

Pascal Gentile

List of Publications by Year in descending order

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130
papers

3,531
citations

101496

36
h-index

161767

54
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132
all docs

132
docs citations

132
times ranked

3680
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermally propagated Al contacts on SiGe nanowires characterized by electron beam induced current in a scanning transmission electron microscope. <i>Nanotechnology</i> , 2022, 33, 035712.	1.3	0
2	Enhancing the incorporation of Sn in vapor-liquid-solid GeSn nanowires by modulation of the droplet composition. <i>Nanotechnology</i> , 2022, 33, 245605.	1.3	0
3	Verifying the band gap narrowing in tensile strained Ge nanowires by electrical means. <i>Nanotechnology</i> , 2021, 32, 145711.	1.3	6
4	Redefining high-k dielectric materials vision at nanoscale for energy storage: A new electrochemically active protection barrier. <i>Electrochimica Acta</i> , 2021, 389, 138727.	2.6	3
5	Reversible Al Propagation in Si _x Ge _{1-x} Nanowires: Implications for Electrical Contact Formation. <i>ACS Applied Nano Materials</i> , 2020, 3, 10427-10436.	2.4	4
6	Impact of droplet composition on the nucleation rate and morphology of vapor-liquid-solid GeSn nanowires. <i>Nanotechnology</i> , 2020, 31, 405602.	1.3	5
7	In-Situ Transmission Electron Microscopy Imaging of Aluminum Diffusion in Germanium Nanowires for the Fabrication of Sub-10 nm Ge Quantum Disks. <i>ACS Applied Nano Materials</i> , 2020, 3, 1891-1899.	2.4	12
8	One Step Deposition of PEDOT-PSS on ALD Protected Silicon Nanowires: Toward Ultrarobust Aqueous Microsupercapacitors. <i>ACS Applied Energy Materials</i> , 2019, 2, 436-447.	2.5	19
9	In Situ Transmission Electron Microscopy Analysis of Aluminum-Germanium Nanowire Solid-State Reaction. <i>Nano Letters</i> , 2019, 19, 2897-2904.	4.5	39
10	In depth characterization of Ge-Si core-shell nanowires using X-ray coherent diffraction and time resolved pump-probe spectroscopy. <i>Journal of Applied Physics</i> , 2019, 126, 204304.	1.1	1
11	Understanding the energy storage mechanisms of poly(3,4-ethylenedioxythiophene)-coated silicon nanowires by electrochemical quartz crystal microbalance. <i>Materials Letters</i> , 2019, 240, 59-61.	1.3	13
12	Growth of Ge _{1-x} Sn _x Nanowires by Chemical Vapor Deposition via Vapor-Liquid-Solid Mechanism Using GeH ₄ and SnCl ₄ . <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2018, 215, 1700743.	0.8	18
13	Measurement of anisotropic thermal conductivity of a dense forest of nanowires using the 3 ω method. <i>Review of Scientific Instruments</i> , 2018, 89, 084902.	0.6	10
14	Powering electrodes for high performance aqueous micro-supercapacitors: Diamond-coated silicon nanowires operating at a wide cell voltage of 3 V. <i>Electrochimica Acta</i> , 2017, 242, 173-179.	2.6	36
15	Atomic Layer Deposition Alumina-Passivated Silicon Nanowires: Probing the Transition from Electrochemical Double-Layer Capacitor to Electrolytic Capacitor. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 13761-13769.	4.0	32
16	New electrolyte mixture of propylene carbonate and butyltrimethylammonium bis(trifluoromethylsulfonyl)imide (N1114 TFSI) for high performance silicon nanowire (SiNW)-based supercapacitor applications. <i>Electrochimica Acta</i> , 2017, 254, 368-374.	2.6	18
17	Electrochemical performance of silicon nanostructures in low-temperature ionic liquids for microelectronic applications. <i>Journal of Materials Chemistry A</i> , 2017, 5, 22708-22716.	5.2	14
18	Fabrication and characterization of a germanium nanowire light emitting diode. <i>Applied Physics Letters</i> , 2017, 111, 233103.	1.5	2

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19	Tailoring Strain and Morphology of Core-Shell SiGe Nanowires by Low-Temperature Ge Condensation. Nano Letters, 2017, 17, 7299-7305.	4.5	13
20	Silicon nanowires and nanotrees: elaboration and optimization of new 3D architectures for high performance on-chip supercapacitors. RSC Advances, 2016, 6, 81017-81027.	1.7	38
21	Uniform phosphorus doping of untapered germanium nanowires. Nanotechnology, 2016, 27, 485701.	1.3	4
22	Solder-reflow resistant solid-state micro-supercapacitors based on ionogels. Journal of Materials Chemistry A, 2016, 4, 11835-11843.	5.2	50
23	Designing 3D Multihierarchical Heteronanostructures for High-Performance On-Chip Hybrid Supercapacitors: Poly(3,4-(ethylenedioxy)thiophene)-Coated Diamond/Silicon Nanowire Electrodes in an Aprotic Ionic Liquid. ACS Applied Materials & Interfaces, 2016, 8, 18069-18077.	4.0	64
24	A step forward into hierarchically nanostructured materials for high performance micro-supercapacitors: Diamond-coated SiNW electrodes in protic ionic liquid electrolyte. Electrochemistry Communications, 2016, 63, 34-38.	2.3	39
25	Photocurrent spectroscopy and X-ray microdiffraction study of highly strained germanium nanostructures. , 2015, , .		0
26	An innovative 3-D nanoforest heterostructure made of polypyrrole coated silicon nanotrees for new high performance hybrid micro-supercapacitors. Journal of Materials Chemistry A, 2015, 3, 13978-13985.	5.2	63
27	3D hierarchical assembly of ultrathin MnO ₂ nanoflakes on silicon nanowires for high performance micro-supercapacitors in Li-doped ionic liquid. Scientific Reports, 2015, 5, 9771.	1.6	150
28	SiNWs-based electrochemical double layer micro-supercapacitors with wide voltage window (4 V) and long cycling stability using a protic ionic liquid electrolyte. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2015, 6, 015004.	0.7	10
29	Radial photovoltaic junction with single Si nanowire core-shell structure. Micro and Nano Letters, 2015, 10, 37-39.	0.6	2
30	Tensile Strained Germanium Nanowires Measured by Photocurrent Spectroscopy and X-ray Microdiffraction. Nano Letters, 2015, 15, 2429-2433.	4.5	36
31	Diamond-coated silicon nanowires for enhanced micro-supercapacitor with ionic liquids. , 2015, , .		3
32	Fabrication and characterization of silicon nanowire p-i-n MOS gated diode for use as p-type tunnel FET. Applied Physics A: Materials Science and Processing, 2015, 121, 1285-1290.	1.1	13
33	Functionalized silicon nanowires/conjugated polymer hybrid solar cells: Optical, electrical and morphological characterizations. Journal of Luminescence, 2015, 168, 315-324.	1.5	14
34	Dielectric Coating-Induced Absorption Enhancement in Si Nanowire Junctions. Advanced Optical Materials, 2015, 3, 120-128.	3.6	13
35	Diamond-coated silicon wires for supercapacitor applications in ionic liquids. Diamond and Related Materials, 2015, 51, 1-6.	1.8	75
36	Band structure engineering of strained and doped germanium nanowires and 2D layers. , 2014, , .		1

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37	Dopant profiling in silicon nanowires measured by scanning capacitance microscopy. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 312-316.	1.2	11
38	Growth strategies to control tapering in Ge nanowires. <i>APL Materials</i> , 2014, 2, .	2.2	16
39	Ultra-dense and highly doped SiNWs for micro-supercapacitors electrodes. <i>Electrochimica Acta</i> , 2014, 117, 159-163.	2.6	59
40	Tuning silicon nanowires doping level and morphology for highly efficient micro-supercapacitors. <i>Nano Energy</i> , 2014, 5, 20-27.	8.2	41
41	Impact of n -type doping on the carrier dynamics of silicon nanowires studied using optical-pump terahertz-probe spectroscopy. <i>Physical Review B</i> , 2014, 89, .	1.1	14
42	Control of the interfacial abruptness of Au-catalyzed Si-Si _{1-x} Ge _x heterostructured nanowires grown by vapor-liquid-solid. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014, 32, .	0.9	4
43	Strain control in germanium nanowires: the use of a silicon nitride shell. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 317-320.	1.2	6
44	High performance of symmetric micro-supercapacitors based on silicon nanowires using N-methyl-N-propylpyrrolidinium bis(trifluoromethylsulfonyl)imide as electrolyte. <i>Nano Energy</i> , 2014, 9, 273-281.	8.2	71
45	Hybrid nanocomposites based on conducting polymer and silicon nanowires for photovoltaic application. <i>Journal of Luminescence</i> , 2014, 156, 30-35.	1.5	11
46	Novel hybrid micro-supercapacitor based on conducting polymer coated silicon nanowires for electrochemical energy storage. <i>RSC Advances</i> , 2014, 4, 26462-26467.	1.7	63
47	Wide-voltage-window silicon nanowire electrodes for micro-supercapacitors via electrochemical surface oxidation in ionic liquid electrolyte. <i>Electrochemistry Communications</i> , 2014, 41, 31-34.	2.3	61
48	Are tomorrow's micro-supercapacitors hidden in a forest of silicon nanotrees?. <i>Journal of Power Sources</i> , 2014, 269, 740-746.	4.0	52
49	Electrical characterisation of horizontal and vertical gate-all-around Si/SiGe nanowires field effect transistors. , 2014, , .		0
50	Highly organised and dense vertical silicon nanowire arrays grown in porous alumina template on $\langle 100 \rangle$ silicon wafers. <i>Nanoscale Research Letters</i> , 2013, 8, 287.	3.1	18
51	Ultradense and planarized antireflective vertical silicon nanowire array using a bottom-up technique. <i>Nanoscale Research Letters</i> , 2013, 8, 123.	3.1	9
52	Micro-ultracapacitors with highly doped silicon nanowires electrodes. <i>Nanoscale Research Letters</i> , 2013, 8, 38.	3.1	61
53	Cu nanoparticles on 2D and 3D silica substrates: controlled size and density, and critical size in catalytic silicon nanowire growth. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1583.	2.7	20
54	Structural investigation of silicon nanowires with grazing incidence small angle X-ray scattering. <i>Micro and Nano Letters</i> , 2013, 8, 709-712.	0.6	2

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55	PtSi Clustering in Silicon Probed by Transport Spectroscopy. <i>Physical Review X</i> , 2013, 3, .	2.8	1
56	Highly N-doped Silicon Nanowires as a Possible Alternative to Carbon for On-chip Electrochemical Capacitors. <i>Electrochemistry</i> , 2013, 81, 777-782.	0.6	18
57	Effect of HCl on the doping and shape control of silicon nanowires. <i>Nanotechnology</i> , 2012, 23, 215702.	1.3	64
58	ELECTRICAL CHARACTERIZATION OF PLANAR SILICON NANOWIRE FIELD-EFFECT TRANSISTORS. <i>International Journal of Nanoscience</i> , 2012, 11, 1240011.	0.4	0
59	From planar to vertical nanowires field-effect transistors. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1439, 101-107.	0.1	0
60	Multifunctional Devices and Logic Gates With Undoped Silicon Nanowires. <i>Nano Letters</i> , 2012, 12, 3074-3079.	4.5	91
61	Supported platinum nanotubes array as new fuel cell electrode architecture. <i>Electrochimica Acta</i> , 2012, 78, 98-108.	2.6	11
62	Geometrical control of photocurrent in active Si nanowire devices. <i>Nano Energy</i> , 2012, 1, 714-722.	8.2	15
63	Gold Contamination in VLS-Grown Si Nanowires: Multiwavelength Anomalous Diffraction Investigations. <i>Chemistry of Materials</i> , 2012, 24, 4511-4516.	3.2	16
64	Hidden defects in silicon nanowires. <i>Nanotechnology</i> , 2012, 23, 025701.	1.3	33
65	Highly doped silicon nanowires based electrodes for micro-electrochemical capacitor applications. <i>Electrochemistry Communications</i> , 2012, 25, 109-111.	2.3	75
66	High-performance silicon nanowire field-effect transistor with silicided contacts. <i>Semiconductor Science and Technology</i> , 2011, 26, 085020.	1.0	40
67	Joule-Assisted Silicidation for Short-Channel Silicon Nanowire Devices. <i>ACS Nano</i> , 2011, 5, 7117-7123.	7.3	27
68	High density core-shell silicon nanowire array for the realization of third generation solar cell. <i>Energy Procedia</i> , 2011, 10, 33-37.	1.8	6
69	Quantum confinement effects and strain-induced band-gap energy shifts in core-shell Si-SiO ₂ nanowires. <i>Physical Review B</i> , 2011, 83, .	1.1	17
70	Controlled growth of SiGe nanowires by addition of HCl in the gas phase. <i>Journal of Applied Physics</i> , 2011, 110, 024311.	1.1	26
71	Organized porous alumina membranes for high density silicon nanowires growth. <i>Microelectronic Engineering</i> , 2011, 88, 2844-2847.	1.1	4
72	Electrical characteristics of a vertically integrated field-effect transistor using non-intentionally doped Si nanowires. <i>Microelectronic Engineering</i> , 2011, 88, 3312-3315.	1.1	17

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73	Growth and characterization of gold catalyzed SiGe nanowires and alternative metal-catalyzed Si nanowires. <i>Nanoscale Research Letters</i> , 2011, 6, 187.	3.1	19
74	Confined growth of silicon nanowires as a possible process for third generation solar cells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011, 8, 812-815.	0.8	3
75	Grazing Incidence X-ray Diffraction investigation of strains in silicon nanowires obtained by gold catalytic growth. <i>Surface Science</i> , 2011, 605, 570-576.	0.8	11
76	Vertically integrated silicon-germanium nanowire field-effect transistor. <i>Applied Physics Letters</i> , 2011, 99, 193107.	1.5	23
77	Off axis holography of doped and intrinsic silicon nanowires: Interpretation and influence of fields in the vacuum. <i>Journal of Physics: Conference Series</i> , 2010, 209, 012027.	0.3	4
78	The Benefits of HCl in the Growth of Silicon Nanowires by Chemical Vapour Deposition: Growth of Small Diameter Nanowires and Controlled Facet Evolution. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1258, 1.	0.1	0
79	Silicon nanowires: Diameter dependence of growth rate and delay in growth. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	64
80	The Importance of the Radial Growth in the Faceting of Silicon Nanowires. <i>Nano Letters</i> , 2010, 10, 2335-2341.	4.5	49
81	Surface Recombination Velocity Measurements of Efficiently Passivated Gold-Catalyzed Silicon Nanowires by a New Optical Method. <i>Nano Letters</i> , 2010, 10, 2323-2329.	4.5	56
82	The effects of HCl on silicon nanowire growth: surface chlorination and existence of a diffusion-limited minimum diameter™. <i>Nanotechnology</i> , 2009, 20, 475307.	1.3	41
83	The morphology of silicon nanowires grown in the presence of trimethylaluminium. <i>Nanotechnology</i> , 2009, 20, 245602.	1.3	16
84	Growth and low temperature photoluminescence of silicon nanowires for different catalysts. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1178, 50.	0.1	0
85	Self-connected horizontal silicon nanowire field effect transistor. <i>Solid State Communications</i> , 2009, 149, 799-801.	0.9	10
86	Chemical-vapour-deposition growth and electrical characterization of intrinsic silicon nanowires. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2009, 159-160, 83-86.	1.7	6
87	Photoluminescence of silicon nanowires obtained by epitaxial chemical vapor deposition. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2009, 41, 963-965.	1.3	14
88	High-density guided growth of silicon nanowires in nanoporous alumina on Si(100) substrate: Estimation of activation energy. <i>Physica Status Solidi - Rapid Research Letters</i> , 2009, 3, 19-21.	1.2	10
89	Coherent-diffraction imaging of single nanowires of diameter 95 nanometers. <i>Physical Review B</i> , 2009, 79, .	1.1	30
90	Size Effects in Mechanical Deformation and Fracture of Cantilevered Silicon Nanowires. <i>Nano Letters</i> , 2009, 9, 525-529.	4.5	216

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91	Recombination Dynamics of Spatially Confined Electron-Hole System in Luminescent Gold Catalyzed Silicon Nanowires. Nano Letters, 2009, 9, 2575-2578.	4.5	33
92	Silicon nanowires grown in nanoporous alumina matrices on oriented silicon substrates investigated by electron microscopy. Superlattices and Microstructures, 2008, 44, 354-361.	1.4	6
93	A new architecture for self-organized silicon nanowire growth integrated on a $\sim 100\%$ silicon substrate. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 1606-1614.	0.8	10
94	Structural investigation of silicon nanowires using GIXD and GISAXS: Evidence of complex saw-tooth faceting. Surface Science, 2008, 602, 2675-2680.	0.8	32
95	The growth of small diameter silicon nanowires to nanotrees. Nanotechnology, 2008, 19, 125608.	1.3	42
96	Control of Gold Surface Diffusion on Si Nanowires. Nano Letters, 2008, 8, 1544-1550.	4.5	108
97	Direct Quantification of Gold along a Single Si Nanowire. Nano Letters, 2008, 8, 3709-3714.	4.5	46
98	Photoluminescence of confined electron-hole plasma in core-shell silicon/silicon oxide nanowires. Applied Physics Letters, 2008, 93, .	1.5	20
99	Optical manipulation of silicon nanowires on silicon nitride waveguides. , 2008, , .		1
100	Surface chemistry along a single silicon nanowire: Quantitative x-ray photoelectron emission microscopy (XPEEM) of the metal catalyst diffusion. , 2008, , 151-152.		0
101	Critical condition for growth of silicon nanowires. Journal of Applied Physics, 2007, 102, 094906.	1.1	55
102	Direct Wafer Bonding for Nanostructure Preparations. Solid State Phenomena, 2007, 121-123, 29-32.	0.3	3
103	Enhancement of the photoluminescence of silicon oxide defect states by combining silicon oxide with silicon nanowires. Journal of Applied Physics, 2007, 102, 016103.	1.1	19
104	Self-assembled block polymer templates as high resolution lithographic masks. Surface Science, 2007, 601, 2611-2614.	0.8	34
105	Controlled Silicon (001) Surface Periodic Nanopatterning by Direct Wafer Bonding. ECS Transactions, 2006, 3, 261-267.	0.3	0
106	Ge quantum dots growth on nanopatterned Si(001) surface: Morphology and stress relaxation study. Surface Science, 2006, 600, 3187-3193.	0.8	10
107	Preparation of a nanopatterned surface of bonded silicon wafers using electrochemical thinning and chemical etching: A scanning tunnel microscopy investigation. Surface Science, 2006, 600, 4931-4936.	0.8	4
108	Growth mechanism of Si nanowhiskers and SiGe heterostructures in Si nanowhiskers: X-ray scattering and electron microscopy investigations. Applied Physics Letters, 2006, 89, 153129.	1.5	21

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109	Si nanowire growth and characterization using a microelectronics-compatible catalyst: PtSi. Applied Physics Letters, 2006, 89, 233111.	1.5	58
110	Germanium growth on nanopatterned surface studied by STM. Journal of Crystal Growth, 2005, 275, e1609-e1613.	0.7	1
111	Low thermal budget surface preparation of Si and SiGe. Applied Surface Science, 2004, 225, 256-266.	3.1	37
112	Controlled surface nanopatterning with buried dislocation arrays. Surface Science, 2003, 545, 211-219.	0.8	39
113	Growth kinetics of Si on fullsheet, patterned and silicon-on-insulator substrates. Journal of Crystal Growth, 2003, 257, 19-30.	0.7	42
114	STM study of ultra-thin (<2 nm) silicon oxide. Journal of Non-Crystalline Solids, 2003, 322, 174-178.	1.5	3
115	Reduced pressure chemical vapour deposition of Si/Si _{1-x} Ge _x heterostructures using a chlorinated chemistry. Semiconductor Science and Technology, 2003, 18, 352-360.	1.0	16
116	Dynamically stable gallium surface coverages during plasma-assisted molecular-beam epitaxy of (0001) GaN. Journal of Applied Physics, 2002, 91, 9638.	1.1	164
117	Ordering of Ge quantum dots with buried Si dislocation networks. Applied Physics Letters, 2002, 80, 3078-3080.	1.5	69
118	Toward two-dimensional self-organization of nanostructures using wafer bonding and nanopatterned silicon surfaces. IEEE Journal of Quantum Electronics, 2002, 38, 995-1005.	1.0	10
119	Nucleation control of CVD growth silicon nanocrystals for quantum devices. Microelectronic Engineering, 2002, 61-62, 511-515.	1.1	41
120	Single-electron charging effect in individual Si nanocrystals. Applied Physics Letters, 2001, 79, 1175-1177.	1.5	80
121	Ultra-thin oxides grown on silicon (1 0 0) by rapid thermal oxidation for CMOS and advanced devices. Applied Surface Science, 2001, 175-176, 726-733.	3.1	41
122	Hydrogen cleaning and smoothing of semiconductor surfaces: The case of II-VI compounds. Applied Physics Letters, 1999, 75, 677-679.	1.5	3
123	Self-organized vicinal surfaces: a template for the growth of nanostructures. Journal of Crystal Growth, 1999, 201-202, 101-105.	0.7	7
124	Epitaxial growth of CdTe(0 0 1) studied by scanning tunnelling microscopy. Journal of Crystal Growth, 1998, 184-185, 203-207.	0.7	18
125	Room temperature electro-optic effect in CdHgTe multiple quantum well heterostructures at 1.5 μ m. Applied Physics Letters, 1997, 70, 856-858.	1.5	2
126	Quantum confined stark effect (QCSE) and self-electro-optic effect device (SEED) in II-VI heterostructures. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1993, 21, 224-227.	1.7	3

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127	Nonlinear interdiffusion in semiconductor superlattices: Case of CdTe/HgTe. Applied Physics Letters, 1993, 62, 2548-2550.	1.5	22
128	Interdiffusion studies in CdTe/HgTe superlattices. Semiconductor Science and Technology, 1993, 8, S276-S280.	1.0	14
129	Application of the RHEED oscillation technique to the growth of II-VI compounds: CdTe, HgTe and their related alloys. Journal of Crystal Growth, 1991, 111, 711-714.	0.7	26
130	Assessment of the structural quality of CdTe/Cd _{1-x} Zn _x Te strained superlattices by high-resolution x-ray diffraction and photoluminescence studies. Journal of Applied Physics, 1990, 68, 6229-6233.	1.1	19