Uri Banin

List of Publications by Citations

136 papers	12,558 citations	49 h-index	111 g-index
151 ext. papers	13,548 ext. citations	11.6 avg, IF	6.52 L-index

#	Paper	IF	Citations
136	Efficient near-infrared polymer nanocrystal light-emitting diodes. *Science*, **2002**, 295, 1506-8	33.3	1182
135	Selective growth of metal tips onto semiconductor quantum rods and tetrapods. *Science*, **2004**, 304, 1787-90	33.3	996
134	Colloidal hybrid nanostructures: a new type of functional materials. *Angewandte Chemie - International Edition*, **2010**, 49, 4878-97	16.4	668
133	Heavily doped semiconductor nanocrystal quantum dots. *Science*, **2011**, 332, 77-81	33.3	582
132	Identification of atomic-like electronic states in indium arsenide nanocrystal quantum dots. *Nature*, **1999**, 400, 542-544	50.4	497
131	Formation of asymmetric one-sided metal-tipped semiconductor nanocrystal dots and rods. *Nature Materials*, **2005**, 4, 855-863	27	491
130	Visible light-induced charge retention and photocatalysis with hybrid CdSe-Au nanodumbbells. *Nano Letters*, **2008**, 8, 637-41	11.5	443
129	Growth and Properties of Semiconductor Core/Shell Nanocrystals with InAs Cores. *Journal of the American Chemical Society*, **2000**, 122, 9692-9702	16.4	396
128	Particle size, surface coating, and PEGylation influence the biodistribution of quantum dots in living mice. *Small*, **2009**, 5, 126-34	11	368
127	Synthesis and size-dependent properties of zinc-blende semiconductor quantum rods. *Nature Materials*, **2003**, 2, 155-8	27	360
126	Synthesis of hybrid CdS-Au colloidal nanostructures. *Journal of Physical Chemistry B*, **2006**, 110, 25421-9	3.4	289
125	Hybrid Semiconductor–Metal Nanoparticles: From Architecture to Function. *Chemistry of Materials*, **2014**, 26, 97-110	9.6	288
124	Synthesis and Properties of CdSe/ZnS Core/Shell Nanorods. *Chemistry of Materials*, **2003**, 15, 3955-3960	9.6	223
123	Impulsive excitation of coherent vibrational motion ground surface dynamics induced by intense short pulses. *Journal of Chemical Physics*, **1994**, 101, 8461-8481	3.9	205
122	Size-dependent tunneling and optical spectroscopy of CdSe quantum rods. *Physical Review Letters*, **2002**, 89, 086801	7.4	190
121	Multiexcitons in type-II colloidal semiconductor quantum dots. *Physical Review B*, **2007**, 75,	3.3	184
120	Absorption properties of metal-semiconductor hybrid nanoparticles. *ACS Nano*, **2011**, 5, 4712-9	16.7	177

119	Au growth on semiconductor nanorods: photoinduced versus thermal growth mechanisms. *Journal of the American Chemical Society*, **2009**, 131, 17406-11	16.4	175
118	Highly emissive nano rod-in-rod heterostructures with strong linear polarization. *Nano Letters*, **2011**, 11, 2054-60	11.5	170
117	Synthesis of InAs/CdSe/ZnSe core/shell1/shell2 structures with bright and stable near-infrared fluorescence. *Journal of the American Chemical Society*, **2006**, 128, 257-64	16.4	165
116	Determination of band offsets in heterostructured colloidal nanorods using scanning tunneling spectroscopy. *Nano Letters*, **2008**, 8, 2954-8	11.5	164
115	Ultrafast photodissociation of I3. Coherent photochemistry in solution. *Journal of Chemical Physics*, **1993**, 98, 4391-4403	3.9	163
114	Multiexciton engineering in seeded core/shell nanorods: transfer from type-I to quasi-type-II regimes. *Nano Letters*, **2009**, 9, 3470-6	11.5	162
113	Optimal metal domain size for photocatalysis with hybrid semiconductor-metal nanorods. *Nature Communications*, **2016**, 7, 10413	17.4	150
112	Synthesis and Characterization of InAs/InP and InAs/CdSe Core/Shell Nanocrystals. *Angewandte Chemie - International Edition*, **1999**, 38, 3692-3694	16.4	141
111	Tuning energetic levels in nanocrystal quantum dots through surface manipulations. *Nano Letters*, **2008**, 8, 678-84	11.5	140
110	Tunneling and optical spectroscopy of semiconductor nanocrystals. *Annual Review of Physical Chemistry*, **2003**, 54, 465-92	15.7	131
109	Imaging and spectroscopy of artificial-atom states in core/shell nanocrystal quantum dots. *Physical Review Letters*, **2001**, 86, 5751-4	7.4	123
108	Selective Gold Growth on CdSe Seeded CdS Nanorods. *Chemistry of Materials*, **2008**, 20, 6900-6902	9.6	122
107	Colloidal Quantum Nanostructures: Emerging Materials for Display Applications. *Angewandte Chemie - International Edition*, **2018**, 57, 4274-4295	16.4	120
106	Hybrid nanoscale inorganic cages. *Nature Materials*, **2010**, 9, 810-5	27	119
105	Electric field induced switching of the fluorescence of single semiconductor quantum rods. *Nano Letters*, **2005**, 5, 1581-6	11.5	118
104	Band-gap engineering, optoelectronic properties and applications of colloidal heterostructured semiconductor nanorods. *Nano Today*, **2013**, 8, 494-513	17.9	114
103	Ultrafast photodissociation of I3□n solution: Direct observation of coherent product vibrations. *Journal of Chemical Physics*, **1992**, 96, 2416-2419	3.9	110
102	Effect of surface coating on the photocatalytic function of hybrid CdS-Au nanorods. *Small*, **2015**, 11, 462-471	11.1	108

101	ZnSe quantum dots within CdS nanorods: a seeded-growth type-II system. *Small*, **2008**, 4, 1319-23	11	106
100	Ultrafast photoinduced charge separation in metal-semiconductor nanohybrids. *ACS Nano*, **2012**, 6, 7034-43	13.7	98
99	Couples of colloidal semiconductor nanorods formed by self-limited assembly. *Nature Materials*, **2014**, 13, 301-7	27	90
98	Photocatalytic Reactive Oxygen Species Formation by Semiconductor-Metal Hybrid Nanoparticles. Toward Light-Induced Modulation of Biological Processes. *Nano Letters*, **2016**, 16, 4266-73	11.5	86
97	Semiconductor nanorod-carbon nanotube biomimetic films for wire-free photostimulation of blind retinas. *Nano Letters*, **2014**, 14, 6685-92	11.5	83
96	Polarization Properties of Semiconductor Nanorod Heterostructures: From Single Particles to the Ensemble. *Journal of Physical Chemistry Letters*, **2013**, 4, 502-7	6.4	73
95	Hierarchical surface patterns of nanorods obtained by co-assembly with block copolymers in ultrathin films. *Advanced Materials*, **2010**, 22, 2774-9	24	72
94	Ultrafast photodissociation of I3□in ethanol: A molecular dynamics study. *Journal of Chemical Physics*, **1993**, 98, 8337-8340	3.9	72
93	Photocatalytic Hybrid Semiconductor-Metal Nanoparticles; from Synergistic Properties to Emerging Applications. *Advanced Materials*, **2018**, 30, e1706697	24	71
92	Rapid Three-Dimensional Printing in Water Using Semiconductor-Metal Hybrid Nanoparticles as Photoinitiators. *Nano Letters*, **2017**, 17, 4497-4501	11.5	67
91	A general strategy for synthesizing colloidal semiconductor zinc chalcogenide quantum rods. *Journal of the American Chemical Society*, **2014**, 136, 11121-7	16.4	65
90	Shape control of III-V semiconductor nanocrystals: synthesis and properties of InAs quantum rods. *Faraday Discussions*, **2004**, 125, 23-38; discussion 99-116	3.6	62
89	Ultrafast vibrational dynamics of nascent diiodide fragments studied by femtosecond transient resonance impulsive stimulated Raman scattering. *Journal of Chemical Physics*, **1993**, 99, 9318-9321	3.9	59
88	Heavy-Metal-Free Colloidal Semiconductor Nanorods: Recent Advances and Future Perspectives. *Advanced Materials*, **2019**, 31, e1900781	24	49
87	Control of charging in resonant tunneling through InAs nanocrystal quantum dots. *Applied Physics Letters*, **2001**, 79, 117-119	3.4	49
86	Multiexciton spectroscopy of semiconductor nanocrystals under quasi-continuous-wave optical pumping. *Physical Review B*, **2006**, 74,	3.3	47
85	Femtosecond Chemical Dynamics in Solution: Photodissociation of I3-. *Israel Journal of Chemistry*, **1993**, 33, 141-156	3.4	47
84	Hybrid Semiconductor-Metal Nanorods as Photocatalysts. *Topics in Current Chemistry*, **2016**, 374, 54	7.2	47

83	Size dependence of molar absorption coefficients of CdSe semiconductor quantum rods. *ChemPhysChem*, **2009**, 10, 1028-31	3.2	45
82	Mesophase Formation Stabilizes High-Purity Magic-Sized Clusters. *Journal of the American Chemical Society*, **2018**, 140, 3652-3662	16.4	44
81	Semiconductor Seeded Nanorods with Graded Composition Exhibiting High Quantum-Yield, High Polarization, and Minimal Blinking. *Nano Letters*, **2017**, 17, 2524-2531	11.5	43
80	Chemically reversible isomerization of inorganic clusters. *Science*, **2019**, 363, 731-735	33.3	42
79	Colloidal quantum dot molecules manifesting quantum coupling at room temperature. *Nature Communications*, **2019**, 10, 5401	17.4	42
78	Fabrication and optical properties of polymeric waveguides containing nanocrystalline quantum dots. *Applied Physics Letters*, **2004**, 85, 4469	3.4	41
77	Strain-controlled shell morphology on quantum rods. *Nature Communications*, **2019**, 10, 2	17.4	40
76	Co-assembly of block copolymers and nanorods in ultrathin films: effects of copolymer size and nanorod filling fraction. *Physical Chemistry Chemical Physics*, **2010**, 12, 11885-93	3.6	38
75	ZnSe/ZnS Core/Shell Quantum Dots with Superior Optical Properties through Thermodynamic Shell Growth. *Nano Letters*, **2020**, 20, 2387-2395	11.5	37
74	Nanoscale near-field imaging of excitons in single heterostructured nanorods. *Nano Letters*, **2010**, 10, 3068-72	11.5	37
73	Semiconductor nanorod layers aligned through mechanical rubbing. *Physica Status Solidi (A) Applications and Materials Science*, **2012**, 209, 235-242	1.6	35
72	Charge Carrier Dynamics in Photocatalytic Hybrid Semiconductor-Metal Nanorods: Crossover from Auger Recombination to Charge Transfer. *Nano Letters*, **2018**, 18, 5211-5216	11.5	34
71	Synthesis and Photocatalytic Properties of a Family of CdS-PdX Hybrid Nanoparticles. *Angewandte Chemie*, **2011**, 123, 1217-1221	3.6	33
70	Unraveling the Impurity Location and Binding in Heavily Doped Semiconductor Nanocrystals: The Case of Cu in InAs Nanocrystals. *Journal of Physical Chemistry C*, **2013**, 117, 13688-13696	3.8	32
69	Inkjet printed fluorescent nanorod layers exhibit superior optical performance over quantum dots. *Nanoscale*, **2015**, 7, 19193-200	7.7	29
68	Delivery of Liposomal Quantum Dots via Monocytes for Imaging of Inflamed Tissue. *ACS Nano*, **2017**, 11, 3038-3051	16.7	28
67	Synthesis, Structure, and Optical Properties of New Cadmium Chalcogenide Clusters of the Type [Cd10E4(ESPh)12(PR3)4], (E, ES= Te, Se, S). *Zeitschrift Fur Anorganische Und Allgemeine Chemie*, **2002**, 628, 2415-2421	1.3	28
66	Controlling Anisotropic Growth of Colloidal ZnSe Nanostructures. *Journal of the American Chemical Society*, **2018**, 140, 14627-14637	16.4	27

65	From Impurity Doping to Metallic Growth in Diffusion Doping: Properties and Structure of Silver-Doped InAs Nanocrystals. *ACS Nano*, **2015**, 9, 10790-800	16.7	26
64	Optical gain from InAs nanocrystal quantum dots in a polymer matrix. *Applied Physics Letters*, **2005**, 87, 251108	3.4	26
63	Quantum Description of the Impulsive Photodissociation Dynamics of I in Solution. *Advances in Chemical Physics*, **2007**, 229-315		25
62	Nanotechnology for catalysis and solar energy conversion. *Nanotechnology*, **2021**, 32, 042003	3.4	24
61	Liposomes of Quantum Dots Configured for Passive and Active Delivery to Tumor Tissue. *Nano Letters*, **2019**, 19, 5844-5852	11.5	23
60	Magic size InP and InAs clusters: synthesis, characterization and shell growth. *Chemical Communications*, **2017**, 53, 2626-2629	5.8	22
59	Size Dependence of Doping by a Vacancy Formation Reaction in Copper Sulfide Nanocrystals. *Angewandte Chemie - International Edition*, **2017**, 56, 10335-10340	16.4	22
58	Heavy-Metal-Free Fluorescent ZnTe/ZnSe Nanodumbbells. *ACS Nano*, **2017**, 11, 7312-7320	16.7	21
57	Interface Modifications of InAs Quantum-Dots Solids and their Effects on FET Performance. *Advanced Functional Materials*, **2010**, 20, 1005-1010	15.6	21
56	PEG-Phospholipids Coated Quantum Rods as Amplifiers of the Photosensitization Process by FRET. *ACS Applied Materials & Interfaces*, **2015**, 7, 21107-14	9.5	20
55	Single-particle studies of band alignment effects on electron transfer dynamics from semiconductor hetero-nanostructures to single-walled carbon nanotubes. *ACS Nano*, **2012**, 6, 176-82	16.7	20
54	Rhodium growth on Cu2S nanocrystals yielding hybrid nanoscale inorganic cages and their synergistic properties. *CrystEngComm*, **2014**, 16, 9506-9512	3.3	18
53	Reversed Nanoscale Kirkendall Effect in Au□hAs Hybrid Nanoparticles. *Chemistry of Materials*, **2016**, 28, 8032-8043	9.6	17
52	Quantum dot labeling of butyrylcholinesterase maintains substrate and inhibitor interactions and cell adherence features. *ACS Chemical Neuroscience*, **2011**, 2, 141-50	5.7	17
51	A Tale of Tails: Thermodynamics of CdSe Nanocrystal Surface Ligand Exchange. *Nano Letters*, **2020**, 20, 6396-6403	11.5	17
50	Copper Sulfide Nanocrystal Level Structure and Electrochemical Functionality towards Sensing Applications. *ChemPhysChem*, **2016**, 17, 675-80	3.2	16
49	Dielectric Confinement and Excitonic Effects in Two-Dimensional Nanoplatelets. *ACS Nano*, **2020**, 14, 8257-8265	16.7	15
48	Electronic properties of hybrid Cu2S/Ru semiconductor/metallic-cage nanoparticles. *Nanotechnology*, **2012**, 23, 505710	3.4	14

47	A clear solution: semiconductor nanocrystals as photoinitiators in solvent free polymerization. *Nanoscale*, **2019**, 11, 11209-11216	7.7	13
46	Impurity Sub-Band in Heavily Cu-Doped InAs Nanocrystal Quantum Dots Detected by Ultrafast Transient Absorption. *Journal of Physical Chemistry A*, **2016**, 120, 3088-97	2.8	13
45	Quantum Photoinitiators: Toward Emerging Photocuring Applications. *Journal of the American Chemical Society*, **2021**, 143, 577-587	16.4	13
44	DNA-Mediated Self-Assembly and Metallization of Semiconductor Nanorods for the Fabrication of Nanoelectronic Interfaces. *Chemistry - A European Journal*, **2019**, 25, 9012-9016	4.8	12
43	Visualizing Ultrafast Electron Transfer Processes in Semiconductor-Metal Hybrid Nanoparticles: Toward Excitonic-Plasmonic Light Harvesting. *Nano Letters*, **2021**, 21, 1461-1468	11.5	12
42	Kolloidale Quantennanostrukturen: neue Materialien f□ Displayanwendungen. *Angewandte Chemie*, **2018**, 130, 4354-4376	3.6	11
41	Size-dependent ligand layer dynamics in semiconductor nanocrystals probed by anisotropy measurements. *Angewandte Chemie - International Edition*, **2015**, 54, 12463-7	16.4	11
40	Synthese und Charakterisierung von InAs/InP- und InAs/CdSe-Kern/Schalen-Nanokristallen. *Angewandte Chemie*, **1999**, 111, 3913-3916	3.6	11
39	Electronic coupling in colloidal quantum dot molecules; the case of CdSe/CdS core/shell homodimers. *Journal of Chemical Physics*, **2019**, 151, 224501	3.9	11
38	Coupled Colloidal Quantum Dot Molecules. *Accounts of Chemical Research*, **2021**, 54, 1178-1188	24.3	10
37	Periodic negative differential conductance in a single metallic nanocage. *Physical Review B*, **2012**, 86,	3.3	9
36	Charge Transport in Cu2S Nanocrystals Arrays: Effects of Crystallite Size and Ligand Length. *Zeitschrift Fur Physikalische Chemie*, **2015**, 229, 179-190	3.1	8
35	Shell Stabilization of Photocatalytic ZnSe Nanorods. *ChemCatChem*, **2019**, 11, 6208-6212	5.2	8
34	Perpendicular Orientation of Anisotropic Au-Tipped CdS Nanorods at the Air/Water Interface. *Advanced Materials Interfaces*, **2014**, 1, 1300030	4.6	8
33	Size Dependence of Doping by a Vacancy Formation Reaction in Copper Sulfide Nanocrystals. *Angewandte Chemie*, **2017**, 129, 10471-10476	3.6	8
32	Phonon-Plasmon Coupling and Active Cu Dopants in Indium Arsenide Nanocrystals Studied by Resonance Raman Spectroscopy. *Journal of Physical Chemistry Letters*, **2017**, 8, 2519-2525	6.4	7
31	The Metal Type Governs Photocatalytic Reactive Oxygen Species Formation by Semiconductor-Metal Hybrid Nanoparticles. *ChemCatChem*, **2018**, 10, 5119-5123	5.2	7
30	Targeting and imaging of monocyte-derived macrophages in rat□s injured artery following local delivery of liposomal quantum dots. *Journal of Controlled Release*, **2020**, 318, 145-157	11.7	6

29	Metallic Conductive Luminescent Film. *ACS Nano*, **2019**, 13, 10826-10834	16.7	5
28	Electronic Level Structure and Single Electron Tunneling Effects in CdSe Quantum Rods. *Israel Journal of Chemistry*, **2004**, 44, 391-400	3.4	5
27	Semiconductor Bow-Tie Nanoantenna from Coupled Colloidal Quantum Dot Molecules. *Angewandte Chemie - International Edition*, **2021**, 60, 14467-14472	16.4	5
26	Carbon Nanotube and Semiconductor Nanorods Hybrids: Preparation, Characterization, and Evaluation of Photocurrent Generation. *Langmuir*, **2017**, 33, 5519-5526	4	4
25	Photoelectrochemistry of colloidal Cu2O nanocrystal layers: the role of interfacial chemistry. *Journal of Materials Chemistry A*, **2017**, 5, 22255-22264	13	4
24	Surface Versus Impurity-Doping Contributions in InAs Nanocrystal Field Effect Transistor Performance. *Journal of Physical Chemistry C*, **2019**, 123, 18717-18725	3.8	4
23	Colloidal Synthesis and Properties of InAs/InP and InAs/CdSe Core/Shell Nanocrystals. *Materials Research Society Symposia Proceedings*, **1999**, 571, 75		4
22	InAs Nanocrystals with Robust p-Type Doping. *Advanced Functional Materials*, **2021**, 31, 2007456	15.6	4
21	Syntheses and Characterizations **2010**, 49-310		3
20	A simple method for preparation of silica aerogels doped with monodispersed nanoparticles in homogeneous concentration. *Journal of Supercritical Fluids*, **2020**, 159, 104496	4.2	3
19	Morphology effect on zinc oxide quantum photoinitiators for radical polymerization. *Nanoscale*, **2021**, 13, 7152-7160	7.7	3
18	Ligands Mediate Anion Exchange between Colloidal Lead-Halide Perovskite Nanocrystals. *Nano Letters*,	11.5	3
17	8.2: Semiconductor Quantum Rods for Display Applications. *Digest of Technical Papers SID International Symposium*, **2015**, 46, 71-72	0.5	2
16	Lasing from CdSe/ZnS Quantum Rods in a Cylindrical Microcavity. *Materials Research Society Symposia Proceedings*, **2003**, 789, 234		2
15	Luminescent Anisotropic Wurtzite InP Nanocrystals. *Nano Letters*, **2021**, 21, 10032-10039	11.5	2
14	High-Sensitivity, High-Resolution Detection of Reactive Oxygen Species Concentration Using NV Centers. *ACS Photonics*, **2021**, 8, 1917-1921	6.3	2
13	Doped Colloidal InAs Nanocrystals in the Single Ionized Dopant Limit. *Journal of Physical Chemistry C*, **2019**, 123, 14803-14812	3.8	1
12	Synthesis of InP and InAs quantum rods using Indium Acetate and Myristic acid. *Materials Research Society Symposia Proceedings*, **2004**, 848, 388		1

11	Neck Barrier Engineering in Quantum Dot Dimer Molecules via Intraparticle Ripening. *Journal of the American Chemical Society*, **2021**, 143, 19816-19823	16.4	1
10	Properties371-454		1
9	Complete Mapping of Interacting Charging States in Single Coupled Colloidal Quantum Dot Molecules.. *ACS Nano*, **2022**,	16.7	1
8	Colloidal Quantum Materials for Photocatalytic Applications **2019**, 105-117		
7	Size-Dependent Ligand Layer Dynamics in Semiconductor Nanocrystals Probed by Anisotropy Measurements. *Angewandte Chemie*, **2015**, 127, 12640-12644	3.6	
6	Innenrücktitelbild: Size-Dependent Ligand Layer Dynamics in Semiconductor Nanocrystals Probed by Anisotropy Measurements (Angew. Chem. 42/2015). *Angewandte Chemie*, **2015**, 127, 12697-12697	3.6	
5	Direct observation of highly polarized non-linear absorption dipole of single semiconductor quantum rods. *Materials Research Society Symposia Proceedings*, **2004**, 818, 330		
4	Syntheses and Characterizations: 3.1 Semiconductor Nanoparticles50-185		
3	Properties305-367		
2	Size and shape dependent level structure in CdSe quantum rods. *Materials Research Society Symposia Proceedings*, **2002**, 737, 174		
1	Semiconductor Bow-Tie Nanoantenna from Coupled Colloidal Quantum Dot Molecules. *Angewandte Chemie*, **2021**, 133, 14588-14593	3.6	