

Leonid Tsybeskov

List of Publications by Year in descending order

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70
papers

3,227
citations

236612

25
h-index

149479

56
g-index

72
all docs

72
docs citations

72
times ranked

2137
citing authors

#	ARTICLE	IF	CITATIONS
1	Silicon-based visible light-emitting devices integrated into microelectronic circuits. <i>Nature</i> , 1996, 384, 338-341.	13.7	793
2	Blue emission in porous silicon: Oxygen-related photoluminescence. <i>Physical Review B</i> , 1994, 49, 7821-7824.	1.1	323
3	Nanocrystalline-silicon superlattice produced by controlled recrystallization. <i>Applied Physics Letters</i> , 1998, 72, 43-45.	1.5	243
4	Ordering and self-organization in nanocrystalline silicon. <i>Nature</i> , 2000, 407, 358-361.	13.7	230
5	Thermal crystallization of amorphous Si/SiO ₂ superlattices. <i>Applied Physics Letters</i> , 1999, 74, 2614-2616.	1.5	187
6	Stable and efficient electroluminescence from a porous silicon-based bipolar device. <i>Applied Physics Letters</i> , 1996, 68, 2058-2060.	1.5	161
7	Correlation between photoluminescence and surface species in porous silicon: Low-temperature annealing. <i>Applied Physics Letters</i> , 1994, 64, 1983-1985.	1.5	110
8	Light-emitting porous silicon: materials science, properties, and device applications. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 1995, 1, 1126-1139.	1.9	84
9	Nanocrystalline Silicon for Optoelectronic Applications. <i>MRS Bulletin</i> , 1998, 23, 33-38.	1.7	80
10	Silicon-Germanium Nanostructures for Light Emitters and On-Chip Optical Interconnects. <i>Proceedings of the IEEE</i> , 2009, 97, 1284-1303.	16.4	78
11	Intrinsic band-edge photoluminescence from silicon clusters at room temperature. <i>Physical Review B</i> , 1996, 54, R8361-R8364.	1.1	66
12	How methanol affects the surface of blue and red emitting porous silicon. <i>Applied Physics Letters</i> , 1995, 66, 3669-3671.	1.5	63
13	Photoluminescence and electroluminescence in partially oxidized porous silicon. <i>Solid State Communications</i> , 1995, 95, 429-433.	0.9	57
14	Preparation and characterization of ultrathin porous silicon films. <i>Applied Physics Letters</i> , 1995, 66, 1662-1664.	1.5	54
15	Room-temperature photoluminescence and electroluminescence from Er-doped silicon-rich silicon oxide. <i>Applied Physics Letters</i> , 1997, 70, 1790-1792.	1.5	47
16	Photoluminescence and Raman scattering in three-dimensional Si/Si _{1-x} Ge _x nanostructures. <i>Applied Physics Letters</i> , 2004, 84, 1293-1295.	1.5	45
17	Stable photoluminescence and electroluminescence from porous silicon. <i>Thin Solid Films</i> , 1997, 297, 254-260.	0.8	44
18	A Si-based light-emitting diode with room-temperature electroluminescence at 1.1 eV. <i>Applied Physics Letters</i> , 1996, 69, 3411-3413.	1.5	37

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19	Fabrication of Nanocrystalline Silicon Superlattices by Controlled Thermal Recrystallization. <i>Physica Status Solidi A</i> , 1998, 165, 69-77.	1.7	37
20	Phonon-assisted tunneling and interface quality in nanocrystalline Si/amorphous SiO ₂ superlattices. <i>Applied Physics Letters</i> , 1999, 75, 2265-2267.	1.5	37
21	Room temperature electroluminescence from a c-Si ^δ -i-n structure. <i>Journal of Applied Physics</i> , 2001, 90, 2310-2313.	1.1	28
22	Porous Silicon Physics and Device Applications: A Status Report. <i>Physica Status Solidi A</i> , 1998, 165, 3-13.	1.7	27
23	Polarized Raman scattering and localized embedded strain in self-organized Si/Ge nanostructures. <i>Applied Physics Letters</i> , 2003, 83, 5035-5037.	1.5	27
24	Time-resolved photoluminescence measurements in spark-processed blue and green emitting silicon. <i>Solid State Communications</i> , 1995, 95, 553-557.	0.9	25
25	Resonant tunneling in partially disordered silicon nanostructures. <i>Europhysics Letters</i> , 2001, 55, 552-558.	0.7	25
26	Electrochemical polymerization, optical and electrical characterizations of polycarbazole on single wall carbon nanotubes. <i>Synthetic Metals</i> , 2005, 151, 202-207.	2.1	25
27	Excitation-dependent photoluminescence in Ge ^δ -Si Stranski-Krastanov nanostructures. <i>Applied Physics Letters</i> , 2006, 89, 153106.	1.5	23
28	Photoluminescence dynamics and Auger fountain in three-dimensional Si/SiGe multilayer nanostructures. <i>Physical Review B</i> , 2009, 79, .	1.1	21
29	Raman scattering in Si/SiGe nanostructures: Revealing chemical composition, strain, intermixing, and heat dissipation. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	20
30	Photocarrier drift-mobility measurements and electron localization in nanoporous silicon. <i>Chemical Physics</i> , 2002, 284, 129-138.	0.9	19
31	Optical properties of Stranski-Krastanov grown three-dimensional Si/Si _{1-x} Ge _x nanostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005, 26, 174-179.	1.3	18
32	Laser-induced structural modifications in nanocrystalline silicon/amorphous silicon dioxide superlattices. <i>Applied Physics Letters</i> , 2006, 88, 143117.	1.5	18
33	Optical properties of Ge nanowires grown on Si(100) and (111) substrates: Nanowire-substrate heterointerfaces. <i>Physica Status Solidi A</i> , 2005, 202, 2753-2758.	1.7	17
34	Carrier tunneling in nanocrystalline silicon-silicon dioxide superlattices: A weak coupling model. <i>Physical Review B</i> , 2004, 69, .	1.1	14
35	Controlled Nucleation of Silicon Nanocrystals on a Periodic Template. <i>Nano Letters</i> , 2001, 1, 643-646.	4.5	13
36	Photoluminescence and Raman scattering in axial Si/Ge nanowire heterojunctions. <i>Applied Physics Letters</i> , 2009, 95, 133120.	1.5	12

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37	Strongly nonlinear luminescence in oxidized porous silicon films. Journal of Luminescence, 1998, 80, 99-102.	1.5	10
38	Fast light-emitting silicon-germanium nanostructures for optical interconnects. Optical and Quantum Electronics, 2012, 44, 505-512.	1.5	10
39	Structural and optical properties of axial silicon-germanium nanowire heterojunctions. Journal of Applied Physics, 2015, 118, .	1.1	10
40	Silicon-germanium nanostructures for on-chip optical interconnects. Applied Physics A: Materials Science and Processing, 2009, 95, 1015-1027.	1.1	9
41	Deposition of Erbium Containing Film in Porous Silicon from Ethanol Solution of Erbium Salt. Journal of Porous Materials, 2000, 7, 37-40.	1.3	8
42	Excitation wavelength dependent photoluminescence in structurally non-uniform Si/SiGe-island heteroepitaxial multilayers. Journal of Applied Physics, 2012, 111, 114313.	1.1	8
43	Self-organization and ordering in nanocrystalline Si/SiO ₂ superlattices. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 11, 99-103.	1.3	7
44	Fast and intense photoluminescence in a SiGe nano-layer embedded in multilayers of Si/SiGe clusters. Applied Physics Letters, 2013, 103, 033103.	1.5	7
45	Erbium-doped oxidized porous silicon for integrated optical waveguides. Technical Physics Letters, 1999, 25, 705-706.	0.2	5
46	Carrier transport in Ge nanowire/Si substrate heterojunctions. Journal of Applied Physics, 2007, 101, 104303.	1.1	5
47	Time-resolved carrier tunneling in nanocrystalline silicon/amorphous silicon dioxide superlattices. Applied Physics Letters, 2003, 83, 5229-5231.	1.5	4
48	Optical Properties of Composition-Controlled Three-Dimensional Si/Si _{1-x} Ge _x Nanostructures. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1579-1584.	1.9	4
49	Strain-induced lateral self-organization in Si/SiO ₂ nanostructures. Applied Physics Letters, 2010, 96, 013105.	1.5	4
50	Photoluminescence fatigue in three-dimensional silicon/silicon-germanium nanostructures. Journal of Applied Physics, 2012, 111, 064318.	1.1	4
51	Fast Light-Emitting Silicon-Germanium Nanostructures. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 225-231.	1.9	4
52	Photoluminescence in PbS nanocrystal thin films: Nanocrystal density, film morphology and energy transfer. Journal of Applied Physics, 2020, 128, 134301.	1.1	4
53	Self-assembled silicon-germanium nanostructures for CMOS compatible light emitters. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2870-2874.	0.8	3
54	Charge carrier transport in a structure with silicon nanocrystals embedded into oxide matrix. Semiconductors, 2006, 40, 1052-1054.	0.2	2

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55	Carrier recombination in tailored multilayer Si/Si _{1-x} Ge nanostructures. Physica B: Condensed Matter, 2014, 453, 29-33.	1.3	2
56	Exciton photoluminescence and energy transfer in nanocrystalline Si/ Si dioxide superlattice structures. Materials Research Society Symposia Proceedings, 2003, 789, 81.	0.1	1
57	OPTICAL PROPERTIES OF Ge NANOWIRES GROWN ON SILICON (100) AND (111) SUBSTRATES. Materials Research Society Symposia Proceedings, 2004, 832, 279.	0.1	1
58	Structural Modifications of nc-Si/SiO ₂ Superlattices by Localized Photo-induced Heating. Materials Research Society Symposia Proceedings, 2004, 832, 297.	0.1	1
59	(Invited) Fast and Slow Light-Emitting Silicon-Germanium Nanostructures. ECS Transactions, 2013, 53, 3-16.	0.3	1
60	Inelastic light scattering spectroscopy in Si/SiGe nanostructures: Strain, chemical composition and thermal properties. Solid State Communications, 2016, 245, 25-30.	0.9	1
61	Determining Strain, Chemical Composition, and Thermal Properties of Si/SiGe Nanostructures Via Raman Scattering Spectroscopy. ECS Transactions, 2018, 86, 99-113.	0.3	1
62	Carrier Tunneling, Current Instabilities, and Negative Differential Conductivity in Nanocrystalline Silicon “ Silicon Dioxide Superlattices. Materials Research Society Symposia Proceedings, 2002, 737, 285.	0.1	0
63	Carrier Transport in One-dimensional Ge Nanowires/Si Substrate Heterojunctions. Materials Research Society Symposia Proceedings, 2004, 832, 285.	0.1	0
64	Photoluminescence Excitation Dependence in Three-dimensional Si/SiGe Nanostructures. Materials Research Society Symposia Proceedings, 2006, 958, 1.	0.1	0
65	Optical Properties of Multiple, Delta-doped Si:B/Si Layers. Materials Research Society Symposia Proceedings, 2006, 958, 1.	0.1	0
66	Strain Engineering and Luminescence in Si/SiGe Three Dimensional Nanostructures. Materials Research Society Symposia Proceedings, 2011, 1305, 1.	0.1	0
67	Reversible Degradation of Photoluminescence in Si/SiGe Three Dimensional Nanostructures. Materials Research Society Symposia Proceedings, 2012, 1409, 37.	0.1	0
68	Quantitative Analysis of Raman Spectra in Si/SiGe Nanostructures. Materials Research Society Symposia Proceedings, 2013, 1510, 1.	0.1	0
69	(Invited) Structural and Optical Properties of Si/Ge Nanowire Heterojunctions. ECS Transactions, 2013, 53, 215-224.	0.3	0
70	Axial silicon-germanium nanowire heterojunctions: Structural properties and carrier transport. Journal of Applied Physics, 2019, 125, 205107.	1.1	0