

Mircea Dragoman

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

149 papers	2,517 citations	22 h-index	44 g-index
163 ext. papers	3,016 ext. citations	2.9 avg, IF	5.21 L-index

#	Paper	IF	Citations
149	Terahertz fields and applications. <i>Progress in Quantum Electronics</i> , 2004 , 28, 1-66	9.1	278
148	Giant thermoelectric effect in graphene. <i>Applied Physics Letters</i> , 2007 , 91, 203116	3.4	203
147	Plasmonics: Applications to nanoscale terahertz and optical devices. <i>Progress in Quantum Electronics</i> , 2008 , 32, 1-41	9.1	149
146	Terahertz antenna based on graphene. <i>Journal of Applied Physics</i> , 2010 , 107, 104313	2.5	116
145	Graphene-based quantum electronics. <i>Progress in Quantum Electronics</i> , 2009 , 33, 165-214	9.1	86
144	Negative differential resistance of electrons in graphene barrier. <i>Applied Physics Letters</i> , 2007 , 90, 143114	3.4	86
143	Graphene for Microwaves. <i>IEEE Microwave Magazine</i> , 2010 , 11, 81-86	1.2	74
142	Millimeter-wave generation via frequency multiplication in graphene. <i>Applied Physics Letters</i> , 2010 , 97, 093101	3.4	59
141	Optical analogue structures to mesoscopic devices. <i>Progress in Quantum Electronics</i> , 1999 , 23, 131-188	9.1	55
140	Microwave propagation in graphene. <i>Applied Physics Letters</i> , 2009 , 95, 073107	3.4	53
139	A tunable microwave slot antenna based on graphene. <i>Applied Physics Letters</i> , 2015 , 106, 153101	3.4	51
138	Writing simple RF electronic devices on paper with carbon nanotube ink. <i>Nanotechnology</i> , 2009 , 20, 375203	3.4	41
137	Reversible metal-semiconductor transitions for microwave switching applications. <i>Applied Physics Letters</i> , 2006 , 88, 073503	3.4	38
136	Coplanar waveguide on graphene in the range 40 MHz–10 GHz. <i>Applied Physics Letters</i> , 2011 , 99, 033112	3.4	37
135	6.3-GHz Film Bulk Acoustic Resonator Structures Based on a Gallium Nitride/Silicon Thin Membrane. <i>IEEE Electron Device Letters</i> , 2009 , 30, 799-801	4.4	37
134	Terahertz oscillations in semiconducting carbon nanotube resonant-tunneling diodes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 24, 282-289	3	36
133	Graphene-based ultrafast diode. <i>Journal of Applied Physics</i> , 2010 , 108, 084316	2.5	33

132	Microwave switches based on graphene. <i>Journal of Applied Physics</i> , 2009 , 105, 054309	2.5	32
131	Experimental determination of microwave attenuation and electrical permittivity of double-walled carbon nanotubes. <i>Applied Physics Letters</i> , 2006 , 88, 153108	3.4	29
130	SAW Devices Manufactured on GaN/Si for Frequencies Beyond 5 GHz. <i>IEEE Electron Device Letters</i> , 2010 , 31, 1398-1400	4.4	27
129	Extraordinary tunability of high-frequency devices using Hf _{0.3} Zr _{0.7} O ₂ ferroelectric at very low applied voltages. <i>Applied Physics Letters</i> , 2017 , 110, 103104	3.4	25
128	Geometrically induced rectification in two-dimensional ballistic nanodevices. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 055306	3	23
127	Tunneling-time asymmetry in resonant quantum structures. <i>IEEE Journal of Quantum Electronics</i> , 1996 , 32, 1150-1154	2	22
126	Negative differential resistance in graphene-based ballistic field-effect transistor with oblique top gate. <i>Nanotechnology</i> , 2014 , 25, 415201	3.4	19
125	Very large phase shift of microwave signals in a 6 nm Hf Zr O ferroelectric at ± 3 V. <i>Nanotechnology</i> , 2017 , 28, 38LT04	3.4	19
124	Memristor device based on carbon nanotubes decorated with gold nanoislands. <i>Applied Physics Letters</i> , 2011 , 99, 093102	3.4	19
123	Terahertz continuous wave amplification in semiconductor carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005 , 25, 492-496	3	19
122	Graphene rectenna for efficient energy harvesting at terahertz frequencies. <i>Applied Physics Letters</i> , 2016 , 109, 113105	3.4	19
121	Towards a terahertz direct receiver based on graphene up to 10 THz. <i>Journal of Applied Physics</i> , 2014 , 115, 044307	2.5	18
120	Temporal implementation of Fourier-related transforms. <i>Optics Communications</i> , 1998 , 145, 33-37	2	18
119	Smart antennas based on graphene. <i>Journal of Applied Physics</i> , 2014 , 116, 114302	2.5	17
118	Graphene as a high impedance surface for ultra-wideband electromagnetic waves. <i>Journal of Applied Physics</i> , 2013 , 114, 184308	2.5	17
117	Extending ballistic graphene FET lumped element models to diffusive devices. <i>Solid-State Electronics</i> , 2012 , 76, 8-12	1.7	17
116	Electrical behavior of multi-walled carbon nanotube network embedded in amorphous silicon nitride. <i>Nanoscale Research Letters</i> , 2011 , 6, 88	5	16
115	There is no Hartman effect in graphene structures. <i>Journal of Applied Physics</i> , 2010 , 107, 054306	2.5	16

114	Terahertz Bloch oscillations in periodic graphene structures. <i>Applied Physics Letters</i> , 2008 , 93, 103105	3.4	16
113	Carbon nanotube-based electromagnetic band gap resonator for CH ₄ gas detection. <i>Journal of Applied Physics</i> , 2016 , 119, 124504	2.5	16
112	MoS ₂ thin films as electrically tunable materials for microwave applications. <i>Applied Physics Letters</i> , 2015 , 107, 243109	3.4	15
111	Harvesting Electromagnetic Energy in the $\{V\}$ -Band Using a Rectenna Formed by a Bow Tie Integrated With a 6-nm-Thick Au/HfO ₂ /Pt Metal/Insulator/Metal Diode. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2973-2980	2.9	15
110	Current oscillations in a wide graphene sheet. <i>Journal of Applied Physics</i> , 2009 , 106, 044312	2.5	14
109	GaN membrane metal-semiconductor-metal ultraviolet photodetector. <i>Applied Optics</i> , 2008 , 47, 1453-6	1.7	13
108	Integration of Antenna Array and Self-Switching Graphene Diode for Detection at 28 GHz. <i>IEEE Electron Device Letters</i> , 2019 , 40, 628-631	4.4	13
107	Ultrabroadband photodetection based on graphene ink. <i>Nanotechnology</i> , 2010 , 21, 455202	3.4	12
106	Metamaterials for ballistic electrons. <i>Journal of Applied Physics</i> , 2007 , 101, 104316	2.5	12
105	Nanoelectromechanical switches based on carbon nanotubes for microwave and millimeter waves. <i>Applied Physics Letters</i> , 2007 , 90, 113102	3.4	12
104	Sensing up to 40 atm Using Pressure-Sensitive Aero-GaN. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900012	2.5	11
103	Negative differential resistance in GaN nanowire network. <i>Applied Physics Letters</i> , 2010 , 96, 053116	3.4	11
102	Microwave switching of graphene field effect transistor at and far from the Dirac point. <i>Applied Physics Letters</i> , 2010 , 96, 103105	3.4	11
101	Tunneling nanotube radio. <i>Journal of Applied Physics</i> , 2008 , 104, 074314	2.5	11
100	High performance thin film bulk acoustic resonator covered with carbon nanotubes. <i>Applied Physics Letters</i> , 2006 , 89, 143122	3.4	11
99	Wigner-transform implementation in the time-frequency domain. <i>Applied Optics</i> , 1996 , 35, 7025-30	1.7	11
98	Graphene bandgap induced by ferroelectric Pca2 HfO substrates: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 15001-15006	3.6	10
97	GaN membrane-supported UV photodetectors manufactured using nanolithographic processes. <i>Microelectronics Journal</i> , 2009 , 40, 319-321	1.8	10

96	Modelling, design and realization of micromachined millimetre-wave band-pass filters. <i>International Journal of Circuit Theory and Applications</i> , 2003 , 31, 529-539	2	10
95	Tomographic amplitude and phase recovery of vertical-cavity surface-emitting lasers by use of the ambiguity function. <i>Optics Letters</i> , 2002 , 27, 1519-21	3	10
94	Wafer-scale very large memory windows in graphene monolayer/HfZrO ferroelectric capacitors. <i>Nanotechnology</i> , 2018 , 29, 425204	3.4	9
93	Tunable electrical superlattices in periodically gated bilayer graphene. <i>Journal of Applied Physics</i> , 2010 , 107, 044312	2.5	9
92	Near and far field optical beam characterization using the fractional Fourier transform. <i>Optics Communications</i> , 1997 , 141, 5-9	2	9
91	Millimeter-wave passive circuit elements based on GaAs micromachining. <i>Journal of Micromechanics and Microengineering</i> , 2005 , 15, S53-S59	2	9
90	Optical actuation of micromechanical tunneling structures with applications in spectrum analysis and optical computing. <i>Applied Optics</i> , 1999 , 38, 6773-8	1.7	9
89	Variant fractional Fourier transformer for optical pulses. <i>Optics Letters</i> , 1999 , 24, 933-5	3	9
88	Electromagnetic interference shielding in X-band with aero-GaN. <i>Nanotechnology</i> , 2019 , 30, 34LT01	3.4	8
87	Terahertz shielding properties of aero-GaN. <i>Semiconductor Science and Technology</i> , 2019 , 34, 12LT02	1.8	8
86	DNA hybridization detection in a miniaturized electromagnetic band gap resonator. <i>Applied Physics Letters</i> , 2011 , 99, 253106	3.4	8
85	Time flow in graphene and its implications on the cutoff frequency of ballistic graphene devices. <i>Journal of Applied Physics</i> , 2011 , 110, 014302	2.5	8
84	Optical modeling of quantum wire arrays. <i>IEEE Journal of Quantum Electronics</i> , 1997 , 33, 375-381	2	8
83	The modeling of the quantum tunneling time through heterostructures using optical layered media. <i>Optics Communications</i> , 1997 , 133, 129-134	2	8
82	Calculation of the tunneling time through type II resonant heterostructures. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1996 , 210, 121-124	2.3	8
81	Room temperature on-wafer ballistic graphene field-effect-transistor with oblique double-gate. <i>Journal of Applied Physics</i> , 2016 , 119, 244305	2.5	8
80	Quantum logic gates based on ballistic transport in graphene. <i>Journal of Applied Physics</i> , 2016 , 119, 094903	2.5	8
79	HfO ₂ -Based Ferroelectrics Applications in Nanoelectronics. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021 , 15, 2000521	2.5	8

78	A SnS ₂ -based photomemristor driven by sun. <i>Journal of Applied Physics</i> , 2018 , 123, 024506	2.5	7
77	Millimeterwave Schottky diode on grapene monolayer via asymmetric metal contacts. <i>Journal of Applied Physics</i> , 2012 , 112, 084302	2.5	7
76	Terahertz generation using a resonant-tunneling-like configuration in graphene. <i>Journal of Applied Physics</i> , 2011 , 109, 124307	2.5	7
75	Time-frequency signal processing of terahertz pulses. <i>Applied Optics</i> , 2004 , 43, 3848-53	1.7	7
74	Amplitude and phase recovery of rotationally symmetric beams. <i>Applied Optics</i> , 2002 , 41, 5512-8	1.7	7
73	Plasmonic ambient light sensing with MoS ₂ -graphene heterostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2017 , 85, 164-168	3	6
72	Graphene-based room-temperature implementation of a modified Deutsch-Jozsa quantum algorithm. <i>Nanotechnology</i> , 2015 , 26, 485201	3.4	6
71	Graphene radio: Detecting radiowaves with a single atom sheet. <i>Applied Physics Letters</i> , 2012 , 101, 033109	3.4	6
70	Enhancement of higher harmonics in graphene-based coupled coplanar line microwave multipliers. <i>Journal of Applied Physics</i> , 2013 , 114, 154304	2.5	6
69	Optical modelling of quantum dots. <i>Optics Communications</i> , 1998 , 150, 331-338	2	6
68	Multiple negative resistances in trenched structures bridged with carbon nanotubes. <i>Applied Physics Letters</i> , 2008 , 93, 043117	3.4	6
67	Physical mechanism of negative differential conductance in substrateless metallic carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2007 , 36, 158-162	3	6
66	Voltage-controlled high-frequency oscillations based on suspended semiconducting carbon nanotubes. <i>Physical Review B</i> , 2006 , 73,	3.3	6
65	Modeling of rf energy sensing and harvesting using the giant thermoelectric effect in carbon nanotubes. <i>Applied Physics Letters</i> , 2007 , 91, 173117	3.4	6
64	Single-chip device for tunneling time measurements. <i>Journal of Applied Physics</i> , 2003 , 93, 6133-6136	2.5	6
63	Terahertz field characterization using Fabry-Perot-like cantilevers. <i>Applied Physics Letters</i> , 2001 , 79, 581-583	3.4	6
62	Hemispherical-rod microlens as a variant fractional Fourier transformer. <i>Optics Letters</i> , 1998 , 23, 1499-501	3.4	6
61	Experimental evidence of magnetostatic soliton propagation at microwave frequencies. <i>Applied Physics Letters</i> , 1991 , 59, 1788-1789	3.4	6

60	Tunable Microwave Filters Using HfO-Based Ferroelectrics. <i>Nanomaterials</i> , 2020 , 10,	5-4	6
59	Non-volatile memory devices based on Ge nanocrystals. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 255-259	1.6	6
58	MoS radio: detecting radio waves with a two-dimensional transition metal dichalcogenide semiconductor. <i>Nanotechnology</i> , 2020 , 31, 06LT01	3-4	6
57	Solving the graphene electronics conundrum: High mobility and high on-off ratio in graphene nanopatterned transistors. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018 , 97, 296-301	3	6
56	Learning mechanisms in memristor networks based on GaN nanomembranes. <i>Journal of Applied Physics</i> , 2018 , 124, 152110	2.5	6
55	Graphene bandgap induced by ferroelectric HfO doped with Zr (HfZrO). <i>Nanotechnology</i> , 2020 , 31, 275204	2-4	5
54	Wafer-Scale Fabrication and Room-Temperature Experiments on Graphene-Based Gates for Quantum Computation. <i>IEEE Nanotechnology Magazine</i> , 2018 , 17, 362-367	2.6	5
53	Electromagnetic energy harvesting based on HfZrO tunneling junctions. <i>Nanotechnology</i> , 2018 , 29, 445203	2-4	5
52	Enhanced architectures for room-temperature reversible logic gates in graphene. <i>Applied Physics Letters</i> , 2014 , 105, 113109	3-4	5
51	Self-powered microwave devices based on graphene ink decorated with gold nanoislands. <i>Journal of Applied Physics</i> , 2012 , 112, 064327	2.5	5
50	High quality nanoelectromechanical microwave resonator based on a carbon nanotube array. <i>Applied Physics Letters</i> , 2008 , 92, 063118	3-4	5
49	Carbon Nanotubes-Based Microwave and Millimeter Wave Sensors 2007 ,		5
48	Characterization of wave fronts of light beams by use of tunneling cantilevers. <i>Applied Optics</i> , 2001 , 40, 678-82	1.7	5
47	Memtransistors Based on Nanopatterned Graphene Ferroelectric Field-Effect Transistors. <i>Nanomaterials</i> , 2020 , 10,	5-4	5
46	Switching microwaves via semiconductor-isolator reversible transition in a thin-film of MoS ₂ . <i>Journal of Applied Physics</i> , 2015 , 118, 045710	2.5	4
45	Tunable fractional Fourier transformer for ballistic electrons. <i>Journal of Applied Physics</i> , 2003 , 94, 4131-4134	4-5	4
44	Microwave applications of carbon nanotubes. <i>Frequenz</i> , 2005 , 59,	0.6	4
43	On the similarities between the Wigner distribution function in classical and quantum optics. <i>Optik</i> , 2001 , 112, 497-501	2.5	4

42	Integrated optic-devices characterization with the Wigner transform. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 1996 , 2, 181-186	3.8	4
41	Experimental observation of microwave envelope solitons of dipolar magnetostatic waves. <i>Applied Physics Letters</i> , 1994 , 65, 249-250	3.4	4
40	Wafer-scale graphene-ferroelectric HfO/Ge-HfO/HfO transistors acting as three-terminal memristors. <i>Nanotechnology</i> , 2020 , 31, 495207	3.4	4
39	Perspectives on Atomic-Scale Switches for High-Frequency Applications Based on Nanomaterials. <i>Nanomaterials</i> , 2021 , 11,	5.4	4
38	DC and radio-frequency transmission characteristics of double-walled carbon nanotubes-based ink. <i>International Journal of Microwave and Wireless Technologies</i> , 2010 , 2, 471-477	0.8	3
37	Graphene-like metal-on-silicon field-effect transistor. <i>Nanotechnology</i> , 2012 , 23, 305201	3.4	3
36	Phase space characterization of solitons with the Wigner transform. <i>Optics Communications</i> , 1997 , 137, 437-444	2	3
35	Proposal for multiple-valued logic in gated semiconducting carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2006 , 33, 178-181	3	3
34	Biased micromechanical cantilever arrays as optical image memory. <i>Applied Optics</i> , 2003 , 42, 1515-9	1.7	3
33	Reconfigurable electro-optical waveguide for optical processing. <i>Applied Optics</i> , 2003 , 42, 6439-44	1.7	3
32	Quantum coherent versus classical coherent light. <i>Optical and Quantum Electronics</i> , 2001 , 33, 239-252	2.4	3
31	Optical realization of the ambiguity function of real two-dimensional light sources. <i>Applied Optics</i> , 2000 , 39, 2912-7	1.7	3
30	Experimental demonstration of a continuously variant fractional fourier transformer. <i>Applied Optics</i> , 1999 , 38, 4985-9	1.7	3
29	Tunneling-time properties in type II quantum resonant structures. <i>IEEE Journal of Quantum Electronics</i> , 1996 , 32, 1932-1936	2	3
28	Current rectification effects in 6 nm thick Hf _x Zr _{1-x} O _y ferroelectrics/Si planar heterostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018 , 104, 241-246	3	2
27	Transport Properties of Carbon Nanotubes and Graphene 2014 , 151-164		2
26	Multiple negative differential resistances in crossed carbon nanotubes. <i>Journal of Applied Physics</i> , 2009 , 105, 114303	2.5	2
25	Real-time detection of deoxyribonucleic acid bases via their negative differential conductance signature. <i>Physical Review E</i> , 2009 , 80, 022901	2.4	2

24	Beam-propagation method based on the Wigner transform: a new formulation. <i>Optics Letters</i> , 1997 , 22, 1050-2	3	2
23	Experimental characterisation of 38 GHz micromachined GaAs receiver. <i>Electronics Letters</i> , 2005 , 41, 256	1.1	2
22	Single device for laser source measurements from the ultraviolet to the far infrared. <i>Applied Optics</i> , 2000 , 39, 4361-5	1.7	2
21	Implementation of the spatial and the temporal cross-ambiguity function for waveguide fields and optical pulses. <i>Applied Optics</i> , 1999 , 38, 822-7	1.7	2
20	Amplitude and Phase Tuning of Microwave Signals in Magnetically Biased Permalloy Structures. <i>IEEE Access</i> , 2020 , 8, 190843-190854	3.5	2
19	Graphene nanoelectronics for high-frequency applications 2013 ,		1
18	Millimeter wave power sensing using micro- and nanoelectromechanical systems. <i>Journal of Applied Physics</i> , 2009 , 105, 014505	2.5	1
17	Investigation of electrical properties of carbon nanotubes 2009 ,		1
16	Time-frequency characterization of magnetostatic envelope soliton waves. <i>Applied Physics Letters</i> , 1997 , 70, 714-716	3.4	1
15	Time-frequency modeling of atomic force microscopy. <i>Optics Communications</i> , 1997 , 140, 220-225	2	1
14	Low-losses coupled-lines silicon micromachined band-pass filters for the 45 GHz frequency band		1
13	Recovery of the refractive-index profile from the wigner distribution of an optical waveguide. <i>Applied Optics</i> , 1998 , 37, 2357-60	1.7	1
12	Band-engineered semiconductor optical waveguides for integral transform implementation. <i>Journal of Applied Physics</i> , 1999 , 85, 3409-3412	2.5	1
11	Phase-space measurements of micro-optical objects. <i>Applied Optics</i> , 1999 , 38, 5019-23	1.7	1
10	Design considerations for tunnel diode non-linear transmission lines. <i>Journal of Infrared, Millimeter and Terahertz Waves</i> , 1995 , 16, 1719-1732		1
9	Reconfigurable horizontal-vertical carrier transport in graphene/HfZrO field-effect transistors. <i>Nanotechnology</i> , 2020 , 31, 025203	3.4	1
8	The Rise of Ferroelectricity at Nanoscale: Nanoelectronics is rediscovering the ferroelectricity. <i>IEEE Nanotechnology Magazine</i> , 2021 , 15, 8-19	1.7	1
7	Tunable and Miniaturized Microwave Filters Using Carbon Nanotube-Based Variable Capacitors. <i>IEEE Nanotechnology Magazine</i> , 2022 , 21, 118-130	2.6	1

- 6 Microwave Detection Using Two-Atom-Thick Self-Switching Diodes Based on Quantum Simulations and Advanced Circuit Models. *IEEE Transactions on Microwave Theory and Techniques*, **2021**, 1-1 4.1 ○
- 5 . *IEEE Access*, **2021**, 9, 122443-122456 3.5 ○
- 4 Response to "Comment on "Negative differential conductance of electrons in graphene barrier" [Appl. Phys. Lett. 92, 216101 (2008)]" *Applied Physics Letters*, **2008**, 92, 216102 3.4
- 3 Carbon nanotube zoom lenses. *IEEE Nanotechnology Magazine*, **2003**, 2, 93-96 2.6
- 2 On 1/f noise in nonlinear physical systems described by infinite dimensional integrable equations. *Journal of Applied Physics*, **1990**, 67, 3519-3521 2.5
- 1 Oxygen-vacancy induced ferroelectricity in nitrogen-doped nickel oxide. *Journal of Applied Physics*, **2022**, 131, 164304 2.5