

Leonetta Baldassarre

List of Publications by Year in descending order

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139
papers

2,343
citations

270111

25
h-index

263392

45
g-index

140
all docs

140
docs citations

140
times ranked

3883
citing authors

#	ARTICLE	IF	CITATIONS
1	Vibrational Properties in Highly Strained Hexagonal Boron Nitride Bubbles. <i>Nano Letters</i> , 2022, 22, 1525-1533.	4.5	30
2	Terahertz control of photoluminescence emission in few-layer InSe. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	4
3	Infrared Nanospectroscopy of Individual Extracellular Microvesicles. <i>Molecules</i> , 2021, 26, 887.	1.7	7
4	n-type Ge/Si antennas for THz sensing. <i>Optics Express</i> , 2021, 29, 7680.	1.7	6
5	THz intersubband absorption in n-type Si δ -Ge parabolic quantum wells. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	8
6	Nano-IR study of light-matter interaction between intersubband transitions in quantum wells and patch antenna resonators by polymer expansion. , 2021, , .		0
7	Conformational changes of a membrane protein determined by infrared difference spectroscopy beyond the diffraction limit. <i>Physical Review Applied</i> , 2021, 16, .	1.5	8
8	Spectral Characterization of Mid-Infrared Bloch Surface Waves Excited on a Truncated 1D Photonic Crystal. <i>ACS Photonics</i> , 2021, 8, 350-359.	3.2	16
9	Mid-infrared nano-imaging of current patterns in patch antenna resonators. , 2021, , .		0
10	Conformational changes of an oriented film of photosensitive proteins observed by polarized ATR infrared spectroscopy. , 2021, , .		0
11	Tip-enhanced infrared nanospectroscopy of microvesicles. , 2021, , .		0
12	Mid-infrared Second Harmonic Generation in SiGe Quantum Wells. , 2021, , .		0
13	Mid-Infrared Bloch Surface Waves for biosensing applications. , 2021, , .		0
14	Detection of strong light-matter interaction at the nano-scale in concealed optical cavities via a thermal transducer. , 2021, , .		0
15	Second Harmonic Generation in Germanium Quantum Wells for Nonlinear Silicon Photonics. <i>ACS Photonics</i> , 2021, 8, 3573-3582.	3.2	13
16	Infrared nanospectroscopy study of the light-induced conformational changes of Channelrhodopsin. <i>EPJ Web of Conferences</i> , 2021, 255, 13001.	0.1	0
17	N-type heavy doping with ultralow resistivity in Ge by Sb deposition and pulsed laser melting. <i>Applied Surface Science</i> , 2020, 509, 145229.	3.1	19
18	Electron Population Dynamics in Optically Pumped Asymmetric Coupled Ge/SiGe Quantum Wells: Experiment and Models. <i>Photonics</i> , 2020, 7, 2.	0.9	5

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19	Nanospectroscopy of a single patch antenna strongly coupled to a mid-infrared intersubband transition in a quantum well. Applied Physics Letters, 2020, 117, .	1.5	13
20	Plasmonic Superchiral Lattice Resonances in the Mid-Infrared. ACS Photonics, 2020, 7, 2676-2681.	3.2	26
21	Electron-phonon coupling in n -type Ge two-dimensional systems. Physical Review B, 2020, 102, .	1.1	7
22	Ultra-broadband mid-infrared Ge-on-Si waveguide polarization rotator. APL Photonics, 2020, 5, 026102.	3.0	21
23	Intersubband Transition Engineering in the Conduction Band of Asymmetric Coupled Ge/SiGe Quantum Wells. Crystals, 2020, 10, 179.	1.0	11
24	Terahertz absorption-saturation and emission from electron-doped germanium quantum wells. Optics Express, 2020, 28, 7245.	1.7	12
25	Design and simulation of losses in Ge/SiGe terahertz quantum cascade laser waveguides. Optics Express, 2020, 28, 4786.	1.7	11
26	Characterization of integrated waveguides by atomic-force-microscopy-assisted mid-infrared imaging and spectroscopy. Optics Express, 2020, 28, 22186.	1.7	9
27	Infrared nanospectroscopy and nanoimaging of individual cell membranes and microvesicles exposed to air. OSA Continuum, 2020, 3, 2564.	1.8	2
28	Ge-on-Si Waveguide Polarization Rotator Operating in the 8-14 μm Atmospheric Transmission Window. , 2020, , .		0
29	Near-field study of the strong coupling between intersubband transitions in quantum wells and single patch antenna resonators in the mid-infrared. , 2020, , .		0
30	Mid-infrared Sensing with Ge on Si Waveguides. , 2019, , .		0
31	High-TC Superconducting Kinetic Inductance Detectors for Terahertz Imaging. , 2019, , .		0
32	Spectroscopic Evidence of Bloch Surface Waves in the Mid Infrared. , 2019, , .		0
33	Towards a Mid-Infrared Lab-on-Chip Sensor using Ge-on-Si Waveguides. , 2019, , .		0
34	Tip-Enhanced Infrared Difference-Nanospectroscopy of the Proton Pump Activity of Bacteriorhodopsin in Single Purple Membrane Patches. Nano Letters, 2019, 19, 3104-3114.	4.5	36
35	Slit Arrays for Plasmon-enhanced Vibrational Circular Dichroism: Characterization of the Local Field Enhancement. , 2019, , .		0
36	Electron-doped SiGe Quantum Well Terahertz Emitters pumped by FEL pulses. , 2019, , .		0

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37	Si-based n-type THz Quantum Cascade Emitter. , 2019, , .		0
38	Molecular Fingerprint Sensing using Ge-on-Si Waveguides. , 2019, , .		0
39	High-Quality n-Type Ge/SiGe Multilayers for THz Quantum Cascade Lasers. , 2019, , .		0
40	Difference mid-IR nanospectroscopy on individual patches of purple membranes: the proton pump activity of bacteriorhodopsin at the nanoscale. , 2019, , .		0
41	Control of Electron-State Coupling in Asymmetric $\text{Ge}/\text{Si}/\text{Ge}$ Quantum Wells. Physical Review Applied, 2019, 11, .	1.5	25
42	Low loss germanium-on-silicon waveguides for integrated mid-infrared photonics. , 2019, , .		3
43	Fingerprint mid-infrared sensing with germanium on silicon waveguides. , 2019, , .		1
44	Plasmon-enhanced Ge-based metal-semiconductor-metal photodetector at near-IR wavelengths. Optics Express, 2019, 27, 20516.	1.7	16
45	Molecular Fingerprint Sensing using Ge-on-Si Waveguides. , 2019, , .		0
46	Observation of phonon-polaritons in thin flakes of hexagonal boron nitride on gold. Applied Physics Letters, 2018, 112, .	1.5	16
47	Light-induced conformational changes of protein receptors probed by difference mid-IR microspectroscopy. , 2018, , .		0
48	Components for Integrated Ge on Si for Mid-Infrared Photonic Sensors. , 2018, , .		0
49	Ge-on-Si Mid-Infrared Waveguides Operating up to $11\frac{1}{4}\mu\text{m}$ Wavelength. , 2018, , .		0
50	High conductivity of ultrathin nanoribbons of SrRuO ₃ on SrTiO ₃ probed by infrared spectroscopy. Scientific Reports, 2018, 8, 15217.	1.6	1
51	Benchmarking the Use of Heavily Doped Ge for Plasmonics and Sensing in the Mid-Infrared. ACS Photonics, 2018, 5, 3601-3607.	3.2	31
52	Low loss Ge-on-Si waveguides operating in the $8\text{--}14\mu\text{m}$ atmospheric transmission window. Optics Express, 2018, 26, 25667.	1.7	56
53	Electromagnetic field confinement in the gap of germanium nanoantennas with plasma wavelength of 4.5 micrometers. Proceedings of SPIE, 2017, , .	0.8	0
54	Functionalization of Scanning Probe Tips with Epitaxial Semiconductor Layers. Small Methods, 2017, 1, 1600033.	4.6	8

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55	Nanospectroscopy of single purple membranes by mid-IR resonantly-enhanced mechanical photoexpansion. Proceedings of SPIE, 2017, , .	0.8	2
56	Heterogeneity of the Transmembrane Protein Conformation in Purple Membranes Identified by Infrared Nanospectroscopy. Small, 2017, 13, 1701181.	5.2	29
57	Optical properties of highly n-doped germanium obtained by <i>in situ</i> doping and laser annealing. Journal Physics D: Applied Physics, 2017, 50, 465103.	1.3	28
58	Orbital dependent coherence temperature and optical anisotropy of V2O3 quasiparticles. Journal of Physics Condensed Matter, 2017, 29, 345602.	0.7	3
59	Electronic bands and optical conductivity of the Dzyaloshinsky-Moriya multiferroic BaO_7 . Physical Review B, 2017, 96, .	1.1	9
60	Near-Field Imaging of Free Carriers in ZnO Nanowires with a Scanning Probe Tip Made of Heavily Doped Germanium. Physical Review Applied, 2017, 8, .	1.5	14
61	Germanium-on-silicon waveguides for mid-infrared photonic sensing chips. , 2017, , .		0
62	Integrated germanium-on-silicon waveguides for mid-infrared photonic sensing chips. , 2017, , .		1
63	Mid-infrared n-Ge on Si plasmonic based microbolometer sensors. , 2017, , .		3
64	Heavily-doped germanium on silicon with activated doping exceeding 10^{20} cm^{-3} as an alternative to gold for mid-infrared plasmonics. , 2017, , .		0
65	n-Ge on Si for mid-infrared plasmonic sensors. , 2017, , .		5
66	Ge-on-Si Photonics for Mid-infrared Sensing Applications. MRS Advances, 2016, 1, 3269-3279.	0.5	0
67	Mapping the electromagnetic field confinement in the gap of germanium nanoantennas with plasma wavelength of 4.5 micrometers. Applied Physics Letters, 2016, 109, .	1.5	17
68	Vibrational contrast imaging and nanospectroscopy of single cell membranes by mid-IR resonantly-enhanced mechanical photoexpansion. , 2016, , .		1
69	Benchmarking the use of heavily-doped Ge against noble metals for plasmonics and sensing in the mid-infrared. , 2016, , .		0
70	Mid-infrared plasmonic platform based on n-doped Ge-on-Si: Molecular sensing with germanium nano-antennas on Si. , 2016, , .		1
71	Stabilization of the Tensile Strength of Aged Cellulose Paper by Cholinium-Amino Acid Ionic Liquid Treatment. Journal of Physical Chemistry C, 2016, 120, 24088-24097.	1.5	20
72	Tunability of the dielectric function of heavily doped germanium thin films for mid-infrared plasmonics. Physical Review B, 2016, 94, .	1.1	86

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73	Protein clustering in chemically stressed HeLa cells studied by infrared nanospectroscopy. <i>Nanoscale</i> , 2016, 8, 17560-17567.	2.8	18
74	Hardening of the soft phonon in bulk SrTiO_3 with LaAlO_3 . <i>Physical Review B</i> , 2016, 93, .	1.1	6
75	Mid-Infrared Sensing Using Heavily Doped Germanium Plasmonics on Silicon Substrates. <i>ECS Transactions</i> , 2016, 75, 247-251.	0.3	0
76	Mapping the amide I absorption in single bacteria and mammalian cells with resonant infrared nanospectroscopy. <i>Nanotechnology</i> , 2016, 27, 075101.	1.3	51
77	Photoluminescence emission from a nanofabricated scanning probe tip made of epitaxial germanium. <i>Microelectronic Engineering</i> , 2016, 159, 164-168.	1.1	1
78	Fabrication of mid-infrared plasmonic antennas based on heavily doped germanium thin films. <i>Thin Solid Films</i> , 2016, 602, 52-55.	0.8	8
79	Heavily phosphorous-doped Germanium thin films for mid-infrared plasmonics. , 2015, , .		0
80	Optical properties of VO_3 in its whole phase diagram. <i>Physical Review B</i> , 2015, 91, .	1.1	22
81	The strength of electron electron correlation in Cs_3C_60 . <i>Scientific Reports</i> , 2015, 5, 15240.	1.6	10
82	Group-IV midinfrared plasmonics. <i>Journal of Nanophotonics</i> , 2015, 9, 093789.	0.4	27
83	Time- and frequency-resolved electrodynamic of germanium nanoantennas for mid-infrared plasmonics. , 2015, , .		0
84	Mid-infrared intersubband absorption in p-Ge/SiGe quantum wells grown on Si. , 2015, , .		0
85	An integrated superhydrophobic-plasmonic biosensor for mid-infrared protein detection at the femtomole level. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 21337-21342.	1.3	27
86	Three-dimensional fabrication of free-standing epitaxial semiconductor nanostructures obtained by focused ion beam. <i>Microelectronic Engineering</i> , 2015, 141, 168-172.	1.1	7
87	Mid-infrared plasmonic resonances exploiting heavily-doped Ge on Si. <i>Proceedings of SPIE</i> , 2015, , .	0.8	1
88	Midinfrared Plasmon-Enhanced Spectroscopy with Germanium Antennas on Silicon Substrates. <i>Nano Letters</i> , 2015, 15, 7225-7231.	4.5	173
89	Mid-infrared plasmonic germanium antennas on silicon. , 2014, , .		1
90	Mid-infrared plasmonic platform based on heavily doped epitaxial Ge-on-Si: Retrieving the optical constants of thin Ge epilayers. , 2014, , .		5

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109	Optical conductivity of bismuth-based topological insulators. <i>Physical Review B</i> , 2012, 86, .	1.1	92
110	A survey of the Italian research in solid state physics by infrared spectroscopy with electron-beam sources. <i>Journal of Physics: Conference Series</i> , 2012, 359, 012001.	0.3	0
111	Vibrational spectrum of solid picene (C ₂₂ H ₁₄). <i>Journal of Physics Condensed Matter</i> , 2012, 24, 252203.	0.7	4
112	Optical study of pressure-induced insulator-to-metal transitions in correlated electron systems. <i>Diamond Light Source Proceedings</i> , 2010, 1, .	0.1	0
113	Multi-gap superconductivity in a BaFe _{1.84} Co _{0.16} As ₂ film from optical measurements at terahertz frequencies. <i>European Physical Journal B</i> , 2010, 77, 25-30.	0.6	26
114	Evidence for a monoclinic metallic phase in high-pressure VO ₂ . <i>High Pressure Research</i> , 2010, 30, 55-59.	0.4	12
115	Sub-Terahertz spectroscopy in superconductors and charge-ordered materials. , 2010, , .		0
116	THz studies of multigap superconductors. , 2010, , .		0
117	Far infrared properties of the rare-earth scandate DyScO ₃ . <i>Journal of Physics Condensed Matter</i> , 2010, 22, 355402.	0.7	6
118	Metal-insulator transition in NiS . <i>Physical Review B</i> , 2010, 81, .		50
119	Optical Properties of (SrMnO ₃) ₂ /(LaMnO ₃) ₂ Superlattices: An Insulator-to-Metal Transition Observed in the Absence of Disorder. <i>Nano Letters</i> , 2010, 10, 4819-4823.	4.5	27
120	A microscopic view on the Mott transition in chromium-doped V ₂ O ₃ . <i>Nature Communications</i> , 2010, 1, 105.	5.8	129
121	Far-Infrared Absorption and the Metal-to-Insulator Transition in Hole-Doped Cuprates. <i>Physical Review Letters</i> , 2009, 102, 206409.	2.9	29
122	Infrared studies of magnetite under high pressure. <i>High Pressure Research</i> , 2009, 29, 500-503.	0.4	6
123	Infrared studies under pressure at the infrared beamline SISSI at ELETTRA. <i>High Pressure Research</i> , 2009, 29, 639-643.	0.4	2
124	Magnetic-Order-Induced Crystal Symmetry Lowering in Cr_2O_4 Ferrimagnetic Spinels. <i>Physical Review Letters</i> , 2009, 103, 077205.		92
125	Optical properties across the insulator to metal transitions in vanadium oxide compounds. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 323202.	0.7	56
126	Infrared study of pressure-induced insulator to metal transitions in vanadium oxide compounds at the SISSI@Elettra beamline. <i>Infrared Physics and Technology</i> , 2008, 51, 440-442.	1.3	3

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127	Study of the optical gap in novel superconductors by coherent THz radiation. Infrared Physics and Technology, 2008, 51, 429-432.	1.3	6
128	Subterahertz electrodynamics of the graphenelike superconductor CaAlSi. Physical Review B, 2008, 77, .	1.1	17
129	Quasiparticle evolution and pseudogap formation in V_2O_3 : An infrared spectroscopy study. Physical Review B, 2008, 77, .	1.1	73
130	Optical properties of V_2O_3 under high pressure. Physical Review B, 2008, 77, .	1.1	14
131	Pressure dependence of the optical properties of the charge-density-wave compound $LaTe_2$. Physical Review B, 2008, 77, .	1.1	14
132	Anisotropic optical conductivity of Sr_3Te_4 . Physical Review B, 2008, 78, .	1.1	4
133	Pressure Dependence of the Charge-Density-Wave Gap in Rare-Earth Tritellurides. Physical Review Letters, 2007, 98, 026401.	2.9	52
134	Evidence of a Pressure-Induced Metallization Process in Monoclinic VO ₂ . Physical Review Letters, 2007, 98, 196406.	2.9	177
135	Electrodynamics near the metal-to-insulator transition in V ₃ O ₅ . Physical Review B, 2007, 75, .	1.1	37
136	An infrared study of the superconducting diamond. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2945-2949.	0.8	1
137	Low-Energy Electrodynamics of Superconducting Diamond. Physical Review Letters, 2006, 97, 097002.	2.9	55
138	Sub-Terahertz spectroscopy of superconducting diamond. , 2006, , .		0
139	Optical conductivity and charge ordering in Na _x CoO ₂ . Physical Review B, 2005, 72, .	1.1	20