Hiroshi Sugimoto

List of Publications by Year in Descending Order

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	Resonance Couplings in Si@MoS Core-Shell Architectures.. *Small*, **2022**, e2200413	11	2
93	Direct Excitation of Triplet State of Molecule by Enhanced Magnetic Field of Dielectric Metasurfaces. *Small*, **2021**, 17, e2104458	11	0
92	Thermal near-field tuning of silicon Mie nanoparticles. *Nanophotonics*, **2021**,	6.3	6
91	Structure and Properties of Heavily B and P Codoped Amorphous Silicon Quantum Dots. *Journal of Physical Chemistry C*, **2021**, 125, 23267-23274	3.8	
90	Magnetic Purcell Enhancement by Magnetic Quadrupole Resonance of Dielectric Nanosphere Antenna. *ACS Photonics*, **2021**, 8, 1794-1800	6.3	8
89	Plasmon Launching and Scattering by Silicon Nanoparticles. *ACS Photonics*, **2021**, 8, 1582-1591	6.3	10
88	Development of Nanoparticle Color Inks Enabled by Mie Resonance. *Hosokawa Powder Technology Foundation ANNUAL REPORT*, **2021**, 28, 49-54	0	
87	Optimizing plasmon enhanced luminescence in silicon nanocrystals by gold nanorods. *Nanoscale*, **2021**, 13, 5045-5057	7.7	5
86	Colloidal Mie Resonators for All-Dielectric Metaoptics. *Advanced Photonics Research*, **2021**, 2, 2000111	1.9	5
85	Angle-, Polarization-, and Wavelength-Resolved Light Scattering of Single Mie Resonators Using Fourier-Plane Spectroscopy. *Advanced Optical Materials*, **2021**, 9, 2002192	8.1	6
84	Color Toning of Mie Resonant Silicon Nanoparticle Color Inks. *ACS Applied Materials & Interfaces*, **2021**, 13, 13613-13619	9.5	8
83	Dual modulating luminescence in all-inorganic perovskite CsPbBr3 quantum dots. *Optical Materials*, **2021**, 113, 110822	3.3	5
82	Colloidal Mie resonant silicon nanoparticles. *Nanotechnology*, **2021**, 32,	3.4	4
81	Solution-processed silicon quantum dot photocathode for hydrogen evolution. *Nanotechnology*, **2021**, 32,	3.4	2
80	Triplex Glass Laminates with Silicon Quantum Dots for Luminescent Solar Concentrators. *Solar Rrl*, **2020**, 4, 2000195	7.1	16
79	Excitation of Nonradiating Anapoles in Dielectric Nanospheres. *Physical Review Letters*, **2020**, 124, 097402	7.4	25
78	3D microstructure analysis of silicon-boron phosphide mixed nanocrystals. *Nanoscale*, **2020**, 12, 7256-7262	7.7	0

77	Visible-light driven photocatalytic hydrogen generation by water-soluble all-inorganic core–shell silicon quantum dots. *Journal of Materials Chemistry A*, **2020**, 8, 15789-15794	13	8
76	Selective excitation and enhancement of multipolar resonances in dielectric nanospheres using cylindrical vector beams. *Journal of Applied Physics*, **2020**, 127, 033101	2.5	12
75	Precise size separation of water-soluble red-to-near-infrared-luminescent silicon quantum dots by gel electrophoresis. *Nanoscale*, **2020**, 12, 9266-9271	7.7	6
74	Silicon Quantum Dot Supraparticles for Fluorescence Bioimaging. *ACS Applied Nano Materials*, **2020**, 3, 6099-6107	5.6	11
73	Quantitative Understanding of Charge-Transfer-Mediated Fe Sensing and Fast Photoresponse by N-Doped Graphene Quantum Dots Decorated on Plasmonic Au Nanoparticles. *ACS Applied Materials & Interfaces*, **2020**, 12, 4755-4768	9.5	28
72	Colloidal Solutions of Silicon Nanospheres toward All-Dielectric Optical Metafluids. *Nano Letters*, **2020**, 20, 7737-7743	11.5	12
71	Silicon Nanowire on Mirror Nanoantennas: Engineering Hybrid Gap Mode for Light Sources and Sensing Platforms. *ACS Applied Nano Materials*, **2020**, 3, 7223-7230	5.6	2
70	Stable near-infrared photoluminescence from silicon quantum dot–bovine serum albumin composites. *MRS Communications*, **2020**, 10, 680-686	2.7	0
69	Coupled Toroidal Dipole Modes in Silicon Nanodisk Metasurface: Polarization Independent Narrow Band Absorption and Directional Emission. *Advanced Optical Materials*, **2020**, 8, 2001148	8.1	12
68	Mie Resonator Color Inks of Monodispersed and Perfectly Spherical Crystalline Silicon Nanoparticles. *Advanced Optical Materials*, **2020**, 8, 2000033	8.1	26
67	Absolute Scattering Cross Sections of Titanium Nitride Nanoparticles Determined by Single-Particle Spectroscopy: Implications for Plasmonic Nanoantennas. *ACS Applied Nano Materials*, **2019**, 2, 6769-6773	5.6	3
66	Distribution of boron and phosphorus and roles of co-doping in colloidal silicon nanocrystals. *Acta Materialia*, **2019**, 178, 186-193	8.4	5
65	Elongated Metal Nanocap with Two Magnetic Dipole Resonances and Its Application for Upconversion Enhancement. *Journal of Physical Chemistry C*, **2019**, 123, 25809-25815	3.8	1
64	Silver nanoparticles stabilized with a silicon nanocrystal shell and their antimicrobial activity.. *RSC Advances*, **2019**, 9, 15171-15176	3.7	2
63	Forward to Backward Scattering Ratio of Dielectric–Metal Heterodimer Suspended in Almost Free-Space. *Advanced Optical Materials*, **2019**, 7, 1900591	8.1	19
62	Size-Dependent Photocatalytic Activity of Cubic Boron Phosphide Nanocrystals in the Quantum Confinement Regime. *Journal of Physical Chemistry C*, **2019**, 123, 23226-23235	3.8	6
61	Evidence for plasmonic hot electron injection induced superior visible light photocatalysis by g-C3N4 nanosheets decorated with Ag–TiO2(B) and Au–TiO2(B) nanorods. *Solar Energy Materials and Solar Cells*, **2019**, 201, 110053	6.4	21
60	Antibody-conjugated near-infrared luminescent silicon quantum dots for biosensing. *MRS Communications*, **2019**, 9, 1079-1086	2.7	9

59	Gold nanopillar array with sharp surface plasmon resonances and the application in immunoassay. *Journal of Applied Physics*, **2019**, 126, 223104	2.5	2
58	Charge Transfer-Induced Photobrightening of Silicon Quantum Dots in Water Containing a Molecular Reductant. *Journal of Physical Chemistry C*, **2019**, 123, 1512-1518	3.8	1
57	Silicon Quantum Dots and Their Impact on Different Human Cells. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700597	1.3	11
56	Size-Dependent Photocatalytic Activity of Colloidal Silicon Quantum Dot. *Journal of Physical Chemistry C*, **2018**, 122, 1874-1880	3.8	16
55	Silicon quantum dots with heavily boron and phosphorus codoped shell. *Chemical Communications*, **2018**, 54, 4375-4389	5.8	18
54	Assembling silicon quantum dots into wires, networks and rods via metal ion bridges. *Nanoscale*, **2018**, 10, 7597-7604	7.7	2
53	Visualizing a core-shell structure of heavily doped silicon quantum dots by electron microscopy using an atomically thin support film. *Nanoscale*, **2018**, 10, 7357-7362	7.7	19
52	Broadband Dielectric–Metal Hybrid Nanoantenna: Silicon Nanoparticle on a Mirror. *ACS Photonics*, **2018**, 5, 1986-1993	6.3	43
51	Hybridized Plasmonic Gap Mode of Gold Nanorod on Mirror Nanoantenna for Spectrally Tailored Fluorescence Enhancement. *ACS Photonics*, **2018**, 5, 3421-3427	6.3	30
50	Metal-Core/Dielectric-Shell/Metal-Cap Composite Nanoparticle for Upconversion Enhancement. *Journal of Physical Chemistry C*, **2018**, 122, 17465-17472	3.8	5
49	Donor-Acceptor Pair Recombination in Size-Purified Silicon Quantum Dots. *Nano Letters*, **2018**, 18, 7282-7288	11.5	21
48	Critical Size for Carrier Delocalization in Doped Silicon Nanocrystals: A Study by Ultrafast Spectroscopy. *ACS Photonics*, **2018**, 5, 4037-4045	6.3	5
47	Growth of Core–Shell Silicon Quantum Dots in Borophosphosilicate Glass Matrix: Raman and Transmission Electron Microscopic Studies. *Journal of Physical Chemistry C*, **2018**, 122, 21069-21075	3.8	3
46	Long-lived luminescence of colloidal silicon quantum dots for time-gated fluorescence imaging in the second near infrared window in biological tissue. *Nanoscale*, **2018**, 10, 13902-13907	7.7	15
45	Photoluminescence Enhancement of Silicon Quantum Dot Monolayer by Double Resonance Plasmonic Substrate. *Journal of Physical Chemistry C*, **2017**, 121, 11609-11615	3.8	21
44	Charge-Transfer-Induced Photoluminescence Enhancement in Colloidal Silicon Quantum Dots. *Journal of Physical Chemistry C*, **2017**, 121, 11962-11967	3.8	9
43	Silicon Quantum Dots in Dielectric Scattering Media: Broadband Enhancement of Effective Absorption Cross Section by Light Trapping. *ACS Applied Materials & Interfaces*, **2017**, 9, 19135-19142	9.5	11
42	Technology and characterization of MIS structures with co-doped silicon nanocrystals (Si-NCs) embedded in hafnium oxide (HfOx) ultra-thin layers. *Microelectronic Engineering*, **2017**, 178, 298-303	2.5	5

41	Silicon Quantum Dot Composites for Nanophotonics **2017**, 233-246		1
40	Controlling Surface Plasmon Resonance of Metal Nanocap for Upconversion Enhancement. *Journal of Physical Chemistry C*, **2017**, 121, 8077-8083	3.8	15
39	Colloidal Dispersion of Subquarter Micrometer Silicon Spheres for Low-Loss Antenna in Visible Regime. *Advanced Optical Materials*, **2017**, 5, 1700332	8.1	35
38	Photoluminescence enhancement of silicon quantum dot monolayer by plasmonic substrate fabricated by nano-imprint lithography. *Journal of Applied Physics*, **2017**, 122, 223101	2.5	8
37	Size-dependent donor and acceptor states in codoped Si nanocrystals studied by scanning tunneling spectroscopy. *Nanoscale*, **2017**, 9, 17884-17892	7.7	21
36	New insights into the red luminescent bovine serum albumin conjugated gold nanospecies. *Journal of Alloys and Compounds*, **2017**, 691, 860-865	5.7	3
35	Near-infrared luminescent colloidal silicon nanocrystals. *Series in Materials Science and Engineering*, **2017**, 399-412		
34	Atom Probe Tomography Analysis of Boron and/or Phosphorus Distribution in Doped Silicon Nanocrystals. *Journal of Physical Chemistry C*, **2016**, 120, 17845-17852	3.8	55
33	Doping efficiency and confinement of donors in embedded and free standing Si nanocrystals. *Physical Review B*, **2016**, 93,	3.3	14
32	Water-dispersible near-infrared luminescent silicon nanocrystals -immobilization on substrate. *MRS Communications*, **2016**, 6, 429-436	2.7	3
31	The impact of doped silicon quantum dots on human osteoblasts. *RSC Advances*, **2016**, 6, 63403-63413	3.7	29
30	Size-Dependence of Acceptor and Donor Levels of Boron and Phosphorus Codoped Colloidal Silicon Nanocrystals. *Nano Letters*, **2016**, 16, 2615-20	11.5	64
29	Surface Structure and Current Transport Property of Boron and Phosphorus Co-Doped Silicon Nanocrystals. *Journal of Physical Chemistry C*, **2016**, 120, 195-200	3.8	20
28	All-inorganic colloidal silicon nanocrystals-surface modification by boron and phosphorus co-doping. *Nanotechnology*, **2016**, 27, 262001	3.4	59
27	DNA assembly of silicon quantum dots/gold nanoparticle nanocomposites. *RSC Advances*, **2016**, 6, 63933-63939	3.7	15
26	Fluorescence Enhancement and Spectral Shaping of Silicon Quantum Dot Monolayer by Plasmonic Gap Resonances. *Journal of Physical Chemistry C*, **2016**, 120, 28795-28801	3.8	16
25	Probing Purcell enhancement in plasmonic nanoantennas by broadband luminescent Si quantum dots. *Applied Physics Letters*, **2016**, 108, 241103	3.4	6
24	Atom probe tomography of phosphorus- and boron-doped silicon nanocrystals with various compositions of silicon rich oxide. *MRS Communications*, **2016**, 6, 283-288	2.7	10

23	Single-dot spectroscopy of boron and phosphorus codoped silicon quantum dots. *Journal of Applied Physics*, **2016**, 120, 164307	2.5	10
22	Silicon nanocrystal-noble metal hybrid nanoparticles. *Nanoscale*, **2016**, 8, 10956-62	7.7	27
21	Controlling Energy Transfer in Silicon Quantum Dot Assemblies Made from All-Inorganic Colloidal Silicon Quantum Dots. *Journal of Physical Chemistry C*, **2016**, 120, 24469-24475	3.8	18
20	Plasmon-Enhanced Emission Rate of Silicon Nanocrystals in Gold Nanorod Composites. *ACS Photonics*, **2015**, 2, 1298-1305	6.3	22
19	Energy Transfer in Silicon Nanocrystal Solids Made from All-Inorganic Colloidal Silicon Nanocrystals. *Journal of Physical Chemistry Letters*, **2015**, 6, 2761-6	6.4	24
18	Surface Plasmon-Enhanced Luminescence of Silicon Quantum Dots in Gold Nanoparticle Composites. *Journal of Physical Chemistry C*, **2015**, 119, 25108-25113	3.8	19
17	Broadband enhancement of local density of states using silicon-compatible hyperbolic metamaterials. *Applied Physics Letters*, **2015**, 106, 241105	3.4	20
16	Size and dopant-concentration dependence of photoluminescence properties of ion-implanted phosphorus- and boron-codoped Si nanocrystals. *Physical Review B*, **2015**, 91,	3.3	16
15	Enhanced photoluminescence of Si nanocrystals-doped cellulose nanofibers by plasmonic light scattering. *Applied Physics Letters*, **2015**, 107, 041111	3.4	17
14	Size-controlled growth of cubic boron phosphide nanocrystals. *RSC Advances*, **2015**, 5, 8427-8431	3.7	15
13	Growth of novel boron-rich nanocrystals from oxygen-deficient borophosphosilicate glasses for boron neutron capture therapy. *RSC Advances*, **2015**, 5, 98248-98253	3.7	6
12	All-inorganic water-dispersible silicon quantum dots: highly efficient near-infrared luminescence in a wide pH range. *Nanoscale*, **2014**, 6, 122-6	7.7	67
11	Synthesis of boron and phosphorus codoped all-inorganic colloidal silicon nanocrystals from hydrogen silsesquioxane. *Nanoscale*, **2014**, 6, 12354-9	7.7	27
10	Colloidal hydrophilic silicon germanium alloy nanocrystals with a high boron and phosphorus concentration shell. *Journal of Materials Chemistry C*, **2014**, 2, 5644-5650	7.1	7
9	Silicon nanocrystals with high boron and phosphorus concentration hydrophilic shell: Raman scattering and X-ray photoelectron spectroscopic studies. *Journal of Applied Physics*, **2014**, 115, 084301	2.5	44
8	Phosphorus and Boron Codoped Colloidal Silicon Nanocrystals with Inorganic Atomic Ligands. *Journal of Physical Chemistry C*, **2013**, 117, 6807-6813	3.8	68
7	Codoping n- and p-Type Impurities in Colloidal Silicon Nanocrystals: Controlling Luminescence Energy from below Bulk Band Gap to Visible Range. *Journal of Physical Chemistry C*, **2013**, 117, 11850-11857	3.8	115
6	All-Inorganic Near-Infrared Luminescent Colloidal Silicon Nanocrystals: High Dispersibility in Polar Liquid by Phosphorus and Boron Codoping. *Journal of Physical Chemistry C*, **2012**, 116, 17969-17974	3.8	95

5	Acceptor-related low-energy photoluminescence from boron-doped Si nanocrystals. *Journal of Applied Physics*, **2011**, 110, 063528	2.5	22
4	Surfactant-free solution-dispersible Si nanocrystals surface modification by impurity control. *Optics Letters*, **2011**, 36, 4026-8	3	31
3	Template-Assisted Self-Assembly of Colloidal Silicon Nanoparticles for All-Dielectric Nanoantenna. *Advanced Optical Materials*,2102750	8.1	0
2	Silicon Nanosphere with Accessible Magnetic Hotspot. *Advanced Optical Materials*,2102574	8.1	0
1	Computational Discovery and Experimental Demonstration of Boron Phosphide Ultraviolet Nanoresonators. *Advanced Optical Materials*,2200422	8.1	3