Uri Banin

List of Publications by Year
in descending order

142 papers	14,432 citations	28242 55 h-index	18633 119 g-index
151 all docs	151 docs citations	151 times ranked	13517 citing authors

#	Article	IF	Citations
1	Flow synthesis of photocatalytic semiconductorâ€“metal hybrid nanocrystals. Nanoscale, 2022, 14, 1944-1953.	2.8	1
2	Entropy of Branching Out: Linear versus Branched Alkylthiols Ligands on CdSe Nanocrystals. ACS Nano, 2022, 16, 4308-4321.	7.3	15
3	Complete Mapping of Interacting Charging States in Single Coupled Colloidal Quantum Dot Molecules. ACS Nano, 2022, 16, 5566-5576.	7.3	7
4	Sulfide Ligands in Hybrid Semiconductorâ€“Metal Nanocrystal Photocatalysts: Improved Hole Extraction and Altered Catalysis. ACS Applied Materials & Interfaces, 2022, 14, 647-653.	4.0	5
5	Ligands Mediate Anion Exchange between Colloidal Lead-Halide Perovskite Nanocrystals. Nano Letters, 2022, 22, 4340-4346.	4.5	29
6	InAs Nanocrystals with Robust pâ€Type Doping. Advanced Functional Materials, 2021, 31, 2007456.	7.8	17
7	Quantum Photoinitiators: Toward Emerging Photocuring Applications. Journal of the American Chemical Society, 2021, 143, 577-587.	6.6	28
8	Coupled Colloidal Quantum Dot Molecules. Accounts of Chemical Research, 2021, 54, 1178-1188.	7.6	34
9	Visualizing Ultrafast Electron Transfer Processes in Semiconductorâ€“Metal Hybrid Nanoparticles: Toward Excitonicâ€“Plasmonic Light Harvesting. Nano Letters, 2021, 21, 1461-1468.	4.5	33
10	Morphology effect on zinc oxide quantum photoinitiators for radical polymerization. Nanoscale, 2021, 13, 7152-7160.	2.8	7
11	Semiconductor Bowâ€Tie Nanoantenna from Coupled Colloidal Quantum Dot Molecules. Angewandte Chemie, 2021, 133, 14588-14593.	1.6	1
12	Semiconductor Bowâ€Tie Nanoantenna from Coupled Colloidal Quantum Dot Molecules. Angewandte Chemie - International Edition, 2021, 60, 14467-14472.	7.2	11
13	High-Sensitivity, High-Resolution Detection of Reactive Oxygen Species Concentration Using NV Centers. ACS Photonics, 2021, 8, 1917-1921.	3.2	7
14	Nanotechnology for catalysis and solar energy conversion. Nanotechnology, 2021, 32, 042003.	1.3	44
15	Luminescent Anisotropic Wurtzite InP Nanocrystals. Nano Letters, 2021, 21, 10032-10039.	4.5	8
16	Neck Barrier Engineering in Quantum Dot Dimer Molecules via Intraparticle Ripening. Journal of the American Chemical Society, 2021, 143, 19816-19823.	6.6	11
17	A simple method for preparation of silica aerogels doped with monodispersed nanoparticles in homogeneous concentration. Journal of Supercritical Fluids, 2020, 159, 104496.	1.6	5
18	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.	4.8	13

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19	A Tale of Tails: Thermodynamics of CdSe Nanocrystal Surface Ligand Exchange. Nano Letters, 2020, 20, 6396-6403.	4.5	39
20	ZnSe/ZnS Core/Shell Quantum Dots with Superior Optical Properties through Thermodynamic Shell Growth. Nano Letters, 2020, 20, 2387-2395.	4.5	81
21	Dielectric Confinement and Excitonic Effects in Two-Dimensional Nanoplatelets. ACS Nano, 2020, 14, 8257-8265.	7.3	29
22	Material Challenges for Colloidal Quantum Nanostructures in Next Generation Displays. , 2020, , .		1
23	Liposomes of Quantum Dots Configured for Passive and Active Delivery to Tumor Tissue. Nano Letters, 2019, 19, 5844-5852.	4.5	38
24	Surface Versus Impurity-Doping Contributions in InAs Nanocrystal Field Effect Transistor Performance. Journal of Physical Chemistry C, 2019, 123, 18717-18725.	1.5	7
25	Shell Stabilization of Photocatalytic ZnSe Nanorods. ChemCatChem, 2019, 11, 6208-6212.	1.8	11
26	Exciton Relaxation Pathways in CdSe Nanorods Revealed by Two-Dimensional Electronic Spectroscopy. , 2019, , .		0
27	Metallic Conductive Luminescent Film. ACS Nano, 2019, 13, 10826-10834.	7.3	6
28	A clear solution: semiconductor nanocrystals as photoinitiators in solvent free polymerization. Nanoscale, 2019, 11, 11209-11216.	2.8	19
29	Heavyâ€Metalâ€Free Colloidal Semiconductor Nanorods: Recent Advances and Future Perspectives. Advanced Materials, 2019, 31, e1900781.	11.1	64
30	DNAâ€Mediated Selfâ€Assembly and Metallization of Semiconductor Nanorods for the Fabrication of Nanoelectronic Interfaces. Chemistry - A European Journal, 2019, 25, 9012-9016.	1.7	14
31	Doped Colloidal InAs Nanocrystals in the Single Ionized Dopant Limit. Journal of Physical Chemistry C, 2019, 123, 14803-14812.	1.5	1
32	Chemically reversible isomerization of inorganic clusters. Science, 2019, 363, 731-735.	6.0	72
33	Colloidal quantum dot molecules manifesting quantum coupling at room temperature. Nature Communications, 2019, 10, 5401.	5.8	86
34	Electronic coupling in colloidal quantum dot molecules; the case of CdSe/CdS core/shell homodimers. Journal of Chemical Physics, 2019, 151, 224501.	1.2	27
35	Strain-controlled shell morphology on quantum rods. Nature Communications, 2019, 10, 2.	5.8	73
36	Photocatalytic Hybrid Semiconductorâ€"Metal Nanoparticles; from Synergistic Properties to Emerging Applications. Advanced Materials, 2018, 30, e1706697.	11.1	111

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37	Mesophase Formation Stabilizes High-Purity Magic-Sized Clusters. Journal of the American Chemical Society, 2018, 140, 3652-3662.	6.6	71
38	Kolloidale Quantennanostrukturen: neue Materialien fÃ¼r Displayanwendungen. Angewandte Chemie, 2018, 130, 4354-4376.	1.6	14
39	Colloidal Quantum Nanostructures: Emerging Materials for Display Applications. Angewandte Chemie - International Edition, 2018, 57, 4274-4295.	7.2	173
40	The Metal Type Governs Photocatalytic Reactive Oxygen Species Formation by Semiconductorâ€Metal Hybrid Nanoparticles. ChemCatChem, 2018, 10, 5119-5123.	1.8	15
41	A hybrid solution. Nature Energy, 2018, 3, 824-825.	19.8	5
42	Controlling Anisotropic Growth of Colloidal ZnSe Nanostructures. Journal of the American Chemical Society, 2018, 140, 14627-14637.	6.6	41
43	Charge Carrier Dynamics in Photocatalytic Hybrid Semiconductorâ€"Metal Nanorods: Crossover from Auger Recombination to Charge Transfer. Nano Letters, 2018, 18, 5211-5216.	4.5	49
44	Semiconductor Seeded Nanorods with Graded Composition Exhibiting High Quantum-Yield, High Polarization, and Minimal Blinking. Nano Letters, 2017, 17, 2524-2531.	4.5	51
45	Delivery of Liposomal Quantum Dots <i>via</i> Monocytes for Imaging of Inflamed Tissue. ACS Nano, 2017, 11, 3038-3051.	7.3	38
46	Magic size InP and InAs clusters: synthesis, characterization and shell growth. Chemical Communications, 2017, 53, 2626-2629.	2.2	32
47	Carbon Nanotube and Semiconductor Nanorods Hybrids: Preparation, Characterization, and Evaluation of Photocurrent Generation. Langmuir, 2017, 33, 5519-5526.	1.6	5
48	Rapid Three-Dimensional Printing in Water Using Semiconductorâ€"Metal Hybrid Nanoparticles as Photoinitiators. Nano Letters, 2017, 17, 4497-4501.	4.5	83
49	Size Dependence of Doping by a Vacancy Formation Reaction in Copper Sulfide Nanocrystals. Angewandte Chemie - International Edition, 2017, 56, 10335-10340.	7.2	26
50	Phononâ€"Plasmon Coupling and Active Cu Dopants in Indium Arsenide Nanocrystals Studied by Resonance Raman Spectroscopy. Journal of Physical Chemistry Letters, 2017, 8, 2519-2525.	2.1	7
51	Photoelectrochemistry of colloidal Cu2O nanocrystal layers: the role of interfacial chemistry. Journal of Materials Chemistry A, 2017, 5, 22255-22264.	5.2	5
52	Size Dependence of Doping by a Vacancy Formation Reaction in Copper Sulfide Nanocrystals. Angewandte Chemie, 2017, 129, 10471-10476.	1.6	10
53	Heavy-Metal-Free Fluorescent ZnTe/ZnSe Nanodumbbells. ACS Nano, 2017, 11, 7312-7320.	7.3	30
54	Copper Sulfide Nanocrystal Level Structure and Electrochemical Functionality towards Sensing Applications. ChemPhysChem, 2016, 17, 675-680.	1.0	17

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55	Hybrid Semiconductorâ€“Metal Nanorods as Photocatalysts. Topics in Current Chemistry, 2016, 374, 54.	3.0	55
56	Reversed Nanoscale Kirkendall Effect in Auâ€“InAs Hybrid Nanoparticles. Chemistry of Materials, 2016, 28, 8032-8043.	3.2	25
57	Photocatalytic Reactive Oxygen Species Formation by Semiconductorâ€“Metal Hybrid Nanoparticles. Toward Light-Induced Modulation of Biological Processes. Nano Letters, 2016, 16, 4266-4273.	4.5	98
58	Optimal metal domain size for photocatalysis with hybrid semiconductor-metal nanorods. Nature Communications, 2016, 7, 10413.	5.8	184
59	Impurity Sub-Band in Heavily Cu-Doped InAs Nanocrystal Quantum Dots Detected by Ultrafast Transient Absorption. Journal of Physical Chemistry A, 2016, 120, 3088-3097.	1.1	13
60	Sizeâ€Dependent Ligand Layer Dynamics in Semiconductor Nanocrystals Probed by Anisotropy Measurements. Angewandte Chemie, 2015, 127, 12640-12644.	1.6	0
61	8.2: Semiconductor Quantum Rods for Display Applications. Digest of Technical Papers SID International Symposium, 2015, 46, 71-72.	0.1	3
62	Sizeâ€Dependent Ligand Layer Dynamics in Semiconductor Nanocrystals Probed by Anisotropy Measurements. Angewandte Chemie - International Edition, 2015, 54, 12463-12467.	7.2	12
63	InnenrÃ¼cktitelbild: Size-Dependent Ligand Layer Dynamics in Semiconductor Nanocrystals Probed by Anisotropy Measurements (Angew. Chem. 42/2015). Angewandte Chemie, 2015, 127, 12697-12697.	1.6	0
64	Charge Transport in Cu₂S Nanocrystals Arrays: Effects of Crystallite Size and Ligand Length. Zeitschrift Fur Physikalische Chemie, 2015, 229, 179-190.	1.4	10
65	From Impurity Doping to Metallic Growth in Diffusion Doping: Properties and Structure of Silver-Doped InAs Nanocrystals. ACS Nano, 2015, 9, 10790-10800.	7.3	34
66	Inkjet printed fluorescent nanorod layers exhibit superior optical performance over quantum dots. Nanoscale, 2015, 7, 19193-19200.	2.8	37
67	PEG-Phospholipids Coated Quantum Rods as Amplifiers of the Photosensitization Process by FRET. ACS Applied Materials & Interfaces, 2015, 7, 21107-21114.	4.0	26
68	Effect of Surface Coating on the Photocatalytic Function of Hybrid CdS-Au Nanorods. Small, 2015, 11, 462-471.	5.2	124
69	Hybrid Semiconductorâ€“Metal Nanoparticles: From Architecture to Function. Chemistry of Materials, 2014, 26, 97-110.	3.2	330
70	Couples of colloidal semiconductor nanorods formed by self-limited assembly. Nature Materials, 2014, 13, 301-307.	13.3	104
71	Perpendicular Orientation of Anisotropic Auâ€Tipped CdS Nanorods at the Air/Water Interface. Advanced Materials Interfaces, 2014, 1, 1300030.	1.9	9
72	Semiconductor Nanorodâ€“Carbon Nanotube Biomimetic Films for Wire-Free Photostimulation of Blind Retinas. Nano Letters, 2014, 14, 6685-6692.	4.5	100

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73	Rhodium growth on Cu₂S nanocrystals yielding hybrid nanoscale inorganic cages and their synergistic properties. CrystEngComm, 2014, 16, 9506-9512.	1.3	26
74	A General Strategy for Synthesizing Colloidal Semiconductor Zinc Chalcogenide Quantum Rods. Journal of the American Chemical Society, 2014, 136, 11121-11127.	6.6	69
75	Nanorods: Perpendicular Orientation of Anisotropic Au-Tipped CdS Nanorods at the Air/Water Interface (Adv. Mater. Interfaces 1/2014). Advanced Materials Interfaces, 2014, 1, n/a-n/a.	1.9	0
76	Band-gap engineering, optoelectronic properties and applications of colloidal heterostructured semiconductor nanorods. Nano Today, 2013, 8, 494-513.	6.2	140
77	Polarization Properties of Semiconductor Nanorod Heterostructures: From Single Particles to the Ensemble. Journal of Physical Chemistry Letters, 2013, 4, 502-507.	2.1	93
78	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.	1.5	35
79	Periodic negative differential conductance in a single metallic nanocage. Physical Review B, 2012, 86, .	1.1	9
80	Electronic properties of hybrid Cu₂S/Ru semiconductor/metallic-cage nanoparticles. Nanotechnology, 2012, 23, 505710.	1.3	17
81	Single-Particle Studies of Band Alignment Effects on Electron Transfer Dynamics from Semiconductor Hetero-nanostructures to Single-Walled Carbon Nanotubes. ACS Nano, 2012, 6, 176-182.	7.3	23
82	Semiconductor nanorod layers aligned through mechanical rubbing. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 235-242.	0.8	43
83	Ultrafast Photoinduced Charge Separation in Metalâ€“Semiconductor Nanohybrids. ACS Nano, 2012, 6, 7034-7043.	7.3	108
84	Quantum Dot Labeling of Butyrylcholinesterase Maintains Substrate and Inhibitor Interactions and Cell Adherence Features. ACS Chemical Neuroscience, 2011, 2, 141-150.	1.7	19
85	Highly Emissive Nano Rod-in-Rod Heterostructures with Strong Linear Polarization. Nano Letters, 2011, 11, 2054-2060.	4.5	197
86	Absorption Properties of Metalâ€“Semiconductor Hybrid Nanoparticles. ACS Nano, 2011, 5, 4712-4719.	7.3	199
87	Heavily Doped Semiconductor Nanocrystal Quantum Dots. Science, 2011, 332, 77-81.	6.0	657
88	Interface Modifications of InAs Quantumâ€Dots Solids and their Effects on FET Performance. Advanced Functional Materials, 2010, 20, 1005-1010.	7.8	23
89	Hierarchical Surface Patterns of Nanorods Obtained by Coâ€Assembly with Block Copolymers in Ultrathin Films. Advanced Materials, 2010, 22, 2774-2779.	11.1	80
90	Colloidal Hybrid Nanostructures: A New Type of Functional Materials. Angewandte Chemie - International Edition, 2010, 49, 4878-4897.	7.2	726

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91	Hybrid nanoscale inorganic cages. Nature Materials, 2010, 9, 810-815.	13.3	129
92	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.	1.3	43
93	Nanoscale Near-Field Imaging of Excitons in Single Heterostructured Nanorods. Nano Letters, 2010, 10, 3068-3072.	4.5	38
94	Size Dependence of Molar Absorption Coefficients of CdSe Semiconductor Quantum Rods. ChemPhysChem, 2009, 10, 1028-1031.	1.0	55
95	Particle Size, Surface Coating, and PEGylation Influence the Biodistribution of Quantum Dots in Living Mice. Small, 2009, 5, 126-134.	5.2	418
96	Multiexciton Engineering in Seeded Core/Shell Nanorods: Transfer from Type-I to Quasi-type-II Regimes. Nano Letters, 2009, 9, 3470-3476.	4.5	180
97	Au Growth on Semiconductor Nanorods: Photoinduced versus Thermal Growth Mechanisms. Journal of the American Chemical Society, 2009, 131, 17406-17411.	6.6	195
98	ZnSe Quantum Dots Within CdS Nanorods: A Seededâ€Growth Typeâ€II System. Small, 2008, 4, 1319-1323.	5.2	114
99	Bright and stable. Nature Photonics, 2008, 2, 209-210.	15.6	12
100	Tuning Energetic Levels in Nanocrystal Quantum Dots through Surface Manipulations. Nano Letters, 2008, 8, 678-684.	4.5	159
101	Determination of Band Offsets in Heterostructured Colloidal Nanorods Using Scanning Tunneling Spectroscopy. Nano Letters, 2008, 8, 2954-2958.	4.5	179
102	Selective Gold Growth on CdSe Seeded CdS Nanorods. Chemistry of Materials, 2008, 20, 6900-6902.	3.2	131
103	Visible Light-Induced Charge Retention and Photocatalysis with Hybrid CdSeâˆ'Au Nanodumbbells. Nano Letters, 2008, 8, 637-641.	4.5	466
104	Multiexcitons in type-II colloidal semiconductor quantum dots. Physical Review B, 2007, 75, .	1.1	206
105	Quantum Description of the Impulsive Photodissociation Dynamics of Iâ€‰âˆ'3 in Solution. Advances in Chemical Physics, 2007, , 229-315.	0.3	29
106	Synthesis of InAs/CdSe/ZnSe Core/Shell1/Shell2 Structures with Bright and Stable Near-Infrared Fluorescence. Journal of the American Chemical Society, 2006, 128, 257-264.	6.6	175
107	Multiexciton spectroscopy of semiconductor nanocrystals under quasi-continuous-wave optical pumping. Physical Review B, 2006, 74, .	1.1	51
108	Synthesis of Hybrid CdSâˆ'Au Colloidal Nanostructuresâ€. Journal of Physical Chemistry B, 2006, 110, 25421-25429.	1.2	315

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109	Formation of asymmetric one-sided metal-tipped semiconductor nanocrystal dots and rods. Nature Materials, 2005, 4, 855-863.	13.3	526
110	Optical gain from InAs nanocrystal quantum dots in a polymer matrix. Applied Physics Letters, 2005, 87, 251108.	1.5	29
111	Electric Field Induced Switching of the Fluorescence of Single Semiconductor Quantum Rods. Nano Letters, 2005, 5, 1581-1586.	4.5	130
112	Synthesis of InP and InAs quantum rods using Indium Acetate and Myristic acid. Materials Research Society Symposia Proceedings, 2004, 848, 388.	0.1	1
113	Direct Observation of Highly Polarized Non-Linear Absorption Dipole of Single Semiconductor Quantum Rods. Materials Research Society Symposia Proceedings, 2004, 818, 330.	0.1	0
114	Fabrication and optical properties of polymeric waveguides containing nanocrystalline quantum dots. Applied Physics Letters, 2004, 85, 4469.	1.5	57
115	Shape control of IIIâ€“V semiconductor nanocrystals: Synthesis and properties of InAs quantum rods. Faraday Discussions, 2004, 125, 23-38.	1.6	65
116	Electronic Level Structure and Single Electron Tunneling Effects in CdSe Quantum Rods. Israel Journal of Chemistry, 2004, 44, 391-400.	1.0	5
117	Selective Growth of Metal Tips onto Semiconductor Quantum Rods and Tetrapods. Science, 2004, 304, 1787-1790.	6.0	1,057
118	TUNNELING ANDOPTICALSPECTROSCOPY OFSEMICONDUCTORNANOCRYSTALS. Annual Review of Physical Chemistry, 2003, 54, 465-492.	4.8	143
119	Synthesis and size-dependent properties of zinc-blende semiconductor quantum rods. Nature Materials, 2003, 2, 155-158.	13.3	388
120	Synthesis and Properties of CdSe/ZnS Core/Shell Nanorods. Chemistry of Materials, 2003, 15, 3955-3960.	3.2	240
121	Lasing from CdSe/ZnS Quantum Rods in a Cylindrical Microcavity. Materials Research Society Symposia Proceedings, 2003, 789, 234.	0.1	3
122	Size and shape dependent level structure in CdSe quantum rods. Materials Research Society Symposia Proceedings, 2002, 737, 174.	0.1	0
123	Size-Dependent Tunneling and Optical Spectroscopy of CdSe Quantum Rods. Physical Review Letters, 2002, 89, 086801.	2.9	206
124	Efficient Near-Infrared Polymer Nanocrystal Light-Emitting Diodes. Science, 2002, 295, 1506-1508.	6.0	1,296
125	Imaging and Spectroscopy of Artificial-Atom States in Core/Shell Nanocrystal Quantum Dots. Physical Review Letters, 2001, 86, 5751-5754.	2.9	137
126	Control of charging in resonant tunneling through InAs nanocrystal quantum dots. Applied Physics Letters, 2001, 79, 117-119.	1.5	52

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127	Growth and Properties of Semiconductor Core/Shell Nanocrystals with InAs Cores. Journal of the American Chemical Society, 2000, 122, 9692-9702.	6.6	430
128	Identification of atomic-like electronic states in indium arsenide nanocrystal quantum dots. Nature, 1999, 400, 542-544.	13.7	551
129	Colloidal Synthesis and Properties of InAs/InP and InAs/CdSe Core/Shell Nanocrystals. Materials Research Society Symposia Proceedings, 1999, 571, 75.	0.1	5
130	Synthesis and Characterization of InAs/InP and InAs/CdSe Core/Shell Nanocrystals. Angewandte Chemie - International Edition, 1999, 38, 3692-3694.	7.2	152
131	Impulsive excitation of coherent vibrational motion ground surface dynamics induced by intense short pulses. Journal of Chemical Physics, 1994, 101, 8461-8481.	1.2	222
132	Ultrafast photodissociation of I3. Coherent photochemistry in solution. Journal of Chemical Physics, 1993, 98, 4391-4403.	1.2	182
133	Ultrafast photodissociation of I3âˆ' in ethanol: A molecular dynamics study. Journal of Chemical Physics, 1993, 98, 8337-8340.	1.2	77
134	Ultrafast vibrational dynamics of nascent diiodide fragments studied by femtosecond transient resonance impulsive stimulated Raman scattering. Journal of Chemical Physics, 1993, 99, 9318-9321.	1.2	66
135	Femtosecond Chemical Dynamics in Solution: Photodissociation of I₃â€• Israel Journal of Chemistry, 1993, 33, 141-156.	1.0	49
136	Ultrafast photodissociation of I3âˆ' in solution: Direct observation of coherent product vibrations. Journal of Chemical Physics, 1992, 96, 2416-2419.	1.2	122
137	Syntheses and Characterizations: 3.1 Semiconductor Nanoparticles. , 0, , 50-185.		0
138	Properties. , 0, , 305-367.		0
139	Hybrid Semiconductor-Metal Nanoparticles as Photocatalysts. , 0, , .		0
140	Hybrid Semiconductor-Metal Nanoparticles as Photocatalysts. , 0, , .		0
141	Neck Barrier Tailors Photon Bunching Characteristics in Single Quantum Dot Dimer Molecules. , 0, , .		0
142	Coupled Colloidal Quantum Dot Molecules. , 0, , .		0