Berardi Sensale-Rodriguez

List of Publications by Year
in descending order

85 papers	3,498 citations	218677 26 h-index	144013 57 g-index
87 all docs	87 docs citations	87 times ranked	3613 citing authors

#	Article	IF	Citations
1	Terahertz metamaterial modulators based on wide-bandgap semiconductor lateral Schottky diodes. Optical Materials Express, 2022, 12, 940.	3.0	4
2	Effect of extended defects on photoluminescence of gallium oxide and aluminum gallium oxide epitaxial films. Scientific Reports, 2022, 12, 3243.	3.3	16
3	Electronic and ionic conductivity in Î²-Ga2O3 single crystals. Journal of Applied Physics, 2022, 131, .	2.5	5
4	Editorial Expression of Concern: Terahertz magneto-plasmonics using cobalt subwavelength aperture arrays. Scientific Reports, 2022, 12, 7029.	3.3	0
5	On the terahertz response of metal-gratings on anisotropic dielectric substrates and its prospective application for anisotropic refractive index characterization. Journal of Applied Physics, 2022, 131, .	2.5	3
6	Terahertz characterization of two-dimensional low-conductive layers enabled by metal gratings. Scientific Reports, 2021, 11, 2833.	3.3	5
7	Ultra-compact integrated photonic devices enabled by machine learning and digital metamaterials. OSA Continuum, 2021, 4, 602.	1.8	8
8	Optical Characterization of Gallium Oxide Î± and Î² Polymorph Thin-Films Grown on c-Plane Sapphire. Journal of Electronic Materials, 2021, 50, 2990-2998.	2.2	9
9	Inverse Designed THz Spectral Splitters. IEEE Microwave and Wireless Components Letters, 2021, 31, 425-428.	3.2	1
10	Real-time multi-task diffractive deep neural networks via hardware-software co-design. Scientific Reports, 2021, 11, 11013.	3.3	24
11	Imaging from the visible to the longwave infrared wavelengths via an inverse-designed flat lens. Optics Express, 2021, 29, 20715.	3.4	23
12	Methods for synthesizing Î²-Ga₂O₃ thin films beyond epitaxy. JPhys Photonics, 2021, 3, 032005.	4.6	5
13	Monolithic all-silicon flat lens for broadband LWIR imaging. Optics Letters, 2021, 46, 4069.	3.3	8
14	THz characterizeation of low-conductive sheet-charges with metallic gratings. , 2021, , .		0
15	Guest Editorial: Special Cluster on Antenna Considerations for Future Millimeter-Wave and Terahertz Wireless Systems. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 2130-2135.	4.0	0
16	Ultra-compact Integrated Photonic Devices Enabled by Digital Metamaterials. , 2021, , .		0
17	University of Utah Hybrid-Flexible Education. , 2021, , .		1
18	2D Materials for Terahertz Modulation. Advanced Optical Materials, 2020, 8, 1900550.	7.3	59

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19	Plasma-Wave Propagation in GaN and Its Applications. , 2020, , 159-179.		0
20	Inverse-designed achromatic flat lens enabling imaging across the visible and near-infrared with diameter > 3â€‰mm and NA = 0.3. Applied Physics Letters, 2020, 117, .	3.3	28
21	Impact of fabrication errors and refractive index on multilevel diffractive lens performance. Scientific Reports, 2020, 10, 14608.	3.3	9
22	Ultra-compact Design of Power Splitters via Machine Learning. , 2020, , .		2
23	Synthesis and Characterization of Largeâ€Area Nanometerâ€Thin Î²â€Ga₂O₃ Films from Oxide Printing of Liquid Metal Gallium. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1901007.	1.8	16
24	Machine learning enables design of on-chip integrated silicon T-junctions with footprint of 1.2ÂÎ¼mÃ—1.2Î¼m. Nano Communication Networks, 2020, 25, 100312.	2.9	11
25	The anisotropic quasi-static permittivity of single-crystal Î² -Ga2O3 measured by terahertz spectroscopy. Applied Physics Letters, 2020, 117, .	3.3	27
26	Super-resolution imaging with an achromatic multi-level diffractive microlens array. Optics Letters, 2020, 45, 6158.	3.3	7
27	Extreme-depth-of-focus imaging with a flat lens. Optica, 2020, 7, 214.	9.3	83
28	Large-area, high-numerical-aperture multi-level diffractive lens via inverse design. Optica, 2020, 7, 252.	9.3	56
29	Inverse designed achromatic flat lens operating in the ultraviolet. OSA Continuum, 2020, 3, 1917.	1.8	13
30	Inverse Designed Flat Optics for Imaging Applications in the IR and beyond. , 2020, , .		0
31	Computational Design of THz Spectral Splitters. , 2020, , .		0
32	Broadband lightweight flat lenses for long-wave infrared imaging. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21375-21378.	7.1	68
33	On the effect of quantum capacitance in graphene FET THz detectors. , 2019, , .		0
34	Extraordinary THz absorption in 2D material-dielectric integrated metasurfaces. , 2019, , .		0
35	A Computational Design Framework for Efficient, Fabrication Error-Tolerant, Planar THz Diffractive Optical Elements. Scientific Reports, 2019, 9, 5801.	3.3	58
36	Broken Symmetry Effects due to Polarization on Resonant Tunneling Transport in Double-Barrier Nitride Heterostructures. Physical Review Applied, 2019, 11, .	3.8	25

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37	Manifestation of Kinetic Inductance in Terahertz Plasmon Resonances in Thin-Film Cd₃As₂. ACS Nano, 2019, 13, 4091-4100.	14.6	24
38	Multi-Level Diffractive Lenses for Real-Time Long-Wave IR Imaging. , 2019, , .		0
39	Graphene Based Optical Interconnects. , 2019, , 271-285.		1
40	3D-printed diffractive terahertz optical elements through computational design. , 2019, , .		7
41	Ultra-thin near infrared camera enabled by a flat multi-level diffractive lens. Optics Letters, 2019, 44, 5450.	3.3	33
42	Ultrafast THz modulators with WSe₂ thin films [Invited]. Optical Materials Express, 2019, 9, 826.	3.0	16
43	Imaging with flat optics: metalenses or diffractive lenses?. Optica, 2019, 6, 805.	9.3	195
44	Single flat lens enabling imaging in the short-wave infra-red (SWIR) band. OSA Continuum, 2019, 2, 2968.	1.8	33
45	THz characterization and demonstration of visible-transparent/terahertz-functional electromagnetic structures in ultra-conductive La-doped BaSnO3 Films. Scientific Reports, 2018, 8, 3577.	3.3	20
46	Demonstration of Computational THz Diffractive Optical Elements Enabled by a Modified Direct Binary Search Technique. , 2018, , .		1
47	Incident wavelength and polarization dependence of spectral shifts in Î²-Ga2O3 UV photoluminescence. Scientific Reports, 2018, 8, 18075.	3.3	62
48	Ultrafast terahertz modulator based on metamaterial-integrated WSe2 thin-films. , 2018, , .		0
49	Comparison of unit cell coupling for grating-gate and high electron mobility transistor array THz resonant absorbers. Journal of Applied Physics, 2018, 124, .	2.5	6
50	Grapheneâ€“dielectric integrated terahertz metasurfaces. Semiconductor Science and Technology, 2018, 33, 104007.	2.0	10
51	A Continuous Compact DC Model for Dual-Independent-Gate FinFETs. IEEE Journal of the Electron Devices Society, 2017, 5, 23-31.	2.1	6
52	New Tunneling Features in Polar III-Nitride Resonant Tunneling Diodes. Physical Review X, 2017, 7, .	8.9	42
53	Terahertz magneto-plasmonics using cobalt subwavelength aperture arrays. Scientific Reports, 2017, 7, 12019.	3.3	3
54	Graphene-based reconfigurable terahertz plasmonics and metamaterials. Carbon, 2017, 112, 177-184.	10.3	28

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55	Tunable Terahertz Metamaterials Employing Layered 2-D Materials Beyond Graphene. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 188-194.	2.9	24
56	Designer metamaterials using graphene for integrated nano-photonic applications. , 2017, , .		0
57	Terahertz amplification in RTD-gated HEMTs with a grating-gate wave coupling topology. Applied Physics Letters, 2016, 109, .	3.3	15
58	A compact DC model for dual-independent-gate FinFETs. , 2016, , .		0
59	Large nanoscale electronic conductivity in complex oxide heterostructures with ultra high electron density. APL Materials, 2016, 4, 076107.	5.1	4
60	Graphene terahertz devices for communications applications. Nano Communication Networks, 2016, 10, 68-78.	2.9	47
61	Terahertz conductivity of ultra high electron concentration 2DEGs in NTO/STO heterostructures. , 2016, , .		0
62	Reconfigurable terahertz plasmonics and metamaterials using graphene. , 2016, , .		0
63	Exceptional Terahertz Wave Modulation in Graphene Enhanced by Frequency Selective Surfaces. ACS Photonics, 2016, 3, 315-323.	6.6	67
64	Geometrical tradeoffs in graphene-based deeply-scaled electrically reconfigurable metasurfaces. Scientific Reports, 2015, 5, 8834.	3.3	11
65	Effect of electron momentum relaxation time on the terahertz properties of graphene structures. , 2015, , .		0
66	Graphene-Based Optoelectronics. Journal of Lightwave Technology, 2015, 33, 1100-1108.	4.6	52
67	Two-dimensional distributed effects in graphene SymFETs. , 2015, , .		0
68	Full-wave hydrodynamic model for predicting THz emission from grating-gate RTD-gated plasma wave HEMTs. , 2015, , .		3
69	A deep-subwavelength metamaterial terahertz phase modulator. , 2014, , .		0
70	Graphene-based electrically reconfigurable deep-subwavelength metamaterials for active control of THz light propagation. Applied Physics A: Materials Science and Processing, 2014, 117, 423-426.	2.3	22
71	Graphene-based tunable metamaterial terahertz filters. Applied Physics Letters, 2014, 105, .	3.3	83
72	Ultrascaled InAlN/GaN High Electron Mobility Transistors with Cutoff Frequency of 400 GHz. Japanese Journal of Applied Physics, 2013, 52, 08JN14.	1.5	66

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73	Noise performance of RTD-gated plasma-wave HEMT THz detectors. , 2013, , .		0
74	Power Amplification at THz via Plasma Wave Excitation in RTD-Gated HEMTs. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 200-206.	3.1	33
75	Graphene for Reconfigurable Terahertz Optoelectronics. Proceedings of the IEEE, 2013, 101, 1705-1716.	21.3	114
76	Perspectives of graphene SymFETs for THz applications. , 2013, , .		0
77	Terahertz imaging employing graphene modulator arrays. Optics Express, 2013, 21, 2324.	3.4	113
78	Near-field enhanced graphene terahertz modulator. , 2013, , .		1
79	A new class of electrically tunable metamaterial terahertz modulators. Optics Express, 2012, 20, 28664.	3.4	102
80	Monolithically integrated E/D-mode InAlN HEMTs with ƒ<inf>t</inf>/ƒ<inf>max</inf> > 200/220 GHz. , 2012, , .		6
81	Extraordinary Control of Terahertz Beam Reflectance in Graphene Electro-absorption Modulators. Nano Letters, 2012, 12, 4518-4522.	9.1	235
82	InAlN/AlN/GaN HEMTs With Regrown Ohmic Contacts and f_{T} of 370 GHz. IEEE Electron Device Letters, 2012, 33, 988-990.	3.9	292
83	Broadband graphene terahertz modulators enabled by intraband transitions. Nature Communications, 2012, 3, 780.	12.8	893
84	220-GHz Quaternary Barrier InAlGaN/AlN/GaN HEMTs. IEEE Electron Device Letters, 2011, 32, 1215-1217.	3.9	71
85	Unique prospects for graphene-based terahertz modulators. Applied Physics Letters, 2011, 99, .	3.3	183