

Lucio C Andreani

List of Publications by Year in descending order

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107
papers

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citations

81839

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all docs

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108
times ranked

5187
citing authors

#	ARTICLE	IF	CITATIONS
1	Dispersive coupling between MoSe ₂ and an integrated zero-dimensional nanocavity. <i>Optical Materials Express</i> , 2022, 12, 59.	1.6	5
2	Study of the Cross-Influence between III-V and IV Elements Deposited in the Same MOVPE Growth Chamber. <i>Materials</i> , 2021, 14, 1066.	1.3	1
3	Doubly-Resonant Photonic Crystal Cavities for Efficient Second-Harmonic Generation in III-V Semiconductors. <i>Nanomaterials</i> , 2021, 11, 605.	1.9	7
4	Accelerated Thermal Aging Effects on Carbon-Based Perovskite Solar Cells: A Joint Experimental and Theoretical Analysis. <i>Solar Rrl</i> , 2021, 5, 2000759.	3.1	4
5	Results on MOVPE SiGeSn deposition for the monolithic integration of III-V and IV elements in multi-junction solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2021, 224, 111016.	3.0	5
6	Optimal condition to probe strong coupling of two-dimensional excitons and zero-dimensional cavity modes. <i>Physical Review B</i> , 2021, 104, .	1.1	1
7	A facile light-trapping approach for ultrathin GaAs solar cells using wet chemical etching. <i>Progress in Photovoltaics: Research and Applications</i> , 2020, 28, 200-209.	4.4	41
8	Inverse Design of Photonic Crystals through Automatic Differentiation. <i>ACS Photonics</i> , 2020, 7, 1729-1741.	3.2	114
9	A new theoretical approach for the performance simulation of multijunction solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2020, 28, 279-294.	4.4	3
10	Optimizing an interleaved p-n junction to reduce energy dissipation in silicon slow-light modulators. <i>Photonics Research</i> , 2020, 8, 457.	3.4	7
11	The Role of Surface Passivation Layer Preparation on Crystallization and Optoelectronic Performance of Hybrid Evaporated-Spincoated Perovskite Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2019, 9, 1428-1435.	1.5	2
12	Slow light with interleaved p-n junction to enhance performance of integrated Mach-Zehnder silicon modulators. <i>Nanophotonics</i> , 2019, 8, 1485-1494.	2.9	14
13	Wet-Chemically Textured Ultra-Thin GaAs Solar Cells with Dielectric/Metal Rear Mirrors. , 2019, , .		0
14	Slow Light to Reduce the Energy Dissipation of Mach-Zehnder Modulators in Silicon Photonics. , 2019, , .		0
15	Silicon solar cells: toward the efficiency limits. <i>Advances in Physics: X</i> , 2019, 4, 1548305.	1.5	188
16	Efficiency Enhancement and Hysteresis Mitigation by Manipulation of Grain Growth Conditions in Hybrid Evaporated-Spin-coated Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 722-729.	4.0	16
17	Slow-Light Modulators in Silicon Waveguides Gratings. , 2019, , .		0
18	Slow Light in Waveguide Gratings on Silicon-on-Insulator Platform. , 2018, , .		1

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19	Tunable Out-of-Plane Excitons in 2D Single-Crystal Perovskites. ACS Photonics, 2018, 5, 4179-4185.	3.2	67
20	Optimizing band-edge slow light in silicon-on-insulator waveguide gratings. Optics Express, 2018, 26, 8470.	1.7	13
21	Simulation of the performances of multijunction solar cells with improved voltage by transfer and scattering matrix methods. , 2017, , .		2
22	Optimizing grating couplers for silicon photonics. , 2016, , .		1
23	A Multi-Optical Collector of Sunlight Employing Luminescent Materials and Photonic Nanostructures. Advanced Optical Materials, 2016, 4, 147-155.	3.6	14
24	Effective bichromatic potential for ultra-high Q-factor photonic crystal slab cavities. Applied Physics Letters, 2015, 107, .	1.5	41
25	Perturbations of Dipole Decay Dynamics Induced by Plasmonic Nano-Antennas " A Study within the Discrete Dipole Approximation. Nanomaterials and Nanotechnology, 2015, 5, 11.	1.2	3
26	Towards the efficiency limits of silicon solar cells: How thin is too thin?. Solar Energy Materials and Solar Cells, 2015, 143, 260-268.	3.0	48
27	Optimising apodized grating couplers in a pure SOI platform to ~05 dB coupling efficiency. Optics Express, 2015, 23, 16289.	1.7	92
28	Exciton-Polaritons in Bulk Semiconductors and in Confined Electron and Photon Systems. , 2014, , 37-82.		0
29	Optimizing polarization-diversity couplers for Si-photonics: reaching the ~1dB coupling efficiency threshold. Optics Express, 2014, 22, 14769.	1.7	111
30	Cascade luminescent solar concentrators. Applied Physics Letters, 2014, 104, 153901.	1.5	32
31	Quantum Theory of Surface Plasmon Polaritons: Planar and Spherical Geometries. Plasmonics, 2014, 9, 965-978.	1.8	24
32	Broadband light trapping with disordered photonic structures in thin-film silicon solar cells. Progress in Photovoltaics: Research and Applications, 2014, 22, 1237-1245.	4.4	57
33	Light trapping and electrical transport in thin-film solar cells with randomly rough textures. Journal of Applied Physics, 2014, 115, .	1.1	18
34	Dipole Decay Rates Engineering via Silver Nanocones. Plasmonics, 2013, 8, 1079-1086.	1.8	11
35	Broad parameter optimization of polarization-diversity 2D grating couplers for silicon photonics. Optics Express, 2013, 21, 21556.	1.7	100
36	Strong coupling between a dipole emitter and localized plasmons: enhancement by sharp silver tips. Optics Express, 2013, 21, 27602.	1.7	29

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37	Engineering disorder for light trapping in thin-film solar cells. , 2013, , .		0
38	Optimizing silicon-on-oxide 2D-grating couplers. , 2013, , .		0
39	Engineering Gaussian disorder at rough interfaces for light trapping in thin-film solar cells. Optics Letters, 2012, 37, 4868.	1.7	53
40	From classical four-wave mixing to parametric fluorescence in silicon microring resonators. Optics Letters, 2012, 37, 3807.	1.7	77
41	Light trapping in thin film solar cells with sub-wavelength photonic crystal patterns. , 2012, , .		1
42	Nonlinear optics in Silicon photonic crystal cavities. , 2011, , .		1
43	Synthesis of amorphous silicon/magnesia based direct opals with tunable optical properties. Optical Materials, 2011, 33, 563-569.	1.7	8
44	Nonlinear optics in silicon photonic crystal nanocavities. , 2011, , .		0
45	Low-power continuous-wave frequency conversion in far-field optimized silicon photonic crystal nanocavities. , 2011, , .		0
46	Nanoscale chemical mapping using three-dimensional adiabatic compression of surface plasmon polaritons. Nature Nanotechnology, 2010, 5, 67-72.	15.6	352
47	Sensing by Means of Nonlinear Optics with Functionalized GaAs/AlGaAs Photonic Crystals. Langmuir, 2010, 26, 10373-10379.	1.6	16
48	Light trapping regimes in thin-film silicon solar cells with a photonic pattern. Optics Express, 2010, 18, 4260.	1.7	79
49	Planar photonic crystal cavities with far-field optimization for high coupling efficiency and quality factor. Optics Express, 2010, 18, 16064.	1.7	139
50	Low-power continuous-wave generation of visible harmonics in silicon photonic crystal nanocavities. Optics Express, 2010, 18, 26613.	1.7	113
51	All-optical switching in silicon-on-insulator photonic wire nano-cavities. Optics Express, 2010, 18, 1450.	1.7	52
52	Modification of erbium radiative lifetime in planar silicon slot waveguides. Applied Physics Letters, 2009, 94, .	1.5	28
53	Two-dimensional surface emitting photonic crystal laser with hybrid triangular-graphite structure. Optics Express, 2009, 17, 15043.	1.7	24
54	A Hybrid Plasmonic~Photonic Nanodevice for Label-Free Detection of a Few Molecules. Nano Letters, 2008, 8, 2321-2327.	4.5	215

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55	High-speed low-voltage electro-optic modulator with a polymer-infiltrated silicon photonic crystal waveguide. <i>Optics Express</i> , 2008, 16, 4177.	1.7	282
56	Effect of implementation of a Bragg reflector in the photonic band structure of the Suzuki-phase photonic crystal lattice. <i>Optics Express</i> , 2008, 16, 8509.	1.7	7
57	Scattering-matrix analysis of periodically patterned multilayers with asymmetric unit cells and birefringent media. <i>Physical Review B</i> , 2008, 77, .	1.1	70
58	All-optical switching in 2D silicon photonic crystals with low loss waveguides and optical cavities. <i>Optics Express</i> , 2008, 16, 11624-36.	1.7	40
59	Quantum theory of exciton-photon coupling in photonic crystal slabs with embedded quantum wells. <i>Physical Review B</i> , 2007, 75, .	1.1	45
60	Theoretical and experimental study of the Suzuki-phase photonic crystal lattice by angle-resolved photoluminescence spectroscopy. <i>Optics Express</i> , 2007, 15, 704.	1.7	13
61	Light-matter interaction in photonic crystal slabs. <i>Physica Status Solidi (B): Basic Research</i> , 2007, 244, 3528-3539.	0.7	46
62	Photonic-crystal slabs with a triangular lattice of triangular holes investigated using a guided-mode expansion method. <i>Physical Review B</i> , 2006, 73, .	1.1	185
63	Fabrication of SOI photonic crystal slabs by soft UV-nanoimprint lithography. <i>Microelectronic Engineering</i> , 2006, 83, 1773-1777.	1.1	16
64	Disorder-Induced Losses in Photonic Crystal Slabs. , 2006, , .		0
65	Second-harmonic generation in doubly resonant microcavities with periodic dielectric mirrors. <i>Physical Review E</i> , 2006, 73, 016613.	0.8	56
66	Strong exciton-light coupling in photonic crystal nanocavities. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 801-804.	0.8	2
67	Exciton-polaritons and nanoscale cavities in photonic crystal slabs. <i>Physica Status Solidi (B): Basic Research</i> , 2005, 242, 2197-2209.	0.7	18
68	Low-loss guided modes in photonic crystal waveguides. <i>Optics Express</i> , 2005, 13, 4939.	1.7	41
69	Highly efficient second-harmonic generation in doubly resonant planar microcavities. <i>Applied Physics Letters</i> , 2004, 85, 1883-1885.	1.5	30
70	Quantum theory of photonic crystal polaritons. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2004, 1, 446-449.	0.8	7
71	Disorder-induced losses in photonic crystal waveguides with line defects. <i>Optics Letters</i> , 2004, 29, 1897.	1.7	101
72	Intrinsic diffraction losses in photonic crystal waveguides with line defects. <i>Applied Physics Letters</i> , 2003, 82, 2011-2013.	1.5	61

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73	Ab Initio Calculations of the Anisotropic Dielectric Tensor of GaAs/AlAs Superlattices. Physical Review Letters, 2002, 89, 216803.	2.9	35
74	Photonic Bands and Radiation Losses in Photonic Crystal Waveguides. Physica Status Solidi (B): Basic Research, 2002, 234, 139-146.	0.7	26
75	Complete photonic band gap in a two-dimensional chessboard lattice. Physical Review B, 2000, 61, 15519-15522.	1.1	34
76	Competition between Coqblin-Schrieffer and local exchange interactions in Kondo systems by the perturbative renormalization group. Physical Review B, 1999, 59, 8828-8834.	1.1	1
77	Quantum theory of exciton polaritons in cylindrical semiconductor microcavities. Physical Review B, 1999, 60, 16799-16806.	1.1	46
78	Strong-coupling regime for quantum boxes in pillar microcavities: Theory. Physical Review B, 1999, 60, 13276-13279.	1.1	374
79	Exciton-light coupling in single and coupled semiconductor microcavities: Polariton dispersion and polarization splitting. Physical Review B, 1999, 59, 5082-5089.	1.1	248
80	Tight-binding approach to excitons bound to monolayer impurity planes: Strong radiative properties of InAs in GaAs. Physical Review B, 1998, 57, R15072-R15075.	1.1	29
81	Effect of inhomogeneous broadening on optical properties of excitons in quantum wells. Physical Review B, 1998, 57, 4670-4680.	1.1	112
82	Stability of SU(N) symmetry in the Coqblin-Schrieffer model by the perturbative renormalization group. Physical Review B, 1997, 56, 5073-5076.	1.1	6
83	Crossover from strong to weak confinement for excitons in shallow or narrow quantum wells. Physical Review B, 1997, 56, 3922-3932.	1.1	59
84	Bulk polariton beatings and two-dimensional radiative decay: Analysis of time-resolved transmission through a dispersive film. Solid State Communications, 1997, 102, 505-509.	0.9	17
85	Hybridization versus Local Exchange Interaction in the Kondo Problem: A Two-Band Model. Physical Review Letters, 1996, 77, 2762-2765.	2.9	9
86	THEORY OF THE MAGNETIC FORM FACTOR IN REDUCED-MOMENT KONDO SYSTEMS. International Journal of Modern Physics B, 1996, 10, 1167-1189.	1.0	2
87	Exciton-polaritons in superlattices. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 192, 99-109.	0.9	81
88	Two-impurity Anderson model: A variational study. Physical Review B, 1993, 48, 7322-7337.	1.1	16
89	Two-impurity Anderson model: Variational wave functions with electron-hole excitations. Journal of Applied Physics, 1993, 73, 6628-6630.	1.1	4
90	Well-width and aluminum-concentration dependence of the exciton binding energies in GaAs/Al _x Ga _{1-x} As quantum wells. Physical Review B, 1993, 47, 15755-15762.	1.1	57

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91	Magnetic correlations in the Anderson lattice: An exact-diagonalization study. <i>Physical Review B</i> , 1993, 47, 1130-1133.	1.1	15
92	Hole subbands in quantum wells: Comparison between theory and hot-electron-acceptor-luminescence experiments. <i>Physical Review B</i> , 1992, 46, 2625-2627.	1.1	6
93	Excitons in confined systems: from quantum well to bulk behaviour. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1992, 168, 451-459.	0.9	35
94	Exchange splitting of light hole excitons in Al _{1-x} Ga _x As-GaAs quantum wells. <i>Solid State Communications</i> , 1991, 80, 553-556.	0.9	22
95	A zero-temperature variational study of the two-impurity Anderson model. <i>Solid State Communications</i> , 1991, 79, 17-20.	0.9	16
96	Competition between Kondo effect and RKKY interaction: A molecular model. <i>Solid State Communications</i> , 1991, 77, 635-640.	0.9	13
97	Radiative lifetime of free excitons in quantum wells. <i>Solid State Communications</i> , 1991, 77, 641-645.	0.9	492
98	High exciton binding energies in GaAs/GaAlAs quantum wells. <i>Superlattices and Microstructures</i> , 1991, 9, 1-4.	1.4	4
99	Variational calculation of Fano linewidth: Application to excitons in quantum wells. <i>Physical Review B</i> , 1991, 44, 3162-3167.	1.1	14
100	Interpretation of three-photon spectra in alkali halides. <i>Physical Review B</i> , 1990, 41, 12230-12235.	1.1	9
101	Comment on "Effect of biaxial strain on acceptor-level energies in In _y Ga _{1-y} As/Al _x Ga _{1-x} As (on GaAs) quantum wells". <i>Physical Review B</i> , 1990, 42, 7641-7642.	1.1	4
102	Accurate theory of excitons in GaAs-Ga _{1-x} Al _x As quantum wells. <i>Physical Review B</i> , 1990, 42, 8928-8938.	1.1	356
103	Exchange interaction and polariton effects in quantum-well excitons. <i>Physical Review B</i> , 1990, 41, 7536-7544.	1.1	199
104	Theory of excitons in GaAs-Ga _{1-x} Al _x As quantum wells including valence band mixing. <i>Superlattices and Microstructures</i> , 1989, 5, 59-63.	1.4	22
105	Binding energies of excited shallow acceptor states in GaAs/Ga _{1-x} Al _x As quantum wells. <i>Physical Review B</i> , 1989, 40, 5602-5612.	1.1	52
106	Hole subbands in strained GaAs-Ga _{1-x} Al _x As quantum wells: Exact solution of the effective-mass equation. <i>Physical Review B</i> , 1987, 36, 5887-5894.	1.1	223
107	Accelerated Thermal Aging Effects on Carbon-Based Perovskite Solar Cells: A Joint Experimental and Theoretical Analysis. , 0, , .		1