KateÅina KÅ¯sovÃ¡

List of Publications by Year
in descending order

49 papers	1,191 citations	471509 17 h-index	377865 34 g-index
50 all docs	50 docs citations	50 times ranked	1195 citing authors

#	Article	IF	Citations
1	Silicon quantum dots: surface matters. Journal of Physics Condensed Matter, 2014, 26, 173201.	1.8	163
2	Brightly Luminescent Organically Capped Silicon Nanocrystals Fabricated at Room Temperature and Atmospheric Pressure. ACS Nano, 2010, 4, 4495-4504.	14.6	161
3	Theoretical analysis of electronic band structure of 2- to 3-nm Si nanocrystals. Physical Review B, 2013, 87, .	3.2	83
4	On the origin of the fast photoluminescence band in small silicon nanoparticles. New Journal of Physics, 2008, 10, 073022.	2.9	80
5	White-emitting oxidized silicon nanocrystals: Discontinuity in spectral development with reducing size. Journal of Applied Physics, 2010, 107, .	2.5	67
6	Direct Bandgap Silicon: Tensileâ€Strained Silicon Nanocrystals. Advanced Materials Interfaces, 2014, 1, 1300042.	3.7	65
7	Lightâ€Emission Performance of Silicon Nanocrystals Deduced from Single Quantum Dot Spectroscopy. Advanced Functional Materials, 2008, 18, 2666-2672.	14.9	64
8	Luminescence of free-standing versus matrix-embedded oxide-passivated silicon nanocrystals: The role of matrix-induced strain. Applied Physics Letters, 2012, 101, .	3.3	61
9	Time-resolved photoluminescence spectroscopy of the initial oxidation stage of small silicon nanocrystals. Applied Physics Letters, 2009, 94, 211903.	3.3	46
10	A complex study of the fast blue luminescence of oxidized silicon nanocrystals: the role of the core. Nanoscale, 2014, 6, 3837.	5.6	38
11	Closely packed luminescent silicon nanocrystals in a distributed-feedback laser cavity. New Journal of Physics, 2008, 10, 063014.	2.9	36
12	Optical gain at the F-band of oxidized silicon nanocrystals. Journal Physics D: Applied Physics, 2009, 42, 135102.	2.8	35
13	Thin polycrystalline diamond films protecting zirconium alloys surfaces: From technology to layer analysis and application in nuclear facilities. Applied Surface Science, 2015, 359, 621-628.	6.1	28
14	Bright trions in direct-bandgap silicon nanocrystals revealed by low-temperature single-nanocrystal spectroscopy. Light: Science and Applications, 2015, 4, e336-e336.	16.6	24
15	AFM topographies of densely packed nanoparticles: a quick way to determine the lateral size distribution by autocorrelation function analysis. Journal of Nanoparticle Research, 2012, 14, 1.	1.9	23
16	THz photoconductivity in light-emitting surface-oxidized Si nanocrystals: the role of large particles. New Journal of Physics, 2014, 16, 093013.	2.9	19
17	Yellow-emitting colloidal suspensions of silicon nanocrystals: Fabrication technology, luminescence performance and application prospects. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 982-985.	2.7	18
18	Electronic Structure Engineering Achieved via Organic Ligands in Silicon Nanocrystals. Chemistry of Materials, 2020, 32, 6326-6337.	6.7	17

#	Article	IF	Citations
19	Tuning luminescence properties of silicon nanocrystals by lithium doping. Journal of Applied Physics, 2012, 112, .	2.5	16
20	Enhanced photoluminescence extraction efficiency from a diamond photonic crystal via leaky modes. New Journal of Physics, 2011, 13, 063005.	2.9	14
21	Silicon Nanocrystals: From Indirect to Direct Bandgap. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700718.	1.8	13
22	Non-thermal pulsed plasma activated water: environmentally friendly way for efficient surface modification of semiconductor nanoparticles. Green Chemistry, 2021, 23, 898-911.	9.0	13
23	Comment on â€œUltrafast Photoluminescence in Quantum-Confined Silicon Nanocrystals Arises from an Amorphous Surface Layerâ€• ACS Photonics, 2015, 2, 454-455.	6.6	11
24	Time-resolved measurements of optical gain and photoluminescence in silicon nanocrystals. Physica Scripta, 2010, T141, 014011.	2.5	10
25	Nanocrystalline silicon in biological studies. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1093-1096.	0.8	9
26	Comprehensive description of blinking-dynamics regimes in single direct-band-gap silicon nanocrystals. Physical Review B, 2016, 93, .	3.2	9
27	On the importance of onset times and multiple-wavelength analysis of photoluminescence decays. Journal of Applied Physics, 2019, 125, 193103.	2.5	9
28	The red and blue luminescence in silicon nanocrystals with an oxidized, nitrogen-containing shell. Faraday Discussions, 2020, 222, 240-257.	3.2	8
29	Plasmon modes in light emission from silver nanoparticles induced by a scanning tunneling microscope. Surface Science, 2008, 602, 345-348.	1.9	7
30	Towards a Germanium and Silicon Laser: The History and the Present. Crystals, 2019, 9, 624.	2.2	7
31	In-situ plasma monitoring by optical emission spectroscopy during pulsed laser deposition of doped Lu2O3. Applied Physics B: Lasers and Optics, 2021, 127, 1.	2.2	6
32	Silicon nanocrystals as fast and efficient light emitters for optical gain. Journal of Non-Crystalline Solids, 2012, 358, 2130-2133.	3.1	5
33	Highly spherical SiC nanoparticles grown in nonthermal plasma. Plasma Processes and Polymers, 2022, 19, e2100127.	3.0	5
34	Emission properties of a distributed feedback laser cavity containing silicon nanocrystals. Journal of Luminescence, 2006, 121, 259-262.	3.1	4
35	Ultrafast decay of femtosecond laser-induced grating in silicon-quantum-dot-based optical waveguides. Journal Physics D: Applied Physics, 2008, 41, 015103.	2.8	3
36	Optical Properties of Si Nanocrystals Enhanced by Ligands. Topics in Applied Physics, 2021, , 3-65.	0.8	3

#	Article	IF	Citations
37	Organically capped silicon nanocrystals. , 2017, , 367-398.		3
38	Synthesis and surface modification of light emitting silicon nanoparticles using non-thermal plasma techniques. EPJ Applied Physics, 2020, 89, 20401.	0.7	2
39	Trap-State-Induced Becquerel Type of Photoluminescence Decay in DPA-Activated Silicon Nanocrystals. Journal of Physical Chemistry C, 2021, 125, 2055-2063.	3.1	2
40	Photoluminescence of nanoporous silicon grains in TiO₂ matrices. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1713-1716.	0.8	1
41	Electronic and optical nature of silicon nanostructures: doping, interface effects and strain. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 133-133.	0.8	1
42	Organically capped silicon nanocrystals. Series in Materials Science and Engineering, 2017, , 367-398.	0.1	1
43	Silicon nanocrystals as light sources: stable, efficient and fast photoluminescence with suitable passivation. International Journal of Nanotechnology, 2012, 9, 717.	0.2	0
44	THz photoconductivity in Si nanocrystals: Issues of (non)percolation. , 2013, , .		0
45	Energy transfer channel between silicon nanocrystals and an optical center emitting above their bandgap. Journal of Luminescence, 2019, 215, 116685.	3.1	0
46	Optical and electronic properties: from theory to experiments: general discussion. Faraday Discussions, 2020, 222, 294-303.	3.2	0
47	Synthesis and functionalisation of silicon nanostructures: general discussion. Faraday Discussions, 2020, 222, 166-175.	3.2	0
48	Colloidal Solution of Organically Capped Si Nanocrystals in Xylene: Efficient Photoluminescence in the Yellow Region. , 2008, , .		0
49	Chapter 4 Band Structure of Silicon Nanocrystals. , 2016, , 109-144.		0