Daniela Dragoman

List of Publications by Year
in descending order

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145 papers	2,549 citations	304368 22 h-index	233125 45 g-index
145 all docs	145 docs citations	145 times ranked	2648 citing authors

#	Article	IF	Citations
1	Terahertz fields and applications. Progress in Quantum Electronics, 2004, 28, 1-66.	3.5	389
2	Giant thermoelectric effect in graphene. Applied Physics Letters, 2007, 91, .	1.5	228
3	Plasmonics: Applications to nanoscale terahertz and optical devices. Progress in Quantum Electronics, 2008, 32, 1-41.	3.5	171
4	Terahertz antenna based on graphene. Journal of Applied Physics, 2010, 107, .	1.1	152
5	Graphene-based quantum electronics. Progress in Quantum Electronics, 2009, 33, 165-214.	3.5	103
6	Negative differential resistance of electrons in graphene barrier. Applied Physics Letters, 2007, 90, 143111.	1.5	98
7	Graphene for Microwaves. IEEE Microwave Magazine, 2010, 11, 81-86.	0.7	97
8	Optical analogue structures to mesoscopic devices. Progress in Quantum Electronics, 1999, 23, 131-188.	3.5	67
9	Writing simple RF electronic devices on paper with carbon nanotube ink. Nanotechnology, 2009, 20, 375203.	1.3	44
10	Terahertz oscillations in semiconducting carbon nanotube resonant-tunneling diodes. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 24, 282-289.	1.3	43
11	Optical analogue of a type II semiconductor heterostructure. Journal of Applied Physics, 2000, 88, 1-6.	1.1	42
12	Extraordinary tunability of high-frequency devices using Hf0.3Zr0.7O2 ferroelectric at very low applied voltages. Applied Physics Letters, 2017, 110, .	1.5	35
13	Very large phase shift of microwave signals in a 6 nm Hf _x Zr_{1â^'x}O₂ ferroelectric at Â±3 V. Nanotechnology, 2017, 28, 38LT04.	1.3	32
14	Complex conjugate media: Alternative configurations for miniaturized lasers. Optics Communications, 2011, 284, 2095-2098.	1.0	29
15	Beam-propagation method based on the Wigner transform:â€ƒa new formulation. Optics Letters, 1997, 22, 1050.	1.7	27
16	Negative differential resistance in graphene-based ballistic field-effect transistor with oblique top gate. Nanotechnology, 2014, 25, 415201.	1.3	26
17	Tunneling-time asymmetry in resonant quantum structures. IEEE Journal of Quantum Electronics, 1996, 32, 1150-1154.	1.0	25
18	2D Materials Nanoelectronics: New Concepts, Fabrication, Characterization From Microwaves up to Optical Spectrum. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800724.	0.8	25

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19	Micro/nano-optoeletromechanical systems. Progress in Quantum Electronics, 2001, 25, 229-290.	3.5	24
20	Terahertz continuous wave amplification in semiconductor carbon nanotubes. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 25, 492-496.	1.3	24
21	Graphene as a high impedance surface for ultra-wideband electromagnetic waves. Journal of Applied Physics, 2013, 114, .	1.1	24
22	Smart antennas based on graphene. Journal of Applied Physics, 2014, 116, .	1.1	22
23	HfO₂â€Based Ferroelectrics Applications in Nanoelectronics. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000521.	1.2	21
24	Temporal implementation of Fourier-related transforms. Optics Communications, 1998, 145, 33-37.	1.0	20
25	Terahertz Bloch oscillations in periodic graphene structures. Applied Physics Letters, 2008, 93, 103105.	1.5	18
26	MoS2 thin films as electrically tunable materials for microwave applications. Applied Physics Letters, 2015, 107, .	1.5	18
27	Metamaterials for ballistic electrons. Journal of Applied Physics, 2007, 101, 104316.	1.1	15
28	Microwave switching of graphene field effect transistor at and far from the Dirac point. Applied Physics Letters, 2010, 96, 103105.	1.5	15
29	Ultra-lightweight pressure sensor based on graphene aerogel decorated with piezoelectric nanocrystalline films. Nanotechnology, 2016, 27, 475203.	1.3	15
30	Wafer-scale very large memory windows in graphene monolayer/HfZrO ferroelectric capacitors. Nanotechnology, 2018, 29, 425204.	1.3	15
31	Multifunctionalities of 2D MoS2 self-switching diode as memristor and photodetector. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 126, 114451.	1.3	15
32	Ultrabroadband photodetection based on graphene ink. Nanotechnology, 2010, 21, 455202.	1.3	13
33	Room temperature on-wafer ballistic graphene field-effect-transistor with oblique double-gate. Journal of Applied Physics, 2016, 119, 244305.	1.1	13
34	Terahertz shielding properties of aero-GaN. Semiconductor Science and Technology, 2019, 34, 12LT02.	1.0	13
35	Sensing up to 40â€‰atm Using Pressureâ€Sensitive Aeroâ€GaN. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900012.	1.2	13
36	Optical modeling of quantum wire arrays. IEEE Journal of Quantum Electronics, 1997, 33, 375-381.	1.0	12

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37	Tunneling time asymmetry in semiconductor heterostructures. IEEE Journal of Quantum Electronics, 1999, 35, 1887-1893.	1.0	12
38	Reconfigurable Plasmonic Logic Gates. Plasmonics, 2018, 13, 2189-2195.	1.8	12
39	Wafer-Scale Fabrication and Room-Temperature Experiments on Graphene-Based Gates for Quantum Computation. IEEE Nanotechnology Magazine, 2018, 17, 362-367.	1.1	12
40	Graphene bandgap induced by ferroelectric Pca2₁ HfO₂ substrates: a first-principles study. Physical Chemistry Chemical Physics, 2019, 21, 15001-15006.	1.3	12
41	Perspectives on Atomic-Scale Switches for High-Frequency Applications Based on Nanomaterials. Nanomaterials, 2021, 11, 625.	1.9	12
42	Tomographic amplitude and phase recovery of vertical-cavity surface-emitting lasers by use of the ambiguity function. Optics Letters, 2002, 27, 1519.	1.7	11
43	Redundancy of phase-space distribution functions in complex field recovery problems. Applied Optics, 2003, 42, 1932.	2.1	11
44	Tunable dielectric properties in polyacrylonitrile/multiwall carbon nanotube composites. Polymer Composites, 2017, 38, 1741-1748.	2.3	11
45	Solving the graphene electronics conundrum: High mobility and high on-off ratio in graphene nanopatterned transistors. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 97, 296-301.	1.3	11
46	Electric field effect in boron and nitrogen doped graphene bilayers. Computational Materials Science, 2018, 155, 175-179.	1.4	11
47	Wafer-scale graphene-ferroelectric HfO₂/Geâ€“HfO₂/HfO₂ transistors acting as three-terminal memristors. Nanotechnology, 2020, 31, 495207.	1.3	11
48	Phase Space Representation of Modes in Optical Waveguides. Journal of Modern Optics, 1995, 42, 1815-1823.	0.6	10
49	Calculation of the tunneling time through type II resonant heterostructures. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 210, 121-124.	0.9	10
50	Terahertz field characterization using Fabryâ€“Perot-like cantilevers. Applied Physics Letters, 2001, 79, 581-583.	1.5	10
51	Phase Space Formulation of Quantum Mechanics. Insight into the Measurement Problem. Physica Scripta, 2005, 72, 290-296.	1.2	10
52	Classical versus complex fractional Fourier transformation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 274.	0.8	10
53	Properties of finite Gaussians and the discrete-continuous transition. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 425305.	0.7	10
54	Graphene-based room-temperature implementation of a modified Deutschâ€“Jozsa quantum algorithm. Nanotechnology, 2015, 26, 485201.	1.3	10

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55	Near and far field optical beam characterization using the fractional Fourier transform. Optics Communications, 1997, 141, 5-9.	1.0	9
56	Variant fractional Fourier transformer for optical pulses. Optics Letters, 1999, 24, 933.	1.7	9
57	DNA hybridization detection in a miniaturized electromagnetic band gap resonator. Applied Physics Letters, 2011, 99, 253106.	1.5	9
58	Enhanced architectures for room-temperature reversible logic gates in graphene. Applied Physics Letters, 2014, 105, .	1.5	9
59	Memristive GaN ultrathin suspended membrane array. Nanotechnology, 2016, 27, 295204.	1.3	9
60	Memtransistors Based on Nanopatterned Graphene Ferroelectric Field-Effect Transistors. Nanomaterials, 2020, 10, 1404.	1.9	9
61	Fractional Fourier-related functions. Optics Communications, 1996, 128, 91-98.	1.0	8
62	The modeling of the quantum tunneling time through heterostructures using optical layered media. Optics Communications, 1997, 133, 129-134.	1.0	8
63	The formulation of Fermi's golden rule in phase space. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 274, 93-97.	0.9	8
64	Can the Wigner transform of a two-dimensional rotationally symmetric beam be fully recovered from the Wigner transform of its one-dimensional approximation?. Optics Letters, 2000, 25, 281.	1.7	8
65	Quantum interference as phase space filtering. Optik, 2001, 112, 31-36.	1.4	8
66	The interference term in the Wigner distribution function and the Aharonovâ€“Bohm effect. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 285, 109-114.	0.9	8
67	Amplitude and phase recovery of rotationally symmetric beams. Applied Optics, 2002, 41, 5512.	2.1	8
68	Unambiguous coherence retrieval from intensity measurements. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2003, 20, 290.	0.8	8
69	Time-frequency signal processing of terahertz pulses. Applied Optics, 2004, 43, 3848.	2.1	8
70	Modeling of rf energy sensing and harvesting using the giant thermoelectric effect in carbon nanotubes. Applied Physics Letters, 2007, 91, .	1.5	8
71	Terahertz generation using a resonant-tunneling-like configuration in graphene. Journal of Applied Physics, 2011, 109, .	1.1	8
72	Applications of multi-barrier structures in graphene. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1687-1691.	1.3	8

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73	Plasmonic ambient light sensing with MoS 2 -graphene heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2017, 85, 164-168.	1.3	8
74	The Wigner distribution function of self-Fourier functions. Journal of Modern Optics, 1996, 43, 1933-1938.	0.6	7
75	Optical modelling of quantum dots. Optics Communications, 1998, 150, 331-338.	1.0	7
76	n-step optical simulation of the n-qubit state: Applications in optical computing. Optik, 2002, 113, 425-428.	1.4	7
77	Single-chip device for tunneling time measurements. Journal of Applied Physics, 2003, 93, 6133-6136.	1.1	7
78	Ballistic transport in graphene Y-junctions in transverse electric field. Nanotechnology, 2018, 29, 355202.	1.3	7
79	Photoconductive Behavior of the PPV/RGO Composites: Insights of Charge Transfer Process. Physica Status Solidi (B): Basic Research, 2019, 256, 1800392.	0.7	7
80	Wigner distribution function expression for the tunnelling time in quantum resonant structures. Optical and Quantum Electronics, 1997, 29, 79-82.	1.5	6
81	Phase space characterization of solitons with the Wigner transform. Optics Communications, 1997, 137, 437-444.	1.0	6
82	Hemispherical-rod microlens as a variant fractional Fourier transformer. Optics Letters, 1998, 23, 1499.	1.7	6
83	Physical mechanism of negative differential conductance in substrateless metallic carbon nanotubes. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 36, 158-162.	1.3	6
84	Enhancement of higher harmonics in graphene-based coupled coplanar line microwave multipliers. Journal of Applied Physics, 2013, 114, 154304.	1.1	6
85	Dirac-SchrÃ¶dinger transformations in contacted graphene structures. Journal of Applied Physics, 2013, 113, 214312.	1.1	6
86	Learning mechanisms in memristor networks based on GaN nanomembranes. Journal of Applied Physics, 2018, 124, 152110.	1.1	6
87	Electromagnetic energy harvesting based on HfZrO tunneling junctions. Nanotechnology, 2018, 29, 445203.	1.3	6
88	Ring-Shaped Plasmonic Logic Gates. Plasmonics, 2019, 14, 71-78.	1.8	6
89	Graphene bandgap induced by ferroelectric HfO₂ doped with Zr (HfZrO). Nanotechnology, 2020, 31, 275202.	1.3	6
90	Integrated optic-devices characterization with the Wigner transform. IEEE Journal of Selected Topics in Quantum Electronics, 1996, 2, 181-186.	1.9	5

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91	Analytical treatment of wave packet tunneling through a resonant double barrier heterostructure. Journal of Applied Physics, 1999, 86, 2677-2683.	1.1	5
92	Biased micromechanical cantilever arrays as optical image memory. Applied Optics, 2003, 42, 1515.	2.1	5
93	Tunable fractional Fourier transformer for ballistic electrons. Journal of Applied Physics, 2003, 94, 4131-4134.	1.1	5
94	Berry phase and traversal time in asymmetric graphene structures. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 816-820.	1.3	5
95	Low-energy equivalence between periodically gated graphene structures and bilayer-like gated graphene. Applied Physics Letters, 2014, 104, 183110.	1.5	5
96	Memory effect in carbon quantum DOTâ€“PEG1500N composites. Current Applied Physics, 2014, 14, 1625-1632.	1.1	5
97	Reduced Graphene Oxide Sheets as Inhibitors of the Photochemical Reactions of Î±-Lipoic Acid in the Presence of Ag and Au Nanoparticles. Nanomaterials, 2020, 10, 2238.	1.9	5
98	Bloch oscillations at room temperature in graphene/h-BN electrostatic superlattices. Nanotechnology, 2021, 32, 345203.	1.3	5
99	Graphene/Ferroelectric (Ge-Doped HfO2) Adaptable Transistors Acting as Reconfigurable Logic Gates. Nanomaterials, 2022, 12, 279.	1.9	5
100	Tunneling-time properties in type II quantum resonant structures. IEEE Journal of Quantum Electronics, 1996, 32, 1932-1936.	1.0	4
101	Time-frequency modeling of atomic force microscopy. Optics Communications, 1997, 140, 220-225.	1.0	4
102	Recovery of longitudinally variant refractive index profile from the measurement of the Wigner transform. Optics Communications, 1998, 153, 360-367.	1.0	4
103	On the similarities between the Wigner distribution function in classical and quantum optics. Optik, 2001, 112, 497-501.	1.4	4
104	Quantum coherent versus classical coherent light. Optical and Quantum Electronics, 2001, 33, 239-252.	1.5	4
105	Reconfigurable electro-optical waveguide for optical processing. Applied Optics, 2003, 42, 6439.	2.1	4
106	Spin-polarized beam splitter for ballistic electrons. Physica B: Condensed Matter, 2005, 367, 92-100.	1.3	4
107	Proposal for multiple-valued logic in gated semiconducting carbon nanotubes. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 33, 178-181.	1.3	4
108	Electric and thermoelectric properties of graphene bilayers with extrinsic impurities under applied electric field. Physica B: Condensed Matter, 2019, 561, 9-15.	1.3	4

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109	Phase-controlling infrared thermal emitting metasurfaces. Journal of Optics (United Kingdom), 2021, 23, 035103.	1.0	4
110	The Wigner distribution function and the energy conservation of a light beam. Journal of Modern Optics, 1996, 43, 1127-1133.	0.6	3
111	Proposal for a three-qubit teleportation experiment. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 288, 121-124.	0.9	3
112	Multiple negative differential resistances in crossed carbon nanotubes. Journal of Applied Physics, 2009, 105, 114303.	1.1	3
113	Graphene-like metal-on-silicon field-effect transistor. Nanotechnology, 2012, 23, 305201.	1.3	3
114	Finite oscillator obtained through finite frame quantization. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 355301.	0.7	3
115	Effects of graded distribution of scattering centers on ballistic transport. Journal of Applied Physics, 2014, 116, .	1.1	3
116	Ballistic charge carrier transmission through graphene multi-barrier structures in uniform magnetic field. Journal Physics D: Applied Physics, 2014, 47, 425302.	1.3	3
117	Influence of TiO₂ and Si on the excitonâ€“phonon interaction in PbI₂ and CdS semiconductors evidenced by Raman spectroscopy. Journal of Physics Condensed Matter, 2017, 29, 365702.	0.7	3
118	Ballistic 3-port interferometric logic gates in the quantum Hall regime. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 109, 144-151.	1.3	3
119	Reconfigurable quantum logic gates using Rashba controlled spin polarized currents. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 111, 13-19.	1.3	3
120	Electrical rectification in asymmetric graphene nanoribbons with pores. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 124, 114240.	1.3	3
121	Oxygen-vacancy induced ferroelectricity in nitrogen-doped nickel oxide. Journal of Applied Physics, 2022, 131, 164304.	1.1	3
122	Time-frequency characterization of magnetostatic envelope soliton waves. Applied Physics Letters, 1997, 70, 714-716.	1.5	2
123	The relation between light diffraction and the fractional fourier transform. Journal of Modern Optics, 1998, 45, 2117-2124.	0.6	2
124	The Aharonovâ€“Bohm effect in the momentum space. Optics Communications, 2008, 281, 2685-2689.	1.0	2
125	Composite metamaterial for ballistic electrons. Journal Physics D: Applied Physics, 2012, 45, 485104.	1.3	2
126	Ballistic electron propagation through periodic few-layer graphene nanostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 84, 60-70.	1.3	2

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127	Current rectification effects in 6â€¯nm thick Hf Zr1-Oy ferroelectrics/Si planar heterostructures. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 104, 241-246.	1.3	2
128	Characterization of Monochromatic Aberrated Metalenses in Terms of Intensity-Based Moments. Nanomaterials, 2021, 11, 1805.	1.9	2
129	Band-engineered semiconductor optical waveguides for integral transform implementation. Journal of Applied Physics, 1999, 85, 3409-3412.	1.1	1
130	The asymmetry of the tunneling time in type II semiconductor heterostructures. Optical and Quantum Electronics, 2002, 34, 1097-1109.	1.5	1
131	Correlation-based phase space beam characterization. Applied Optics, 2003, 42, 4147.	2.1	1
132	Noninterferometric and nontomographic iterative method for field retrieval. Applied Optics, 2004, 43, 4208.	2.1	1
133	Relativistic aberrations in quantum phase space. Optics Communications, 2009, 282, 1042-1046.	1.0	1
134	Effect of SchrÃ¶dingerâ€“Dirac transformations on electron transport in graphene-based structures surrounded by conducting regions. Journal Physics D: Applied Physics, 2013, 46, 245301.	1.3	1
135	Ballistic electron transport in wrinkled superlattices. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 81, 131-135.	1.3	1
136	Characterization of optical fields with quantized orbital angular momentum by invariants of higher order moments of radial coordinates. Journal of Modern Optics, 2017, 64, 2328-2335.	0.6	1
137	Tunable fractional Fourier transform implementation of electronic wave functions in atomically thin materials. Beilstein Journal of Nanotechnology, 2018, 9, 1828-1833.	1.5	1
138	Reconfigurable horizontalâ€“vertical carrier transport in graphene/HfZrO field-effect transistors. Nanotechnology, 2020, 31, 025203.	1.3	1
139	One-step measurement of optical fields in multimode circular fibers. Applied Optics, 2001, 40, 4655.	2.1	0
140	Carbon nanotube zoom lenses. IEEE Nanotechnology Magazine, 2003, 2, 93-96.	1.1	0
141	Fault-tolerant bandstructure of two-dimensional square photonic crystals with different dielectric rod shapes. Photonics and Nanostructures - Fundamentals and Applications, 2017, 24, 12-17.	1.0	0
142	Reconfigurable logic gates in nanowires with Rashba spin-orbit interaction. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 120, 114064.	1.3	0
143	A Ballistic Transport Model for an Artificial Neuron. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900936.	0.8	0
144	Plasmonic slot waveguide circuits for pulse shaping. Optik, 2021, 231, 166419.	1.4	0

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145	Graphene Nanopore Arrays for Electron Focusing and Antifocusing. Nanomaterials, 2022, 12, 529.	1.9	0