

# Alessandro Pitanti

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/5758744/publications.pdf>

Version: 2024-02-01

82  
papers

1,294  
citations

331259

21  
h-index

377514

34  
g-index

85  
all docs

85  
docs citations

85  
times ranked

1883  
citing authors

#	ARTICLE	IF	CITATIONS
1	Room-Temperature Terahertz Detectors Based on Semiconductor Nanowire Field-Effect Transistors. Nano Letters, 2012, 12, 96-101.	4.5	171
2	Silicon Nanocrystals as an Enabling Material for Silicon Photonics. Proceedings of the IEEE, 2009, 97, 1250-1268.	16.4	74
3	Quantum electromechanics on silicon nitride nanomembranes. Nature Communications, 2016, 7, 12396.	5.8	58
4	Whispering-gallery modes and light emission from a Si-nanocrystal-based single microdisk resonator. Optics Express, 2008, 16, 13218.	1.7	54
5	Strong opto-electro-mechanical coupling in a silicon photonic crystal cavity. Optics Express, 2015, 23, 3196.	1.7	52
6	Quantification of the carrier absorption losses in Si-nanocrystal rich rib waveguides at 1.54 $\mu$ m. Applied Physics Letters, 2008, 92, 051101.	1.5	45
7	Synchronization of Optomechanical Nanobeams by Mechanical Interaction. Physical Review Letters, 2019, 123, 017402.	2.9	44
8	Hyperuniform disordered terahertz quantum cascade laser. Scientific Reports, 2016, 6, 19325.	1.6	40
9	A self-stabilized coherent phonon source driven by optical forces. Scientific Reports, 2015, 5, 15733.	1.6	39
10	Magneto-optic transmittance modulation observed in a hybrid graphene split ring resonator terahertz metasurface. Applied Physics Letters, 2015, 107, .	1.5	39
11	NanoSi low loss horizontal slot waveguides coupled to high Q ring resonators. Optics Express, 2009, 17, 20762.	1.7	38
12	Oscillatory Vertical Coupling between a Whispering-Gallery Resonator and a Bus Waveguide. Physical Review Letters, 2013, 110, 163901.	2.9	38
13	Energy transfer between amorphous Si nanoclusters and Er <sup>3+</sup> ions in a SiO <sub>2</sub> matrix. Physical Review B, 2009, 79, .	1.1	36
14	Complete thermoelectric benchmarking of individual InSb nanowires using combined micro-Raman and electric transport analysis. Nano Research, 2015, 8, 4048-4060.	5.8	32
15	Energy transfer mechanism and Auger effect in Er <sup>3+</sup> coupled silicon nanoparticle samples. Journal of Applied Physics, 2010, 108, 053518.	1.1	28
16	Electrostatic Spin Control in InAs/InP Nanowire Quantum Dots. Nano Letters, 2012, 12, 4490-4494.	4.5	26
17	Terahertz detection by heterostructured InAs/InSb nanowire based field effect transistors. Applied Physics Letters, 2012, 101, 141103.	1.5	25
18	Optomechanics of Chiral Dielectric Metasurfaces. Advanced Optical Materials, 2020, 8, 1901507.	3.6	24

#	ARTICLE	IF	CITATIONS
19	Ferromagnetic Resonance Assisted Optomechanical Magnetometer. <i>Physical Review Letters</i> , 2020, 125, 147201.	2.9	23
20	Probing the Spontaneous Emission Dynamics in Si-Nanocrystals-Based Microdisk Resonators. <i>Physical Review Letters</i> , 2010, 104, 103901.	2.9	22
21	InAs/InP/InSb Nanowires as Low Capacitance $\hat{\alpha}$ Heterojunction Diodes. <i>Physical Review X</i> , 2011, 1, .	2.8	21
22	Photoluminescence of hydrophilic silicon nanocrystals in aqueous solutions. <i>Nanotechnology</i> , 2011, 22, 215704.	1.3	20
23	Dynamical back-action at 5.5 GHz in a corrugated optomechanical beam. <i>AIP Advances</i> , 2014, 4, .	0.6	18
24	Distributed feedback terahertz frequency quantum cascade lasers with dual periodicity gratings. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	18
25	Modeling of Slot Waveguide Sensors Based on Polymeric Materials. <i>Sensors</i> , 2011, 11, 7327-7340.	2.1	17
26	Photonic bands, superchirality, and inverse design of a chiral minimal metasurface. <i>Nanophotonics</i> , 2019, 8, 2291-2301.	2.9	17
27	Micromechanical Bolometers for Subterahertz Detection at Room Temperature. <i>ACS Photonics</i> , 2022, 9, 360-367.	3.2	17
28	Optically active Er <sup>3+</sup> ions in SiO <sub>2</sub> codoped with Si nanoclusters. <i>Journal of Applied Physics</i> , 2009, 106, 093107.	1.1	16
29	Electron beam induced current in InSb-InAs nanowire type-III heterostructures. <i>Applied Physics Letters</i> , 2012, 101, 063116.	1.5	15
30	Controlling local deformation in graphene using micrometric polymeric actuators. <i>2D Materials</i> , 2018, 5, 045032.	2.0	14
31	Room-Temperature Silicon Platform for GHz-Frequency Nanoelectro-Opto-Mechanical Systems. <i>ACS Photonics</i> , 2022, 9, 413-419.	3.2	13
32	Assessment of the main material issues for achieving an Er coupled to silicon nanoclusters infrared amplifier. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2009, 41, 1029-1033.	1.3	12
33	Continuous-wave laser operation of a dipole antenna terahertz microresonator. <i>Light: Science and Applications</i> , 2017, 6, e17054-e17054.	7.7	12
34	Injection locking in an optomechanical coherent phonon source. <i>Nanophotonics</i> , 2021, 10, 1319-1327.	2.9	12
35	Anisotropic straining of graphene using micropatterned SiN membranes. <i>APL Materials</i> , 2016, 4, .	2.2	11
36	Further improvements in Er <sup>3+</sup> -coupled to Si nanoclusters rib waveguides. , 2008, , .		10

#	ARTICLE	IF	CITATIONS
37	Whispering-gallery mode micro-kylix resonators. <i>Optics Express</i> , 2009, 17, 9434.	1.7	10
38	THz quantum cascade lasers based on a hyperuniform design. <i>Proceedings of SPIE</i> , 2015, , .	0.8	9
39	Local tuning of WS <sub>2</sub> photoluminescence using polymeric micro-actuators in a monolithic van der Waals heterostructure. <i>Applied Physics Letters</i> , 2019, 115, .	1.5	9
40	High-Frequency Mechanical Excitation of a Silicon Nanostring with Piezoelectric Aluminum Nitride Layers. <i>Physical Review Applied</i> , 2020, 14, .	1.5	9
41	Efficient microwave frequency conversion mediated by a photonics compatible silicon nitride nanobeam oscillator. <i>Quantum Science and Technology</i> , 2020, 5, 034011.	2.6	9
42	Unexpected Electron Transport Suppression in a Heterostructured Graphene-MoS <sub>2</sub> Multiple Field-Effect Transistor Architecture. <i>ACS Nano</i> , 2022, 16, 1291-1300.	7.3	9
43	Low dimensional silicon structures for photonic and sensor applications. <i>Applied Surface Science</i> , 2008, 255, 624-627.	3.1	8
44	Copropagating pump and probe experiments on Si-nc in SiO <sub>2</sub> rib waveguides doped with Er: The optical role of non-emitting ions. <i>Applied Physics Letters</i> , 2011, 99, 231114.	1.5	8
45	Thermal noise and optomechanical features in the emission of a membrane-coupled compound cavity laser diode. <i>Scientific Reports</i> , 2016, 6, 31489.	1.6	8
46	Symmetry enhanced non-reciprocal polarization rotation in a terahertz metal-graphene metasurface. <i>Optics Express</i> , 2018, 26, 3328.	1.7	7
47	Contacts shielding in nanowire field effect transistors. <i>Journal of Applied Physics</i> , 2012, 111, 064301.	1.1	6
48	Optomechanical Modulation Spectroscopy of Bound States in the Continuum in a Dielectric Metasurface. <i>Physical Review Applied</i> , 2022, 17, .	1.5	6
49	Optomechanical response with nanometer resolution in the self-mixing signal of a terahertz quantum cascade laser. <i>Optics Letters</i> , 2019, 44, 5663.	1.7	5
50	Electron localization in periodically strained graphene. <i>Journal of Applied Physics</i> , 2022, 131, 085103.	1.1	5
51	Si nanoclusters coupled to Er <sup>3+</sup> ions in a SiO <sub>2</sub> matrix for optical amplifiers. <i>Optical Materials</i> , 2011, 33, 1086-1090.	1.7	4
52	Silicon nanocluster sensitization of erbium ions under low-energy optical excitation. <i>Journal of Applied Physics</i> , 2012, 111, 094314.	1.1	4
53	Electrical properties and band diagram of InSb-InAs nanowire type-III heterojunctions. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	4
54	Stress-strain in electron-beam activated polymeric micro-actuators. <i>Journal of Applied Physics</i> , 2020, 128, 115104.	1.1	3

#	ARTICLE	IF	CITATIONS
55	Mechanical Mode Engineering with Orthotropic Metamaterial Membranes. <i>Advanced Materials Technologies</i> , 0, , 2200337.	3.0	3
56	Erbium and Silicon nanocrystals for light amplification. <i>Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007</i> , , .	0.0	2
57	Coupled cavities in one-dimensional photonic crystal based on horizontal slot waveguide structure with Si-nc. , 2008, , .		2
58	Purcell factor and superradiance in Si-patterned waveguides. <i>Optics Letters</i> , 2010, 35, 3384.	1.7	2
59	Continuous wave spectroscopy of nonlinear dynamics of Si nanocrystals in a microdisk resonator. <i>Physical Review B</i> , 2011, 84, .	1.1	2
60	Far-field characterization of the thermal dynamics in lasing microspheres. <i>Scientific Reports</i> , 2015, 5, 14452.	1.6	2
61	Broadband Dynamic Polarization Conversion in Optomechanical Metasurfaces. <i>Frontiers in Physics</i> , 2020, 7, .	1.0	2
62	Semiconductor nanowire field-effect transistors: towards high-frequency THz detectors. , 2012, , .		1
63	Ultrafast optical modulation of magneto-optical terahertz effects occurring in a graphene-loaded resonant metasurface. <i>Proceedings of SPIE</i> , 2016, , .	0.8	1
64	Numerical emulation of Thru-Reflection-Line calibration for the de-embedding of Surface Acoustic Wave devices. <i>Scientific Reports</i> , 2018, 8, 9256.	1.6	1
65	Chiral Dielectric Metasurfaces: Optomechanics of Chiral Dielectric Metasurfaces (Advanced Optical) Tj ETQq1 1 0.784314 rgBT /Overloc	3.6	1
66	Assessment of the Excited Carrier absorption losses in Si-nc rib-waveguides. , 2007, , .		0
67	Silicon Photonics at University of Trento. , 2007, , .		0
68	Er <sup>3+</sup> coupled to Si nanoclusters rib waveguides. , 2008, , .		0
69	Whispering-gallery modes and Purcell effect in a Si-nanocrystal-based single microdisk resonator. , 2008, , .		0
70	Silicon quantum dots in microdisk resonators: whispering-gallery modes, stress-induced Q-factor tuning and enhancement. , 2009, , .		0
71	NanoSi low loss horizontal slot waveguides coupled to high Q ring resonators: Erratum. <i>Optics Express</i> , 2009, 17, 23556.	1.7	0
72	Q-factor tuning in all-active whispering-gallery mode resonators with Si-nc. , 2009, , .		0

#	ARTICLE	IF	CITATIONS
73	Silicon quantum dots in microdisk resonators: Stress-engineering of disk core for q-factor tuning and enhancement. , 2009, , .		0
74	Er-doped Si nanoclusters waveguides longitudinally pumped by broad area lasers for optical amplification. Proceedings of SPIE, 2009, , .	0.8	0
75	Second-order susceptibility $\chi^{(2)}$ in Si waveguides. , 2011, , .		0
76	Nanowire-based architectures for the detection of THz radiation. , 2011, , .		0
77	Room temperature terahertz detectors based on semiconductor nanowire field effect transistors. , 2012, , .		0
78	Continuous wave vertical emission from terahertz microcavity lasers with a dual injection scheme. Optics Express, 2021, 29, 33602.	1.7	0
79	Spontaneous emission dynamics and Purcell enhancement in Si-nc-based microdisk resonators. , 2010, , .		0
80	Selfmix and optomechanics with silicon nitride membrane. , 2017, , .		0
81	Terahertz quantum cascade dipole-antenna vertically emitting continuous wave laser. , 2017, , .		0
82	Chiral metasurface optomechanics. , 2019, , .		0