

Hiroshi Sugimoto

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94
papers

1,571
citations

21
h-index

35
g-index

99
ext. papers

1,848
ext. citations

5.5
avg, IF

5.4
L-index

#	Paper	IF	Citations
94	Codoping n- and p-Type Impurities in Colloidal Silicon Nanocrystals: Controlling Luminescence Energy from below Bulk Band Gap to Visible Range. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 11850-11857	3.8	115
93	All-Inorganic Near-Infrared Luminescent Colloidal Silicon Nanocrystals: High Dispersibility in Polar Liquid by Phosphorus and Boron Codoping. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 17969-17974	3.8	95
92	Phosphorus and Boron Codoped Colloidal Silicon Nanocrystals with Inorganic Atomic Ligands. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 6807-6813	3.8	68
91	All-inorganic water-dispersible silicon quantum dots: highly efficient near-infrared luminescence in a wide pH range. <i>Nanoscale</i> , 2014 , 6, 122-6	7.7	67
90	Size-Dependence of Acceptor and Donor Levels of Boron and Phosphorus Codoped Colloidal Silicon Nanocrystals. <i>Nano Letters</i> , 2016 , 16, 2615-20	11.5	64
89	All-inorganic colloidal silicon nanocrystals-surface modification by boron and phosphorus co-doping. <i>Nanotechnology</i> , 2016 , 27, 262001	3.4	59
88	Atom Probe Tomography Analysis of Boron and/or Phosphorus Distribution in Doped Silicon Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 17845-17852	3.8	55
87	Silicon nanocrystals with high boron and phosphorus concentration hydrophilic shell Raman scattering and X-ray photoelectron spectroscopic studies. <i>Journal of Applied Physics</i> , 2014 , 115, 084301	2.5	44
86	Broadband Dielectric Metal Hybrid Nanoantenna: Silicon Nanoparticle on a Mirror. <i>ACS Photonics</i> , 2018 , 5, 1986-1993	6.3	43
85	Colloidal Dispersion of Subquarter Micrometer Silicon Spheres for Low-Loss Antenna in Visible Regime. <i>Advanced Optical Materials</i> , 2017 , 5, 1700332	8.1	35
84	Surfactant-free solution-dispersible Si nanocrystals surface modification by impurity control. <i>Optics Letters</i> , 2011 , 36, 4026-8	3	31
83	Hybridized Plasmonic Gap Mode of Gold Nanorod on Mirror Nanoantenna for Spectrally Tailored Fluorescence Enhancement. <i>ACS Photonics</i> , 2018 , 5, 3421-3427	6.3	30
82	The impact of doped silicon quantum dots on human osteoblasts. <i>RSC Advances</i> , 2016 , 6, 63403-63413	3.7	29
81	Quantitative Understanding of Charge-Transfer-Mediated Fe Sensing and Fast Photoresponse by N-Doped Graphene Quantum Dots Decorated on Plasmonic Au Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 4755-4768	9.5	28
80	Synthesis of boron and phosphorus codoped all-inorganic colloidal silicon nanocrystals from hydrogen silsesquioxane. <i>Nanoscale</i> , 2014 , 6, 12354-9	7.7	27
79	Silicon nanocrystal-noble metal hybrid nanoparticles. <i>Nanoscale</i> , 2016 , 8, 10956-62	7.7	27
78	Mie Resonator Color Inks of Monodispersed and Perfectly Spherical Crystalline Silicon Nanoparticles. <i>Advanced Optical Materials</i> , 2020 , 8, 2000033	8.1	26

77	Excitation of Nonradiating Anapoles in Dielectric Nanospheres. <i>Physical Review Letters</i> , 2020 , 124, 0974024	7.4	25
76	Energy Transfer in Silicon Nanocrystal Solids Made from All-Inorganic Colloidal Silicon Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 2761-6	6.4	24
75	Plasmon-Enhanced Emission Rate of Silicon Nanocrystals in Gold Nanorod Composites. <i>ACS Photonics</i> , 2015 , 2, 1298-1305	6.3	22
74	Acceptor-related low-energy photoluminescence from boron-doped Si nanocrystals. <i>Journal of Applied Physics</i> , 2011 , 110, 063528	2.5	22
73	Photoluminescence Enhancement of Silicon Quantum Dot Monolayer by Double Resonance Plasmonic Substrate. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 11609-11615	3.8	21
72	Evidence for plasmonic hot electron injection induced superior visible light photocatalysis by g-C ₃ N ₄ nanosheets decorated with Ag ⁺ /TiO ₂ (B) and Au ⁺ /TiO ₂ (B) nanorods. <i>Solar Energy Materials and Solar Cells</i> , 2019 , 201, 110053	6.4	21
71	Size-dependent donor and acceptor states in codoped Si nanocrystals studied by scanning tunneling spectroscopy. <i>Nanoscale</i> , 2017 , 9, 17884-17892	7.7	21
70	Donor-Acceptor Pair Recombination in Size-Purified Silicon Quantum Dots. <i>Nano Letters</i> , 2018 , 18, 7282-7288	7.8	21
69	Broadband enhancement of local density of states using silicon-compatible hyperbolic metamaterials. <i>Applied Physics Letters</i> , 2015 , 106, 241105	3.4	20
68	Surface Structure and Current Transport Property of Boron and Phosphorus Co-Doped Silicon Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 195-200	3.8	20
67	Surface Plasmon-Enhanced Luminescence of Silicon Quantum Dots in Gold Nanoparticle Composites. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 25108-25113	3.8	19
66	Visualizing a core-shell structure of heavily doped silicon quantum dots by electron microscopy using an atomically thin support film. <i>Nanoscale</i> , 2018 , 10, 7357-7362	7.7	19
65	Forward to Backward Scattering Ratio of Dielectric-Metal Heterodimer Suspended in Almost Free-Space. <i>Advanced Optical Materials</i> , 2019 , 7, 1900591	8.1	19
64	Silicon quantum dots with heavily boron and phosphorus codoped shell. <i>Chemical Communications</i> , 2018 , 54, 4375-4389	5.8	18
63	Controlling Energy Transfer in Silicon Quantum Dot Assemblies Made from All-Inorganic Colloidal Silicon Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 24469-24475	3.8	18
62	Enhanced photoluminescence of Si nanocrystals-doped cellulose nanofibers by plasmonic light scattering. <i>Applied Physics Letters</i> , 2015 , 107, 041111	3.4	17
61	Triplex Glass Laminates with Silicon Quantum Dots for Luminescent Solar Concentrators. <i>Solar Rrl</i> , 2020 , 4, 2000195	7.1	16
60	Size-Dependent Photocatalytic Activity of Colloidal Silicon Quantum Dot. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 1874-1880	3.8	16

59	Size and dopant-concentration dependence of photoluminescence properties of ion-implanted phosphorus- and boron-codoped Si nanocrystals. <i>Physical Review B</i> , 2015 , 91,	3.3	16
58	Fluorescence Enhancement and Spectral Shaping of Silicon Quantum Dot Monolayer by Plasmonic Gap Resonances. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 28795-28801	3.8	16
57	Controlling Surface Plasmon Resonance of Metal Nanocap for Upconversion Enhancement. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 8077-8083	3.8	15
56	Size-controlled growth of cubic boron phosphide nanocrystals. <i>RSC Advances</i> , 2015 , 5, 8427-8431	3.7	15
55	DNA assembly of silicon quantum dots/gold nanoparticle nanocomposites. <i>RSC Advances</i> , 2016 , 6, 63933-63939	3.7	15
54	Long-lived luminescence of colloidal silicon quantum dots for time-gated fluorescence imaging in the second near infrared window in biological tissue. <i>Nanoscale</i> , 2018 , 10, 13902-13907	7.7	15
53	Doping efficiency and confinement of donors in embedded and free standing Si nanocrystals. <i>Physical Review B</i> , 2016 , 93,	3.3	14
52	Selective excitation and enhancement of multipolar resonances in dielectric nanospheres using cylindrical vector beams. <i>Journal of Applied Physics</i> , 2020 , 127, 033101	2.5	12
51	Colloidal Solutions of Silicon Nanospheres toward All-Dielectric Optical Metafluids. <i>Nano Letters</i> , 2020 , 20, 7737-7743	11.5	12
50	Coupled Toroidal Dipole Modes in Silicon Nanodisk Metasurface: Polarization Independent Narrow Band Absorption and Directional Emission. <i>Advanced Optical Materials</i> , 2020 , 8, 2001148	8.1	12
49	Silicon Quantum Dots in Dielectric Scattering Media: Broadband Enhancement of Effective Absorption Cross Section by Light Trapping. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 19135-19142	9.5	11
48	Silicon Quantum Dots and Their Impact on Different Human Cells. <i>Physica Status Solidi (B): Basic Research</i> , 2018 , 255, 1700597	1.3	11
47	Silicon Quantum Dot Supraparticles for Fluorescence Bioimaging. <i>ACS Applied Nano Materials</i> , 2020 , 3, 6099-6107	5.6	11
46	Plasmon Launching and Scattering by Silicon Nanoparticles. <i>ACS Photonics</i> , 2021 , 8, 1582-1591	6.3	10
45	Atom probe tomography of phosphorus- and boron-doped silicon nanocrystals with various compositions of silicon rich oxide. <i>MRS Communications</i> , 2016 , 6, 283-288	2.7	10
44	Single-dot spectroscopy of boron and phosphorus codoped silicon quantum dots. <i>Journal of Applied Physics</i> , 2016 , 120, 164307	2.5	10
43	Charge-Transfer-Induced Photoluminescence Enhancement in Colloidal Silicon Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 11962-11967	3.8	9
42	Antibody-conjugated near-infrared luminescent silicon quantum dots for biosensing. <i>MRS Communications</i> , 2019 , 9, 1079-1086	2.7	9

41	Visible-light driven photocatalytic hydrogen generation by water-soluble all-inorganic core-shell silicon quantum dots. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 15789-15794	13	8
40	Photoluminescence enhancement of silicon quantum dot monolayer by plasmonic substrate fabricated by nano-imprint lithography. <i>Journal of Applied Physics</i> , 2017 , 122, 223101	2.5	8
39	Magnetic Purcell Enhancement by Magnetic Quadrupole Resonance of Dielectric Nanosphere Antenna. <i>ACS Photonics</i> , 2021 , 8, 1794-1800	6.3	8
38	Color Toning of Mie Resonant Silicon Nanoparticle Color Inks. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 13613-13619	9.5	8
37	Colloidal hydrophilic silicon germanium alloy nanocrystals with a high boron and phosphorus concentration shell. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 5644-5650	7.1	7
36	Precise size separation of water-soluble red-to-near-infrared-luminescent silicon quantum dots by gel electrophoresis. <i>Nanoscale</i> , 2020 , 12, 9266-9271	7.7	6
35	Size-Dependent Photocatalytic Activity of Cubic Boron Phosphide Nanocrystals in the Quantum Confinement Regime. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 23226-23235	3.8	6
34	Growth of novel boron-rich nanocrystals from oxygen-deficient borophosphosilicate glasses for boron neutron capture therapy. <i>RSC Advances</i> , 2015 , 5, 98248-98253	3.7	6
33	Thermal near-field tuning of silicon Mie nanoparticles. <i>Nanophotonics</i> , 2021 ,	6.3	6
32	Probing Purcell enhancement in plasmonic nanoantennas by broadband luminescent Si quantum dots. <i>Applied Physics Letters</i> , 2016 , 108, 241103	3.4	6
31	Angle-, Polarization-, and Wavelength-Resolved Light Scattering of Single Mie Resonators Using Fourier-Plane Spectroscopy. <i>Advanced Optical Materials</i> , 2021 , 9, 2002192	8.1	6
30	Technology and characterization of MIS structures with co-doped silicon nanocrystals (Si-NCs) embedded in hafnium oxide (HfOx) ultra-thin layers. <i>Microelectronic Engineering</i> , 2017 , 178, 298-303	2.5	5
29	Distribution of boron and phosphorus and roles of co-doping in colloidal silicon nanocrystals. <i>Acta Materialia</i> , 2019 , 178, 186-193	8.4	5
28	Metal-Core/Dielectric-Shell/Metal-Cap Composite Nanoparticle for Upconversion Enhancement. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 17465-17472	3.8	5
27	Optimizing plasmon enhanced luminescence in silicon nanocrystals by gold nanorods. <i>Nanoscale</i> , 2021 , 13, 5045-5057	7.7	5
26	Colloidal Mie Resonators for All-Dielectric Metaoptics. <i>Advanced Photonics Research</i> , 2021 , 2, 2000111	1.9	5
25	Dual modulating luminescence in all-inorganic perovskite CsPbBr ₃ quantum dots. <i>Optical Materials</i> , 2021 , 113, 110822	3.3	5
24	Critical Size for Carrier Delocalization in Doped Silicon Nanocrystals: A Study by Ultrafast Spectroscopy. <i>ACS Photonics</i> , 2018 , 5, 4037-4045	6.3	5

23	Colloidal Mie resonant silicon nanoparticles. <i>Nanotechnology</i> , 2021 , 32,	3.4	4
22	Absolute Scattering Cross Sections of Titanium Nitride Nanoparticles Determined by Single-Particle Spectroscopy: Implications for Plasmonic Nanoantennas. <i>ACS Applied Nano Materials</i> , 2019 , 2, 6769-6773 ^{5,6}	5.6	3
21	Water-dispersible near-infrared luminescent silicon nanocrystals -immobilization on substrate. <i>MRS Communications</i> , 2016 , 6, 429-436	2.7	3
20	New insights into the red luminescent bovine serum albumin conjugated gold nanospecies. <i>Journal of Alloys and Compounds</i> , 2017 , 691, 860-865	5.7	3
19	Growth of Core-Shell Silicon Quantum Dots in Borophosphosilicate Glass Matrix: Raman and Transmission Electron Microscopic Studies. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 21069-21075	3.8	3
18	Computational Discovery and Experimental Demonstration of Boron Phosphide Ultraviolet Nanoresonators. <i>Advanced Optical Materials</i> , 2200422	8.1	3
17	Silver nanoparticles stabilized with a silicon nanocrystal shell and their antimicrobial activity.. <i>RSC Advances</i> , 2019 , 9, 15171-15176	3.7	2
16	Assembling silicon quantum dots into wires, networks and rods via metal ion bridges. <i>Nanoscale</i> , 2018 , 10, 7597-7604	7.7	2
15	Silicon Nanowire on Mirror Nanoantennas: Engineering Hybrid Gap Mode for Light Sources and Sensing Platforms. <i>ACS Applied Nano Materials</i> , 2020 , 3, 7223-7230	5.6	2
14	Gold nanopillar array with sharp surface plasmon resonances and the application in immunoassay. <i>Journal of Applied Physics</i> , 2019 , 126, 223104	2.5	2
13	Solution-processed silicon quantum dot photocathode for hydrogen evolution. <i>Nanotechnology</i> , 2021 , 32,	3.4	2
12	Resonance Couplings in Si@MoS Core-Shell Architectures.. <i>Small</i> , 2022 , e2200413	11	2
11	Silicon Quantum Dot Composites for Nanophotonics 2017 , 233-246		1
10	Elongated Metal Nanocap with Two Magnetic Dipole Resonances and Its Application for Upconversion Enhancement. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 25809-25815	3.8	1
9	Charge Transfer-Induced Photobrightening of Silicon Quantum Dots in Water Containing a Molecular Reductant. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 1512-1518	3.8	1
8	3D microstructure analysis of silicon-boron phosphide mixed nanocrystals. <i>Nanoscale</i> , 2020 , 12, 7256-7262	7.7	0
7	Direct Excitation of Triplet State of Molecule by Enhanced Magnetic Field of Dielectric Metasurfaces. <i>Small</i> , 2021 , 17, e2104458	11	0
6	Stable near-infrared photoluminescence from silicon quantum dot-bovine serum albumin composites. <i>MRS Communications</i> , 2020 , 10, 680-686	2.7	0

- 5 Template-Assisted Self-Assembly of Colloidal Silicon Nanoparticles for All-Dielectric Nanoantenna. *Advanced Optical Materials*, 2102750 8.1 ○
- 4 Silicon Nanosphere with Accessible Magnetic Hotspot. *Advanced Optical Materials*, 2102574 8.1 ○
- 3 Structure and Properties of Heavily B and P Codoped Amorphous Silicon Quantum Dots. *Journal of Physical Chemistry C*, **2021**, 125, 23267-23274 3.8
- 2 Near-infrared luminescent colloidal silicon nanocrystals. *Series in Materials Science and Engineering*, **2017**, 399-412
- 1 Development of Nanoparticle Color Inks Enabled by Mie Resonance. *Hosokawa Powder Technology Foundation ANNUAL REPORT*, **2021**, 28, 49-54 ○