters</i> , <b>2014</b> , 14, 101-6	11.5	166
54	Three-dimensional plasmonic nanofocusing. <i>Nano Letters</i> , <b>2010</b> , 10, 1369-73	11.5	152
53	Efficient low-temperature thermophotovoltaic emitters from metallic photonic crystals. <i>Nano Letters</i> , <b>2008</b> , 8, 3238-43	11.5	110
52	Single-crystalline silver films for plasmonics. <i>Advanced Materials</i> , <b>2012</b> , 24, 3988-92	24	100
51	Spectral dependence of nanocrystal photoionization probability: the role of hot-carrier transfer. <i>ACS Nano</i> , <b>2011</b> , 5, 5045-55	16.7	64
50	Measurement of electronic states of PbS nanocrystal quantum dots using scanning tunneling spectroscopy: the role of parity selection rules in optical absorption. <i>Physical Review Letters</i> , <b>2013</b> , 110, 127406	7.4	63
49	Potentiating antibiotics in drug-resistant clinical isolates via stimuli-activated superoxide generation. <i>Science Advances</i> , <b>2017</b> , 3, e1701776	14.3	62
48	Photocatalysis deconstructed: design of a new selective catalyst for artificial photosynthesis. <i>Nano Letters</i> , <b>2014</b> , 14, 597-603	11.5	56
47	Nanorg Microbial Factories: Light-Driven Renewable Biochemical Synthesis Using Quantum Dot-Bacteria Nanobiohybrids. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 10272-10282	16.4	51
46	Fabrication of carbon/refractory metal nanocomposites as thermally stable metallic photonic crystals. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 10836		47
45	Split-Wedge Antennas with Sub-5 nm Gaps for Plasmonic Nanofocusing. <i>Nano Letters</i> , <b>2016</b> , 16, 7849-7856	16.5	45
44	Thermally Stable Organic/Inorganic Hybrid Photoresists for Fabrication of Photonic Band Gap Structures with Direct Laser Writing. <i>Advanced Materials</i> , <b>2008</b> , 20, 606-610	24	44

43	Observation of Thermal Beaming from Tungsten and Molybdenum Bullseyes. <i>ACS Photonics</i> , <b>2016</b> , 3, 494-500	6.3	42
42	Copper plasmonics and catalysis: role of electron-phonon interactions in dephasing localized surface plasmons. <i>Nanoscale</i> , <b>2014</b> , 6, 12450-7	7.7	38
41	Plasmonic nanofocusing with a metallic pyramid and an integrated C-shaped aperture. <i>Scientific Reports</i> , <b>2013</b> , 3, 1857	4.9	35
40	Fabrication of smooth patterned structures of refractory metals, semiconductors, and oxides via template stripping. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 9701-8	9.5	26
39	Photon upconversion towards applications in energy conversion and bioimaging. <i>Progress in Surface Science</i> , <b>2017</b> , 92, 281-316	6.6	25
38	Doping of wide-bandgap titanium-dioxide nanotubes: optical, electronic and magnetic properties. <i>Nanoscale</i> , <b>2014</b> , 6, 10839-49	7.7	25
37	Designing Superoxide-Generating Quantum Dots for Selective Light-Activated Nanotherapy. <i>Frontiers in Chemistry</i> , <b>2018</b> , 6, 46	5	23
36	Improved dielectric functions in metallic films obtained via template stripping. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 081105	3.4	22
35	Near-Infrared-Light-Triggered Antimicrobial Indium Phosphide Quantum Dots. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 11414-11418	16.4	18
34	Quantum dot therapeutics: a new class of radical therapies. <i>Journal of Biological Engineering</i> , <b>2019</b> , 13, 48	6.3	15
33	Assessing Different Reactive Oxygen Species as Potential Antibiotics: Selectivity of Intracellular Superoxide Generation Using Quantum Dots.. <i>ACS Applied Bio Materials</i> , <b>2018</b> , 1, 529-537	4.1	15
32	Multiple Energy Exciton Shelves in Quantum-Dot-DNA Nanobioelectronics. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 3909-13	6.4	15
31	Standalone anion- and co-doped titanium dioxide nanotubes for photocatalytic and photoelectrochemical solar-to-fuel conversion. <i>Nanoscale</i> , <b>2016</b> , 8, 17496-17505	7.7	14
30	Direct conjugation of DNA to quantum dots for scalable assembly of photoactive thin films. <i>RSC Advances</i> , <b>2014</b> , 4, 8064	3.7	12
29	Transparent conducting oxide nanotubes. <i>Nanotechnology</i> , <b>2014</b> , 25, 385202	3.4	11
28	Quantum Point Contact Single-Nucleotide Conductance for DNA and RNA Sequence Identification. <i>ACS Nano</i> , <b>2017</b> , 11, 11169-11181	16.7	10
27	Pseudo-direct bandgap transitions in silicon nanocrystals: effects on optoelectronics and thermoelectrics. <i>Nanoscale</i> , <b>2014</b> , 6, 14643-7	7.7	10
26	ROS mediated selection for increased NADPH availability in Escherichia coli. <i>Biotechnology and Bioengineering</i> , <b>2017</b> , 114, 2685-2689	4.9	9

25	Effect of plasmon-enhancement on photophysics in upconverting nanoparticles. <i>Optics Express</i> , <b>2014</b> , 22, 11516-27	3.3	9
24	High-Throughput Block Optical DNA Sequence Identification. <i>Small</i> , <b>2018</b> , 14, 1703165	11	9
23	Low Exciton-Phonon Coupling, High Charge Carrier Mobilities, and Multiexciton Properties in Two-Dimensional Lead, Silver, Cadmium, and Copper Chalcogenide Nanostructures. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 4291-7	6.4	8
22	Titanium dioxide nanotube membranes for solar energy conversion: effect of deep and shallow dopants. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 10042-10050	3.6	7
21	Conformational Smear Characterization and Binning of Single-Molecule Conductance Measurements for Enhanced Molecular Recognition. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 15420-15428	16.4	7
20	Long-range energy transfer in self-assembled quantum dot-DNA cascades. <i>Nanoscale</i> , <b>2015</b> , 7, 18435-40	7.7	7
19	Photophysical Color Tuning for Photon Upconverting Nanoparticles. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 27011-27016	9.5	7
18	Photoexcited Quantum Dots as Efficacious and Nontoxic Antibiotics in an Animal Model. <i>ACS Biomaterials Science and Engineering</i> , <b>2021</b> , 7, 1863-1875	5.5	7
17	Tuning Ternary ZnCdTe Quantum Dot Composition: Engineering Electronic States for Light-Activated Superoxide Generation as a Therapeutic against Multidrug-Resistant Bacteria. <i>ACS Biomaterials Science and Engineering</i> , <b>2019</b> , 5, 3111-3118	5.5	6
16	Measurements of single nucleotide electronic states as nanoelectronic fingerprints for identification of DNA nucleobases, their protonated and unprotonated states, isomers, and tautomers. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 4968-74	3.4	6
15	Isolating the Transcriptomic Response to Superoxide Generation from Cadmium Chalcogenide Quantum Dots. <i>ACS Biomaterials Science and Engineering</i> , <b>2019</b> , 5, 4206-4218	5.5	6
14	Single Nucleobase Identification Using Biophysical Signatures from Nanoelectronic Quantum Tunneling. <i>Small</i> , <b>2017</b> , 13, 1603033	11	5
13	Charge transport through exciton shelves in cadmium chalcogenide quantum dot-DNA nano-bioelectronic thin films. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 083109	3.4	5
12	Air-pressure tunable depletion width, rectification behavior, and charge conduction in oxide nanotubes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2015</b> , 7, 2153-9	9.5	5
11	Nucleotide and structural label identification in single RNA molecules with quantum tunneling spectroscopy. <i>Chemical Science</i> , <b>2019</b> , 10, 1052-1063	9.4	4
10	Air-gating and chemical-gating in transistors and sensing devices made from hollow TiO <sub>2</sub> semiconductor nanotubes. <i>Nanotechnology</i> , <b>2015</b> , 26, 295203	3.4	4
9	Titanium-dioxide nanotube p-n homojunction diode. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 263501	3.4	4
8	BOCS: DNA k-mer content and scoring for rapid genetic biomarker identification at low coverage. <i>Computers in Biology and Medicine</i> , <b>2019</b> , 110, 196-206	7	3

7	Diagnostic Optical Sequencing. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 35587-35596	9.5	2
6	Analysis of Identification Method for Bacterial Species and Antibiotic Resistance Genes Using Optical Data From DNA Oligomers. <i>Frontiers in Microbiology</i> , <b>2020</b> , 11, 257	5.7	2
5	Gold nanoclusters cause selective light-driven biochemical catalysis in living nano-biohybrid organisms. <i>Nanoscale Advances</i> , <b>2020</b> , 2, 2363-2370	5.1	2
4	Co-doping metal oxide nanotubes: superlinear photoresponse and multianalyte sensing. <i>Materials Research Express</i> , <b>2019</b> , 6, 1150b1	1.7	2
3	Photoactivated Indium Phosphide Quantum Dots Treat Multidrug-Resistant Bacterial Abscesses. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 30404-30419	9.5	2
2	Light-activated quantum dot potentiation of antibiotics to treat drug-resistant bacterial biofilms. <i>Nanoscale Advances</i> , <b>2021</b> , 3, 2782-2786	5.1	2
1	Near-Infrared-Light-Triggered Antimicrobial Indium Phosphide Quantum Dots. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 11536-11540	3.6	0