

Silvia Rubini

List of Publications by Year in descending order

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126
papers

2,284
citations

218592

26
h-index

276775

41
g-index

129
all docs

129
docs citations

129
times ranked

2167
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-catalyzed growth of GaAs nanowires on cleaved Si by molecular beam epitaxy. <i>Nanotechnology</i> , 2008, 19, 275711.	1.3	141
2	Interaction between conduction band edge and nitrogen states probed by carrier effective-mass measurements in GaAs $_{1-x}$ N $_x$. <i>Physical Review B</i> , 2006, 73, .	1.1	106
3	Low-temperature synthesis of ZnSe nanowires and nanosaws by catalyst-assisted molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2005, 86, 153103.	1.5	87
4	Stopping and Resuming at Will the Growth of GaAs Nanowires. <i>Crystal Growth and Design</i> , 2013, 13, 3976-3984.	1.4	84
5	Quasiharmonic and molecular-dynamics study of the martensitic transformation in Ni-Al alloys. <i>Physical Review B</i> , 1993, 48, 99-111.	1.1	79
6	Growth by molecular beam epitaxy and electrical characterization of GaAs nanowires. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2007, 37, 134-137.	1.3	66
7	Manganese-Induced Growth of GaAs Nanowires. <i>Nano Letters</i> , 2006, 6, 2130-2134.	4.5	61
8	In-Plane Bandgap Engineering by Modulated Hydrogenation of Dilute Nitride Semiconductors. <i>Advanced Materials</i> , 2006, 18, 1993-1997.	11.1	51
9	Vapor-liquid-solid and vapor-solid growth of self-catalyzed GaAs nanowires. <i>AIP Advances</i> , 2011, 1, .	0.6	48
10	Influence of nitrogen-cluster states on the gyromagnetic factor of electrons in GaAs $_{1-x}$ N $_x$. <i>Physical Review B</i> , 2006, 74, .	1.1	46
11	Photoluminescence of Mn-catalyzed GaAs nanowires grown by molecular beam epitaxy. <i>Nanotechnology</i> , 2007, 18, 125603.	1.3	45
12	Structural characterization of GaAs and InAs nanowires by means of Raman spectroscopy. <i>Journal of Applied Physics</i> , 2008, 104, 104311.	1.1	43
13	Formation and dissolution of D-N complexes in dilute nitrides. <i>Physical Review B</i> , 2007, 76, .	1.1	42
14	Self-catalyzed GaAs nanowire growth on Si-treated GaAs(100) substrates. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	42
15	Long-Lived Hot Carriers in III-V Nanowires. <i>Nano Letters</i> , 2016, 16, 3085-3093.	4.5	42
16	Fabrication of Site-Controlled Quantum Dots by Spatially Selective Incorporation of Hydrogen in Ga(AsN)/GaAs Heterostructures. <i>Advanced Materials</i> , 2011, 23, 2706-2710.	11.1	41
17	Hydrogen-nitrogen complexes in dilute nitride alloys: Origin of the compressive lattice strain. <i>Applied Physics Letters</i> , 2006, 89, 061904.	1.5	38
18	Room temperature luminescent InGaAs/GaAs core-shell nanowires. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	37

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19	Atomic recombination and absorption in In _x Ga _{1-x} As/GaAs heterostructure nanowires. Physical Review B, 2013, 87, .	1.1	34
20	Photoreflectance and reflectance investigation of deuterium-irradiated GaAsN. Applied Physics Letters, 2007, 90, 091907.	1.5	33
21	Selective growth of ZnSe and ZnCdSe nanowires by molecular beam epitaxy. Nanotechnology, 2005, 16, S139-S142.	1.3	32
22	Single Photons on Demand from Novel Site-Controlled GaAsN/GaAsN:H Quantum Dots. Nano Letters, 2014, 14, 1275-1280.	4.5	32
23	Atomic resolution composition analysis by scanning transmission electron microscopy high-angle annular dark-field imaging. Applied Physics Letters, 2003, 83, 662-664.	1.5	31
24	Growth of III ^V semiconductor nanowires by molecular beam epitaxy. Microelectronics Journal, 2009, 40, 442-445.	1.1	31
25	Resonant Transport in Nb/GaAs/AlGaAs Heterostructures: Realization of the de Gennes ¹ Saint-James Model. Physical Review Letters, 2001, 87, 216808.	2.9	29
26	Resonant second harmonic generation in ZnSe bulk microcavity. Applied Physics Letters, 1999, 74, 1945-1947.	1.5	26
27	Hydrogen diffusion in GaAs _{1-x} N _x . Physical Review B, 2009, 80, .	1.1	26
28	Site of Mn in Mn ²⁺ -doped GaAs: X-ray absorption spectroscopy. Physical Review B, 2006, 73, .	1.1	25
29	Contactless monitoring of the diameter-dependent conductivity of GaAs nanowires. Nano Research, 2010, 3, 706-713.	5.8	25
30	Embedded-atom model of glass-forming Si-metal alloys. Physical Review B, 1995, 51, 14962-14975.	1.1	23
31	Vibrational properties of the H-N-H complex in dilute III-N-V alloys: Infrared spectroscopy and density functional theory. Physical Review B, 2008, 77, .	1.1	23
32	A Roadmap for Controlled and Efficient n-Type Doping of Self-Assisted GaAs Nanowires Grown by Molecular Beam Epitaxy. Advanced Functional Materials, 2016, 26, 2836-2845.	7.8	23
33	High-resolution X-ray diffraction in situ study of very small complexes: the case of hydrogenated dilute nitrides. Journal of Applied Crystallography, 2008, 41, 366-372.	1.9	22
34	Optical reflectivity of GaAs nanowire arrays: Experiment and model. Journal of Applied Physics, 2012, 111, 114302.	1.1	22
35	Local structure of nitrogen-hydrogen complexes in dilute nitrides. Physical Review B, 2009, 79, .	1.1	21
36	Catalyst incorporation in ZnSe nanowires. Philosophical Magazine Letters, 2006, 86, 261-266.	0.5	19

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37	Light polarization control in strain-engineered GaAsN/GaAsN:H heterostructures. Applied Physics Letters, 2009, 94, 261905.	1.5	19
38	Lineshape analysis of Raman scattering from LO and SO phonons in III-V nanowires. Journal of Applied Physics, 2009, 106, .	1.1	19
39	Detailed structure of the H-N-H center in GaAs by vibrational spectroscopy under uniaxial stress. Physical Review B, 2010, 81, .	1.1	19
40	InGaAs/GaAs Core-Shell Nanowires Grown by Molecular Beam Epitaxy. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 794-800.	1.9	18
41	Band-gap profiling by laser writing of hydrogen-containing III-N-Vs. Physical Review B, 2012, 86, .	1.1	18
42	Tuning the growth mode of nanowires via the interaction among seeds, substrates and beam fluxes. Nanoscale, 2014, 6, 8392-8399.	2.8	18
43	Electronic structure and the martensitic transformation in \hat{I}^2 -phase Ni-Al alloys: Al ₂₇ NMR and specific-heat measurements. Physical Review B, 1992, 46, 10563-10572.	1.1	17
44	InAs \cdot GaAs(N) quantum-dot and InGaAs \cdot GaAs quantum-well emitters: A comparison. Applied Physics Letters, 2005, 86, 233107.	1.5	17
45	Ultrafast carrier dynamics, band-gap renormalization, and optical properties of ZnSe nanowires. Physical Review B, 2016, 94, .	1.1	17
46	Tuning of ZnSe \cdot GaAs band discontinuities in heterojunction diodes. Applied Physics Letters, 1996, 69, 3233-3235.	1.5	15
47	Microscopic origin of compressive strain in hydrogen-irradiated dilute GaAs \cdot N alloys: Role of N-H \cdot Physical Review B, 2013, 87, 041101.	1.1	15
48	Determination of Exciton Reduced Mass and Gyromagnetic Factor of Wurtzite (InGa)As Nanowires by Photoluminescence Spectroscopy under High Magnetic Fields. ACS Nano, 2013, 7, 10717-10725.	7.3	15
49	Martensitic transformation in a Cu-Zn-Al alloy studied by Cu ₆₃ and Al ₂₇ NMR. Physical Review B, 1991, 44, 2019-2029.	1.1	14
50	High-resolution potential mapping in semiconductor nanostructures by cross-sectional scanning tunneling microscopy and spectroscopy. Applied Physics Letters, 2003, 82, 1932-1934.	1.5	14
51	Effect of hydrogen incorporation temperature in plane-engineered GaAsN \cdot GaAsN:H heterostructures. Applied Physics Letters, 2008, 92, 221901.	1.5	14
52	Mn-induced growth of InAs nanowires. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, 478-483.	0.6	14
53	Scanning Photoelectron Spectroscopy: A Modern Tool for the Study of Materials at the Nanoscale. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800308.	0.8	14
54	Broadband enhancement of light-matter interaction in photonic crystal cavities integrating site-controlled quantum dots. Physical Review B, 2020, 101, .	1.1	14

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55	Phonon localization and martensitic transformation in Ni ₃ Al alloys. <i>Physical Review B</i> , 1994, 50, 1297-1300.	1.1	13
56	NMR study of ordering kinetics in Ni ₃ Al alloys. <i>Physical Review B</i> , 1998, 57, 10462-10469.	1.1	12
57	Bundling of GaAs Nanowires: A Case of Adhesion-Induced Self-Assembly of Nanowires. <i>ACS Nano</i> , 2014, 8, 8932-8941.	7.3	12
58	Photoluminescence of GaAs nanowires at an energy larger than the zincblende band-gap: dependence on growth parameters. <i>Semiconductor Science and Technology</i> , 2015, 30, 055020.	1.0	12
59	Native oxides formation and surface wettability of epitaxial III-V materials: The case of InP and GaAs. <i>Applied Surface Science</i> , 2016, 383, 19-27.	3.1	12
60	Roughening Transition of an Amorphous Metal Surface: A Molecular Dynamics Study. <i>Physical Review Letters</i> , 1996, 77, 3169-3172.	2.9	11
61	Stacking faults in pseudomorphic ZnSe-GaAs and lattice-matched ZnSe-In _{0.04} Ga _{0.96} As layers. <i>Philosophical Magazine Letters</i> , 1997, 75, 219-226.	0.5	11
62	Optical study of hydrogen-irradiated GaAsN/GaAs heterostructures. <i>Journal of Applied Physics</i> , 2011, 109, 123511.	1.1	11
63	On the growth of InAs nanowires by molecular beam epitaxy. <i>Journal of Crystal Growth</i> , 2011, 323, 297-300.	0.7	11
64	Resonant depletion of photogenerated carriers in InGaAs/GaAs nanowire mats. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	11
65	Diameter-dependent morphology of vapour-solid grown ZnSe nanowires. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 394005.	1.3	11
66	Formation of axial metal-semiconductor junctions in GaAs nanowires by thermal annealing. <i>Semiconductor Science and Technology</i> , 2014, 29, 054001.	1.0	11
67	Covalent organic functionalization of graphene nanosheets and reduced graphene oxide via 1,3-dipolar cycloaddition of azomethine ylide. <i>Nanoscale Advances</i> , 2021, 3, 5841-5852.	2.2	11
68	Strain and surface morphology in lattice-matched ZnSe/In _x Ga _{1-x} As heterostructures. <i>Journal of Applied Physics</i> , 1998, 83, 2504-2510.	1.1	10
69	In-N correlation in In _x Ga _{1-x} As _{1-y} N _y GaAs quasi-lattice-matched quantum wells: A cross-sectional scanning tunneling microscopy study. <i>Physical Review B</i> , 2005, 72, .	1.1	10
70	Nitrogen-induced hindering of In incorporation in InGaAsN. <i>Applied Physics Letters</i> , 2006, 88, 141923.	1.5	10
71	Giant and reversible enhancement of the electrical resistance of GaAs _{1-x} N _x by hydrogen irradiation. <i>Physical Review B</i> , 2011, 84, .	1.1	10
72	Laser writing of the electronic activity of N- and H-atoms in GaAs. <i>Applied Physics Letters</i> , 2011, 99, 021105.	1.5	10

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73	Nanoscale Tailoring of the Polarization Properties of Dilute-Nitride Semiconductors via H-Assisted Strain Engineering. <i>Physical Review Applied</i> , 2014, 2, .	1.5	10
74	Strong blue emission from ZnSe nanowires grown at low temperature. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 182-186.	1.2	10
75	A lithographic approach for quantum dot-photonic crystal nanocavity coupling in dilute nitrides. <i>Microelectronic Engineering</i> , 2017, 174, 16-19.	1.1	10
76	Addressing the Fundamental Electronic Properties of Wurtzite GaAs Nanowires by High-Field Magneto-Photoluminescence Spectroscopy. <i>Nano Letters</i> , 2017, 17, 6540-6547.	4.5	10
77	Reflectionless tunneling in planar Nb/GaAs hybrid junctions. <i>Applied Physics Letters</i> , 2001, 78, 1772-1774.	1.5	9
78	Oxygen diffusion in $\text{La}_2\text{CuO}_4+\delta$ from ^{139}La NMR-NQR relaxation. <i>Physica C: Superconductivity and Its Applications</i> , 1994, 235-240, 1717-1718.	0.6	8
79	$\text{Zn}_{0.85}\text{Cd}_{0.15}\text{Se}$ active layers on graded-composition $\text{In}_x\text{Ga}_{1-x}\text{As}$ buffer layers. <i>Journal of Applied Physics</i> , 1999, 85, 8160-8169.	1.1	8
80	Quantum confinement effects in hydrogen-intercalated $\text{Ga}_{1-x}\text{As}_x\text{Nx}$ - $\text{GaAs}_{1-x}\text{Nx}$:H planar heterostructures investigated by photoluminescence spectroscopy. <i>Physical Review B</i> , 2010, 81, .	1.1	8
81	Monitoring the Fermi-level position within the bandgap on a single nanowire: A tool for local investigations of doping. <i>Journal of Applied Physics</i> , 2013, 114, 154308.	1.1	8
82	Rectification and Photoconduction Mapping of Axial Metal-Semiconductor Interfaces Embedded in GaAs Nanowires. <i>Physical Review Applied</i> , 2015, 4, .	1.5	8
83	An embedded atom study of an amorphous metal surface: Pd ₈₀ Si ₂₀ . <i>Surface Science</i> , 1995, 342, L1116-L1120.	0.8	7
84	Enhanced plasmonic properties of gold-catalysed semiconductor nanowires. <i>Nanoscale</i> , 2014, 6, 13651-13659.	2.8	7
85	Structural and electronic properties of wide band gap $\text{Zn}_{1-x}\text{Mg}_x\text{Se}$ alloys. <i>Journal of Applied Physics</i> , 2004, 95, 4184-4192.	1.1	6
86	GaAs nanowires by Mn-catalysed molecular beam epitaxy. <i>Journal of Physics: Conference Series</i> , 2007, 61, 992-996.	0.3	6
87	Plasmon-induced resonant effects on the optical properties of Ag-decorated ZnSe nanowires. <i>Nanotechnology</i> , 2020, 31, 174001.	1.3	6
88	NMR investigation of the martensitic transformation in fine particles of Ni-Al alloys. <i>Physical Review B</i> , 1994, 49, 9331-9335.	1.1	5
89	^{139}La NMR-NQR study of the oxygen diffusion in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4+\delta$. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1994, 16, 1799-1802.	0.4	5
90	Band discontinuities in $\text{ZnMgSe}/\text{ZnCdSe}(001)$ lattice-matched heterostructures. <i>Applied Physics Letters</i> , 2001, 78, 1574-1576.	1.5	5

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91	Silicon clustering in Si-doped GaAs layers and superlattices. Applied Physics Letters, 2002, 81, 1639-1641.	1.5	5
92	The Mn site in Mn-doped GaAs nanowires: an EXAFS study. Semiconductor Science and Technology, 2012, 27, 085001.	1.0	5
93	An all optical mapping of the strain field in GaAsN/GaAsN:H wires. Applied Physics Letters, 2012, 101, .	1.5	5
94	Optical properties of single wurtzite/zinc-blende ZnSe nanowires grown at low temperature. Journal of Applied Physics, 2015, 118, .	1.1	5
95	Martensitic transformation in Ag-Cd and Cu-Zn alloys studied by nuclear magnetic resonance. Physical Review B, 1994, 49, 12590-12595.	1.1	4
96	An overview on recent NMR-NQR studies of high-T _c superconductors and of their precursors AF. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1743-1753.	0.4	4
97	Structural and dynamical properties of metastable Al:Si solid solutions calculated by the embedded-atom method. Physical Review B, 1994, 50, 9648-9651.	1.1	4
98	Martensitic transformation and phonon localization in Ni-Al alloys by atomistic simulations. Meccanica, 1995, 30, 439-448.	1.2	4
99	Ohmic versus rectifying contacts through interfacial dipoles: Al/In _x Ga _{1-x} As. Journal of Crystal Growth, 1999, 201-202, 769-772.	0.7	4
100	Cross sectional studies of buried semiconductor interfaces by means of photoemission microscopy. Applied Physics Letters, 2002, 80, 2511-2513.	1.5	4
101	Photoluminescence under magnetic field and hydrostatic pressure for probing the electronic properties of GaAsN. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 107-113.	0.8	4
102	Plasmon-assisted bandgap engineering in dilute nitrides. Nanophotonics, 2019, 8, 1465-1476.	2.9	4
103	Electrical characterization of engineered ZnSe _{1-x} GaAs heterojunction diodes. Journal of Crystal Growth, 1997, 175-176, 603-607.	0.7	3
104	CdTe epitaxial layers in ZnSe-based heterostructures. Journal of Crystal Growth, 1999, 201-202, 465-469.	0.7	3
105	Controlling interface reactivity and Schottky barrier height in Au ⁺ /ZnSe(001) junctions. Journal of Vacuum Science & Technology B, 2006, 24, 1259.	1.3	3
106	Imaging with low-voltage scanning transmission electron microscopy: A quantitative analysis. Ultramicroscopy, 2011, 111, 1018-1028.	0.8	3
107	H irradiation effects on the GaAs-like Raman modes in GaAs _{1-x} N _x /GaAs _{1-x} N _x :H planar heterostructures. Journal of Applied Physics, 2014, 116, .	1.1	3
108	Strain related relaxation of the GaAs-like Raman mode selection rules in hydrogenated GaAs _{1-x} N _x layers. Journal of Applied Physics, 2019, 125, 175701.	1.1	3

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109	Thermal evolution of small N-D complexes in deuterated dilute nitrides revealed by in-situ high resolution X-ray diffraction. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 2766-2771.	0.8	2
110	Lattice-matched Zn _{1-y} Cd _y Se/In _x Ga _{1-x} As(0 0 1) heterostructures. <i>Journal of Crystal Growth</i> , 1998, 184-185, 21-25.	0.7	1
111	Excitonic properties and band alignment in lattice-matched ZnCdSe/ZnMgSe multiple-quantum-well structures. <i>Applied Physics Letters</i> , 2001, 78, 434-436.	1.5	1
112	Epitaxial Al/GaN and Au/GaN junctions on as-grown GaN(0001) 1 Å ⁻¹ surfaces. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005, 202, 804-807.	0.8	1
113	Convergent beam electron-diffraction investigation of lattice mismatch and static disorder in GaAs/GaAs _{1-x} N _x intercalated GaAs/GaAs _{1-x} N _x :H heterostructures. <i>Applied Physics Letters</i> , 2012, 101, 111912.	1.5	1
114	Ga ₂ Se ₃ Nanowires via Au-Assisted Heterovalent Exchange Reaction on GaAs. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17783-17794.	1.5	1
115	Electrical properties of n-n ZnSe/In _{0.04} Ga _{0.96} As(001) heterojunctions. <i>Applied Physics Letters</i> , 1998, 73, 2033-2035.	1.5	0
116	Metal/III-V diodes engineered by means of Si interlayers: Interface reactions versus local interface dipoles. <i>Applied Physics Letters</i> , 2001, 79, 1462-1464.	1.5	0
117	Microphotoluminescence characterization of alloy fluctuations in InGaAsN/GaAs quantum wells emitting at 1.3 Åm. <i>Semiconductor Science and Technology</i> , 2006, 21, 1207-1211.	1.0	0
118	Hydrogen-induced Nitrogen Passivation in Dilute Nitrides: A Novel Approach to Defect Engineering. <i>Materials Research Society Symposia Proceedings</i> , 2007, 994, 1.	0.1	0
119	Photoluminescence under magnetic field and hydrostatic pressure in GaAs _{1-x} N _x for probing the compositional dependence of carrier effective mass and gyromagnetic ratio. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
120	In-Plane Band Gap Engineering by Hydrogenation of Dilute Nitride Semiconductors. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
121	Fabrication And Characterization Of Mn-catalyzed GaAs Nanowires. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
122	Growth of semiconductor nanowires by molecular beam epitaxy. , 2013, , 55-93.		0
123	Single photon emitters in dilute nitrides: Towards a determinist approach of quantum dot-photon crystal nanocavity coupling. , 2015, , .		0
124	Schottky barrier measurements on individual GaAs nanowires by X-ray photoemission microscopy. <i>Applied Surface Science</i> , 2016, 386, 72-77.	3.1	0
125	Evidence of a New Hydrogen Complex in Dilute Nitride Alloys. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	0
126	Spatially Selective Hydrogen Irradiation/Removal of Dilute Nitrides: A Versatile Nanofabrication Tool for Photonic Applications. , 2019, , .		0