Luca Seravalli

List of Publications by Year
in descending order

97 papers	1,667 citations	279487 23 h-index	344852 36 g-index
98 all docs	98 docs citations	98 times ranked	1368 citing authors

#	Article	IF	Citations
1	The effect of strain on tuning of light emission energy of InAs/InGaAs quantum-dot nanostructures. Applied Physics Letters, 2003, 82, 2341-2343.	1.5	89
2	Ga₂O₃polymorphs: tailoring the epitaxial growth conditions. Journal of Materials Chemistry C, 2020, 8, 10975-10992.	2.7	84
3	Exciton and trion in few-layer MoS2: Thickness- and temperature-dependent photoluminescence. Applied Surface Science, 2020, 515, 146033.	3.1	79
4	Quantum dot strain engineering of InAsâˆ•InGaAs nanostructures. Journal of Applied Physics, 2007, 101, 024313.	1.1	75
5	Quantum dot nanostructures and molecular beam epitaxy. Progress in Crystal Growth and Characterization of Materials, 2003, 47, 166-195.	1.8	65
6	Quantum dot strain engineering for light emission at 1.3, 1.4 and 1.5Î¼m. Applied Physics Letters, 2005, 87, 063101.	1.5	55
7	1.59 Î¼ m room temperature emission from metamorphic InAsâˆ•InGaAs quantum dots grown on GaAs substrates. Applied Physics Letters, 2008, 92, .	1.5	55
8	Single quantum dot emission at telecom wavelengths from metamorphic InAs/InGaAs nanostructures grown on GaAs substrates. Applied Physics Letters, 2011, 98, .	1.5	50
9	Carrier thermodynamics inInAsâˆ•InxGa1â^'xAsquantum dots. Physical Review B, 2006, 74, .	1.1	44
10	Effects of the quantum dot ripening in high-coverage InAsâˆ•GaAs nanostructures. Journal of Applied Physics, 2007, 102, .	1.1	42
11	The role of wetting layer states on the emission efficiency of InAs/InGaAs metamorphic quantum dot nanostructures. Nanotechnology, 2009, 20, 275703.	1.3	42
12	Defect passivation in strain engineered InAs/(InGa)As quantum dots. Materials Science and Engineering C, 2005, 25, 830-834.	3.8	39
13	Residual strain measurements in InGaAs metamorphic buffer layers on GaAs. European Physical Journal B, 2007, 56, 217-222.	0.6	36
14	Metamorphic quantum dots: Quite different nanostructures. Journal of Applied Physics, 2010, 108, .	1.1	34
15	Properties of wetting layer states in low density InAs quantum dot nanostructures emitting at 1.3â€‚Î¼m: Effects of InGaAs capping. Journal of Applied Physics, 2010, 108, 114313.	1.1	34
16	Enhancement of Raman Scattering and Exciton/Trion Photoluminescence of Monolayer and Few-Layer MoS₂ by Ag Nanoprisms and Nanoparticles: Shape and Size Effects. Journal of Physical Chemistry C, 2021, 125, 4119-4132.	1.5	32
17	Metamorphic buffers and optical measurement of residual strain. Applied Physics Letters, 2005, 87, 263120.	1.5	31
18	All-Optical Fiber Hanbury Brown & Twiss Interferometer to study 1300â€‰nm single photon emission of a metamorphic InAs Quantum Dot. Scientific Reports, 2016, 6, 27214.	1.6	30

#	ARTICLE	IF	CITATIONS
19	Design and growth of metamorphic InAs/InGaAs quantum dots for single photon emission in the telecom window. CrystEngComm, 2012, 14, 6833.	1.3	29
20	2Dâ€“3D growth transition in metamorphic InAs/InGaAs quantum dots. CrystEngComm, 2012, 14, 1155-1160.	1.3	29
21	Effective phonon bottleneck in the carrier thermalization of InAs/GaAs quantum dots. Physical Review B, 2008, 78, .	1.1	26
22	Low density InAs/(In)GaAs quantum dots emitting at long wavelengths. Nanotechnology, 2009, 20, 415607.	1.3	25
23	Random population model to explain the recombination dynamics in single InAs/GaAs quantum dots under selective optical pumping. New Journal of Physics, 2011, 13, 023022.	1.2	24
24	Low-temperature growth of single-crystal Cu(In,Ga)Se2 films by pulsed electron deposition technique. Solar Energy Materials and Solar Cells, 2015, 133, 82-86.	3.0	23
25	Reversible Control of Inâ€Plane Elastic Stress Tensor in Nanomembranes. Advanced Optical Materials, 2016, 4, 682-687.	3.6	23
26	A Review on Chemical Vapour Deposition of Two-Dimensional MoS2 Flakes. Materials, 2021, 14, 7590.	1.3	23
27	Calculation of metamorphic two-dimensional quantum energy system: Application to wetting layer states in InAs/InGaAs metamorphic quantum dot nanostructures. Journal of Applied Physics, 2013, 114, .	1.1	22
28	Influence of organic promoter gradient on the MoS₂ growth dynamics. Nanoscale Advances, 2020, 2, 2352-2362.	2.2	20
29	Size dependent carrier thermal escape and transfer in bimodally distributed self assembled InAs/GaAs quantum dots. Journal of Applied Physics, 2012, 111, .	1.1	19
30	Deep levels in metamorphic InAs/InGaAs quantum dot structures with different composition of the embedding layers. Semiconductor Science and Technology, 2017, 32, 125001.	1.0	19
31	Photoluminescence monitoring of oxide formation and surface state passivation on InAs quantum dots exposed to water vapor. Nano Research, 2016, 9, 3018-3026.	5.8	17
32	Comparative Study of Photoelectric Properties of Metamorphic InAs/InGaAs and InAs/GaAs Quantum Dot Structures. Nanoscale Research Letters, 2017, 12, 335.	3.1	17
33	Selective optical pumping of charged excitons in unintentionally doped InAs quantum dots. Nanotechnology, 2008, 19, 145711.	1.3	16
34	The effects of quantum dot coverage in InAs/(In)GaAs nanostructures for long wavelength emission. Microelectronics Journal, 2009, 40, 465-468.	1.1	16
35	Two-Color Single-Photon Emission from InAs Quantum Dots: Toward Logic Information Management Using Quantum Light. Nano Letters, 2014, 14, 456-463.	4.5	16
36	Photoelectric properties of the metamorphic InAs/InGaAs quantum dot structure at room temperature. Journal of Applied Physics, 2015, 117, 214312.	1.1	16

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37	Broadband light sources based on InAs/InGaAs metamorphic quantum dots. Journal of Applied Physics, 2016, 119, .	1.1	16
38	Defect influence on in-plane photocurrent of InAs/InGaAs quantum dot array: long-term electron trapping and Coulomb screening. Nanotechnology, 2019, 30, 305701.	1.3	15
39	MoS2 two-dimensional quantum dots with weak lateral quantum confinement: Intense exciton and trion photoluminescence. Surfaces and Interfaces, 2021, 23, 100909.	1.5	15
40	Gold nanoparticle assisted synthesis of MoS₂ monolayers by chemical vapor deposition. Nanoscale Advances, 2021, 3, 4826-4833.	2.2	15
41	Predictive Design and Experimental Realization of InAs/GaAs Superlattices with Tailored Thermal Conductivity. Journal of Physical Chemistry C, 2018, 122, 4054-4062.	1.5	14
42	Interband Photoconductivity of Metamorphic InAs/InGaAs Quantum Dots in the 1.3â€“1.55-Î¼m Window. Nanoscale Research Letters, 2018, 13, 103.	3.1	14
43	Near-infrared lateral photoresponse in InGaAs/GaAs quantum dots. Semiconductor Science and Technology, 2020, 35, 055029.	1.0	14
44	Electrical and structural characterization of InAs/InGaAs quantum dot structures on GaAs. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2009, 165, 111-114.	1.7	13
45	Wetting layer states in low density InAs/InGaAs quantum dots from sub-critical InAs coverages. Journal Physics D: Applied Physics, 2013, 46, 315101.	1.3	13
46	Thermodynamic and Kinetic Effects on the Nucleation and Growth of Îµ/Îº- or Î²-Ga₂O₃ by Metalâ€“Organic Vapor Phase Epitaxy. Crystal Growth and Design, 2021, 21, 6393-6401.	1.4	13
47	Defects in nanostructures with ripened InAs/GaAs quantum dots. Journal of Materials Science: Materials in Electronics, 2008, 19, 96-100.	1.1	12
48	Extra-long and taper-free germanium nanowires: use of an alternative Ge precursor for longer nanostructures. Nanotechnology, 2019, 30, 415603.	1.3	12
49	Time resolved emission at 1.3 Î¼m of a single InAs quantum dot by using a tunable fibre Bragg grating. Nanotechnology, 2014, 25, 035204.	1.3	11
50	Characterization of hydrogen passivated defects in strain-engineered semiconductor quantum dot structures. Journal of Applied Physics, 2006, 100, 084313.	1.1	10
51	Energy states and carrier transport processes in metamorphic InAs quantum dots. Journal of Applied Physics, 2012, 112, 034309.	1.1	10
52	Exciton, biexciton and trion recombination dynamics in a single quantum dot under selective optical pumping. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2100-2103.	1.3	9
53	Influence of anharmonicity and interlayer interaction on Raman spectra in mono- and few-layer MoS2: A computational study. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 136, 114999.	1.3	9
54	Developments in surface magneto-optical Kerr effect setup for ultrahigh vacuum analysis of magnetic ultrathin films. Review of Scientific Instruments, 2005, 76, 046102.	0.6	8

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55	Molecular Beam Epitaxy: An Overview. , 2011, , 480-522.		8
56	All optical switching of a single photon stream by excitonic depletion. Communications Physics, 2020, 3, .	2.0	8
57	InAs/InGaAs quantum dots confined by InAlAs barriers for enhanced room temperature light emission: Photoelectric properties and deep levels. Microelectronic Engineering, 2021, 238, 111514.	1.1	8
58	Detection of Nitroaromatic Explosives in Air by Amino-Functionalized Carbon Nanotubes. Nanomaterials, 2022, 12, 1278.	1.9	8
59	Metamorphic self-assembled quantum dot nanostructures. Materials Science and Engineering C, 2006, 26, 731-734.	3.8	7
60	The effect of high-In content capping layers on low-density bimodal-sized InAs quantum dots. Journal of Applied Physics, 2013, 113, 194306.	1.1	7
61	Bipolar Effects in Photovoltage of Metamorphic InAs/InGaAs/GaAs Quantum Dot Heterostructures: Characterization and Design Solutions for Light-Sensitive Devices. Nanoscale Research Letters, 2017, 12, 559.	3.1	7
62	Growth of germanium nanowires with isobuthyl germane. Nanotechnology, 2019, 30, 084002.	1.3	7
63	Reviewing quantum dots for single-photon emission at 1.55 Î¼m: a quantitative comparison of materials. JPhys Materials, 2020, 3, 042005.	1.8	7
64	Plasmonic enhancement of exciton and trion photoluminescence in 2D MoS2 decorated with Au nanorods: Impact of nonspherical shape. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 140, 115213.	1.3	7
65	Metamorphic quantum dot nanostructures for long wavelength operation with enhanced emission efficiency. Materials Science and Engineering C, 2007, 27, 1046-1051.	3.8	6
66	Raman scattering in InAs/AlGaAs quantum dot nanostructures. Applied Physics Letters, 2011, 98, 111903.	1.5	6
67	MBE growth and properties of lowâ€density InAs/GaAs quantum dot structures. Crystal Research and Technology, 2011, 46, 801-804.	0.6	6
68	Modelling of metamorphic quantum dots for single photon generation at long wavelength. Semiconductor Science and Technology, 2018, 33, 095018.	1.0	6
69	Kinetics peculiarities of photovoltage in vertical metamorphic InAs/InGaAs quantum dot structures. Semiconductor Science and Technology, 2019, 34, 075025.	1.0	6
70	Study of SnO/<i>É›</i>-Ga₂O₃ <i>p</i>â€“<i>n</i> diodes in planar geometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, 042701.	0.9	6
71	Parallel Recording of Single Quantum Dot Optical Emission Using Multicore Fibers. IEEE Photonics Technology Letters, 2016, 28, 1257-1260.	1.3	4
72	Defect levels and interface space charge area responsible for negative photovoltage component in InAs/GaAs quantum dot photodetector structure. Microelectronic Engineering, 2020, 230, 111367.	1.1	4

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73	Germanium Nanowires as Sensing Devices: Modelization of Electrical Properties. Nanomaterials, 2021, 11, 507.	1.9	4
74	Subâ€critical InAs layers on metamorphic InGaAs for single quantum dot emission at telecom wavelengths. Crystal Research and Technology, 2014, 49, 540-545.	0.6	3
75	Ultrafast Carrier Redistribution in Single InAs Quantum Dots Mediated by Wetting-Layer Dynamics. Physical Review Applied, 2019, 11, .	1.5	3
76	Orientation of germanium nanowires on germanium and silicon substrates for nanodevices. Materials Today: Proceedings, 2020, 20, 30-36.	0.9	3
77	Photoelectric and deep level study of metamorphic InAs/InGaAs quantum dots with GaAs confining barriers for photoluminescence enhancement. Semiconductor Science and Technology, 2020, 35, 095022.	1.0	3
78	Direct growth of germanium nanowires on glass. Nanotechnology, 2020, 31, 394001.	1.3	3
79	Hydrogenation of strain engineered InAs/InxGa1â˜’x As quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 581-584.	0.8	2
80	Molecular Beam Epitaxy: An Overview. , 2016, , .		2
81	Study of electrically active defects in GaAs/InAs/GaAs QDs structures by DLTS and TEM. , 2006, , .		1
82	Optical switching of quantum states inside self-assembled quantum dots. Superlattices and Microstructures, 2008, 43, 494-499.	1.4	1
83	Engineering of Quantum Dot Nanostructures for Photonic Devices. , 2008, , 505-528.		1
84	Low Density Metamorphic Quantum Dot structures with emission in the 1.3 â€“ 1.55<i>Î¼</i>m window. Journal of Physics: Conference Series, 2010, 245, 012074.	0.3	1
85	Epitaxial germanium deposited by MOVPE on InGaAs quantum dot stressors grown by MBE. Crystal Research and Technology, 2014, 49, 570-574.	0.6	1
86	Exciton confinement in strain-engineered metamorphic InAs/ <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">I</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mi mathvariant="normal">G</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mtext>â€“</mml:mtext><mml:mi>x</mml:mi></mml:mro	1.1	1
87	Metamorphic InAs/InGaAs Quantum Dot Structures: Photoelectric Properties and Deep Levels. Springer Proceedings in Physics, 2020, , 319-336.	0.1	1
88	The OH vibrational spectrum in Bi2TeO5single crystals. Radiation Effects and Defects in Solids, 1999, 151, 115-119.	0.4	0
89	1.46 Î¼m room-temperature emission from InAs/InGaAs quantum dot nanostructures. Optoelectronics Letters, 2007, 3, 165-168.	0.4	0
90	Purcell effect in micropillars with oxidized Bragg mirrors. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2433-2436.	0.8	0

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91	Thermal activated carrier transfer between InAs quantum dots in very low density samples. Journal of Physics: Conference Series, 2010, 210, 012015.	0.3	0
92	Single-crystal CuIn<inf>1−x</inf>Ga<inf>x</inf>Se<inf>2</inf> films grown on lattice-matched Ge by low-temperature Pulsed Electron Deposition technique. , 2014, , .		0
93	Modelling of broadband light sources based on InAs / InxGa1-xAs metamorphic quantum dots. , 2015, , .		0
94	Deviation from Regular Shape in the Early Stages of Formation of Strain-Driven 3D InGaAs/GaAs Micro/Nanotubes. Journal of Nanomaterials, 2017, 2017, 1-7.	1.5	0
95	Tunable fiber Bragg gratings at 1.3 Î¼m to improve the characterization of InAs Quantum Dot emission. , 2014, , .		0
96	Nanostructuring Germanium Nanowires by In Situ TEM Ion Irradiation. Particle and Particle Systems Characterization, 2021, 38, 2100154.	1.2	0
97	Metamorphic InAs/InAlAs/InGaAs quantum dots: Establishing the limit for indium composition in InGaAs buffers. Microelectronic Engineering, 2022, 263, 111840.	1.1	0