Mircea Dragoman

List of Publications by Year in Descending Order

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	Tunable and Miniaturized Microwave Filters Using Carbon Nanotube-Based Variable Capacitors. *IEEE Nanotechnology Magazine*, **2022**, 21, 118-130	2.6	1
148	Oxygen-vacancy induced ferroelectricity in nitrogen-doped nickel oxide. *Journal of Applied Physics*, **2022**, 131, 164304	2.5	
147	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	0
146	Perspectives on Atomic-Scale Switches for High-Frequency Applications Based on Nanomaterials. *Nanomaterials*, **2021**, 11,	5.4	4
145	. *IEEE Access*, **2021**, 9, 122443-122456	3.5	0
144	HfO2-Based Ferroelectrics Applications in Nanoelectronics. *Physica Status Solidi - Rapid Research Letters*, **2021**, 15, 2000521	2.5	8
143	The Rise of Ferroelectricity at Nanoscale: Nanoelectronics is rediscovering the ferroelectricity. *IEEE Nanotechnology Magazine*, **2021**, 15, 8-19	1.7	1
142	Graphene bandgap induced by ferroelectric HfO doped with Zr (HfZrO). *Nanotechnology*, **2020**, 31, 275202	3.4	5
141	Wafer-scale graphene-ferroelectric HfO/Ge-HfO/HfO transistors acting as three-terminal memristors. *Nanotechnology*, **2020**, 31, 495207	3.4	4
140	Memtransistors Based on Nanopatterned Graphene Ferroelectric Field-Effect Transistors. *Nanomaterials*, **2020**, 10,	5.4	5
139	Tunable Microwave Filters Using HfO-Based Ferroelectrics. *Nanomaterials*, **2020**, 10,	5.4	6
138	Amplitude and Phase Tuning of Microwave Signals in Magnetically Biased Permalloy Structures. *IEEE Access*, **2020**, 8, 190843-190854	3.5	2
137	Reconfigurable horizontal-vertical carrier transport in graphene/HfZrO field-effect transistors. *Nanotechnology*, **2020**, 31, 025203	3.4	1
136	MoS radio: detecting radio waves with a two-dimensional transition metal dichalcogenide semiconductor. *Nanotechnology*, **2020**, 31, 06LT01	3.4	6
135	Graphene bandgap induced by ferroelectric Pca2 HfO substrates: a first-principles study. *Physical Chemistry Chemical Physics*, **2019**, 21, 15001-15006	3.6	10
134	Electromagnetic interference shielding in X-band with aero-GaN. *Nanotechnology*, **2019**, 30, 34LT01	3.4	8
133	Sensing up to 40 atm Using Pressure-Sensitive Aero-GaN. *Physica Status Solidi - Rapid Research Letters*, **2019**, 13, 1900012	2.5	11

132	Terahertz shielding properties of aero-GaN. *Semiconductor Science and Technology*, **2019**, 34, 12LT02	1.8	8
131	Integration of Antenna Array and Self-Switching Graphene Diode for Detection at 28 GHz. *IEEE Electron Device Letters*, **2019**, 40, 628-631	4.4	13
130	A SnS2-based photomemristor driven by sun. *Journal of Applied Physics*, **2018**, 123, 024506	2.5	7
129	Wafer-Scale Fabrication and Room-Temperature Experiments on Graphene-Based Gates for Quantum Computation. *IEEE Nanotechnology Magazine*, **2018**, 17, 362-367	2.6	5
128	Wafer-scale very large memory windows in graphene monolayer/HfZrO ferroelectric capacitors. *Nanotechnology*, **2018**, 29, 425204	3.4	9
127	Current rectification effects in 6 nm thick HfxZr1-xOy ferroelectrics/Si planar heterostructures. *Physica E: Low-Dimensional Systems and Nanostructures*, **2018**, 104, 241-246	3	2
126	Electromagnetic energy harvesting based on HfZrO tunneling junctions. *Nanotechnology*, **2018**, 29, 445203	3.4	5
125	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	3	6
124	Learning mechanisms in memristor networks based on GaN nanomembranes. *Journal of Applied Physics*, **2018**, 124, 152110	2.5	6
123	Harvesting Electromagnetic Energy in the ${V}$ -Band Using a Rectenna Formed by a Bow Tie Integrated With a 6-nm-Thick Au/HfO2/Pt Metal–Insulator–Metal Diode. *IEEE Transactions on Electron Devices*, **2018**, 65, 2973-2980	2.9	15
122	Extraordinary tunability of high-frequency devices using Hf0.3Zr0.7O2 ferroelectric at very low applied voltages. *Applied Physics Letters*, **2017**, 110, 103104	3.4	25
121	Very large phase shift of microwave signals in a 6 nm Hf Zr O ferroelectric at ±3 V. *Nanotechnology*, **2017**, 28, 38LT04	3.4	19
120	Plasmonic ambient light sensing with MoS2-graphene heterostructures. *Physica E: Low-Dimensional Systems and Nanostructures*, **2017**, 85, 164-168	3	6
119	Non-volatile memory devices based on Ge nanocrystals. *Physica Status Solidi (A) Applications and Materials Science*, **2016**, 213, 255-259	1.6	6
118	Graphene rectenna for efficient energy harvesting at terahertz frequencies. *Applied Physics Letters*, **2016**, 109, 113105	3.4	19
117	Room temperature on-wafer ballistic graphene field-effect-transistor with oblique double-gate. *Journal of Applied Physics*, **2016**, 119, 244305	2.5	8
116	Quantum logic gates based on ballistic transport in graphene. *Journal of Applied Physics*, **2016**, 119, 094303	2.5	8
115	Carbon nanotube-based electromagnetic band gap resonator for CH4 gas detection. *Journal of Applied Physics*, **2016**, 119, 124504	2.5	16

114	A tunable microwave slot antenna based on graphene. *Applied Physics Letters*, **2015**, 106, 153101	3.4	51
113	Switching microwaves via semiconductor-isolator reversible transition in a thin-film of MoS2. *Journal of Applied Physics*, **2015**, 118, 045710	2.5	4
112	MoS2 thin films as electrically tunable materials for microwave applications. *Applied Physics Letters*, **2015**, 107, 243109	3.4	15
111	Graphene-based room-temperature implementation of a modified Deutsch-Jozsa quantum algorithm. *Nanotechnology*, **2015**, 26, 485201	3.4	6
110	Negative differential resistance in graphene-based ballistic field-effect transistor with oblique top gate. *Nanotechnology*, **2014**, 25, 415201	3.4	19
109	Smart antennas based on graphene. *Journal of Applied Physics*, **2014**, 116, 114302	2.5	17
108	Transport Properties of Carbon Nanotubes and Graphene **2014**, 151-164		2
107	Enhanced architectures for room-temperature reversible logic gates in graphene. *Applied Physics Letters*, **2014**, 105, 113109	3.4	5
106	Towards a terahertz direct receiver based on graphene up to 10 THz. *Journal of Applied Physics*, **2014**, 115, 044307	2.5	18
105	Graphene nanoelectronics for high-frequency applications **2013**,		1
104	Graphene as a high impedance surface for ultra-wideband electromagnetic waves. *Journal of Applied Physics*, **2013**, 114, 184308	2.5	17
103	Geometrically induced rectification in two-dimensional ballistic nanodevices. *Journal Physics D: Applied Physics*, **2013**, 46, 055306	3	23
102	Enhancement of higher harmonics in graphene-based coupled coplanar line microwave multipliers. *Journal of Applied Physics*, **2013**, 114, 154304	2.5	6
101	Millimeterwave Schottky diode on grapene monolayer via asymmetric metal contacts. *Journal of Applied Physics*, **2012**, 112, 084302	2.5	7
100	Extending ballistic graphene FET lumped element models to diffusive devices. *Solid-State Electronics*, **2012**, 76, 8-12	1.7	17
99	Graphene radio: Detecting radiowaves with a single atom sheet. *Applied Physics Letters*, **2012**, 101, 033109	3.4	6
98	Self-powered microwave devices based on graphene ink decorated with gold nanoislands. *Journal of Applied Physics*, **2012**, 112, 064327	2.5	5
97	Graphene-like metal-on-silicon field-effect transistor. *Nanotechnology*, **2012**, 23, 305201	3.4	3

96	Terahertz generation using a resonant-tunneling-like configuration in graphene. *Journal of Applied Physics*, **2011**, 109, 124307	2.5	7
95	Electrical behavior of multi-walled carbon nanotube network embedded in amorphous silicon nitride. *Nanoscale Research Letters*, **2011**, 6, 88	5	16
94	Coplanar waveguide on graphene in the range 40 MHz–110 GHz. *Applied Physics Letters*, **2011**, 99, 033112	3.4	37
93	Memristor device based on carbon nanotubes decorated with gold nanoislands. *Applied Physics Letters*, **2011**, 99, 093102	3.4	19
92	DNA hybridization detection in a miniaturized electromagnetic band gap resonator. *Applied Physics Letters*, **2011**, 99, 253106	3.4	8
91	Time flow in graphene and its implications on the cutoff frequency of ballistic graphene devices. *Journal of Applied Physics*, **2011**, 110, 014302	2.5	8
90	DC and radio-frequency transmission characteristics of double-walled carbon nanotubes-based ink. *International Journal of Microwave and Wireless Technologies*, **2010**, 2, 471-477	0.8	3
89	Negative differential resistance in GaN nanowire network. *Applied Physics Letters*, **2010**, 96, 053116	3.4	11
88	Ultrabroadband photodetection based on graphene ink. *Nanotechnology*, **2010**, 21, 455202	3.4	12
87	There is no Hartman effect in graphene structures. *Journal of Applied Physics*, **2010**, 107, 054306	2.5	16
86	Millimeter-wave generation via frequency multiplication in graphene. *Applied Physics Letters*, **2010**, 97, 093101	3.4	59
85	Terahertz antenna based on graphene. *Journal of Applied Physics*, **2010**, 107, 104313	2.5	116
84	Graphene for Microwaves. *IEEE Microwave Magazine*, **2010**, 11, 81-86	1.2	74
83	Tunable electrical superlattices in periodically gated bilayer graphene. *Journal of Applied Physics*, **2010**, 107, 044312	2.5	9
82	Graphene-based ultrafast diode. *Journal of Applied Physics*, **2010**, 108, 084316	2.5	33
81	Microwave switching of graphene field effect transistor at and far from the Dirac point. *Applied Physics Letters*, **2010**, 96, 103105	3.4	11
80	SAW Devices Manufactured on GaN/Si for Frequencies Beyond 5 GHz. *IEEE Electron Device Letters*, **2010**, 31, 1398-1400	4.4	27
79	Multiple negative differential resistances in crossed carbon nanotubes. *Journal of Applied Physics*, **2009**, 105, 114303	2.5	2

78	Current oscillations in a wide graphene sheet. *Journal of Applied Physics*, **2009**, 106, 044312	2.5	14
77	Microwave propagation in graphene. *Applied Physics Letters*, **2009**, 95, 073107	3.4	53
76	Writing simple RF electronic devices on paper with carbon nanotube ink. *Nanotechnology*, **2009**, 20, 375203	3.4	41
75	Millimeter wave power sensing using micro- and nanoelectromechanical systems. *Journal of Applied Physics*, **2009**, 105, 014505	2.5	1
74	Graphene-based quantum electronics. *Progress in Quantum Electronics*, **2009**, 33, 165-214	9.1	86
73	GaN membrane-supported UV photodetectors manufactured using nanolithographic processes. *Microelectronics Journal*, **2009**, 40, 319-321	1.8	10
72	6.3-GHz Film Bulk Acoustic Resonator Structures Based on a Gallium Nitride/Silicon Thin Membrane. *IEEE Electron Device Letters*, **2009**, 30, 799-801	4.4	37
71	Microwave switches based on graphene. *Journal of Applied Physics*, **2009**, 105, 054309	2.5	32
70	Real-time detection of deoxyribonucleic acid bases via their negative differential conductance signature. *Physical Review E*, **2009**, 80, 022901	2.4	2
69	Investigation of electrical properties of carbon nanotubes **2009**,		1
68	GaN membrane metal-semiconductor-metal ultraviolet photodetector. *Applied Optics*, **2008**, 47, 1453-6	1.7	13
67	Tunneling nanotube radio. *Journal of Applied Physics*, **2008**, 104, 074314	2.5	11
66	Terahertz Bloch oscillations in periodic graphene structures. *Applied Physics Letters*, **2008**, 93, 103105	3.4	16
65	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	
64	Multiple negative resistances in trenched structures bridged with carbon nanotubes. *Applied Physics Letters*, **2008**, 93, 043117	3.4	6
63	High quality nanoelectromechanical microwave resonator based on a carbon nanotube array. *Applied Physics Letters*, **2008**, 92, 063118	3.4	5
62	Plasmonics: Applications to nanoscale terahertz and optical devices. *Progress in Quantum Electronics*, **2008**, 32, 1-41	9.1	149
61	Giant thermoelectric effect in graphene. *Applied Physics Letters*, **2007**, 91, 203116	3.4	203

60	Negative differential resistance of electrons in graphene barrier. *Applied Physics Letters*, **2007**, 90, 143113	3.4	86
59	Physical mechanism of negative differential conductance in substrateless metallic carbon nanotubes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2007**, 36, 158-162	3	6
58	Carbon Nanotubes-Based Microwave and Millimeter Wave Sensors **2007**,		5
57	Metamaterials for ballistic electrons. *Journal of Applied Physics*, **2007**, 101, 104316	2.5	12
56	Nanoelectromechanical switches based on carbon nanotubes for microwave and millimeter waves. *Applied Physics Letters*, **2007**, 90, 113102	3.4	12
55	Modeling of rf energy sensing and harvesting using the giant thermoelectric effect in carbon nanotubes. *Applied Physics Letters*, **2007**, 91, 173117	3.4	6
54	Reversible metal-semiconductor transitions for microwave switching applications. *Applied Physics Letters*, **2006**, 88, 073503	3.4	38
53	Experimental determination of microwave attenuation and electrical permittivity of double-walled carbon nanotubes. *Applied Physics Letters*, **2006**, 88, 153108	3.4	29
52	Voltage-controlled high-frequency oscillations based on suspended semiconducting carbon nanotubes. *Physical Review B*, **2006**, 73,	3.3	6
51	High performance thin film bulk acoustic resonator covered with carbon nanotubes. *Applied Physics Letters*, **2006**, 89, 143122	3.4	11
50	Proposal for multiple-valued logic in gated semiconducting carbon nanotubes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2006**, 33, 178-181	3	3
49	Terahertz continuous wave amplification in semiconductor carbon nanotubes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2005**, 25, 492-496	3	19
48	Experimental characterisation of 38 GHz micromachined GaAs receiver. *Electronics Letters*, **2005**, 41, 256	1.1	2
47	Millimeter-wave passive circuit elements based on GaAs micromachining. *Journal of Micromechanics and Microengineering*, **2005**, 15, S53-S59	2	9
46	Microwave applications of carbon nanotubes. *Frequenz*, **2005**, 59,	0.6	4
45	Terahertz fields and applications. *Progress in Quantum Electronics*, **2004**, 28, 1-66	9.1	278
44	Terahertz oscillations in semiconducting carbon nanotube resonant-tunneling diodes. *Physica E: Low-Dimensional Systems and Nanostructures*, **2004**, 24, 282-289	3	36
43	Time-frequency signal processing of terahertz pulses. *Applied Optics*, **2004**, 43, 3848-53	1.7	7

42	Modelling, design and realization of micromachined millimetre-wave band-pass filters. *International Journal of Circuit Theory and Applications*, **2003**, 31, 529-539	2	10
41	Biased micromechanical cantilever arrays as optical image memory. *Applied Optics*, **2003**, 42, 1515-9	1.7	3
40	Reconfigurable electro-optical waveguide for optical processing. *Applied Optics*, **2003**, 42, 6439-44	1.7	3
39	Single-chip device for tunneling time measurements. *Journal of Applied Physics*, **2003**, 93, 6133-6136	2.5	6
38	Tunable fractional Fourier transformer for ballistic electrons. *Journal of Applied Physics*, **2003**, 94, 4131-4134	2.5	4
37	Carbon nanotube zoom lenses. *IEEE Nanotechnology Magazine*, **2003**, 2, 93-96	2.6	
36	Tomographic amplitude and phase recovery of vertical-cavity surface-emitting lasers by use of the ambiguity function. *Optics Letters*, **2002**, 27, 1519-21	3	10
35	Amplitude and phase recovery of rotationally symmetric beams. *Applied Optics*, **2002**, 41, 5512-8	1.7	7
34	Quantum coherent versus classical coherent light. *Optical and Quantum Electronics*, **2001**, 33, 239-252	2.4	3
33	Terahertz field characterization using Fabry–Perot-like cantilevers. *Applied Physics Letters*, **2001**, 79, 581-583	3.4	6
32	On the similarities between the Wigner distribution function in classical and quantum optics. *Optik*, **2001**, 112, 497-501	2.5	4
31	Characterization of wave fronts of light beams by use of tunneling cantilevers. *Applied Optics*, **2001**, 40, 678-82	1.7	5
30	Optical realization of the ambiguity function of real two-dimensional light sources. *Applied Optics*, **2000**, 39, 2912-7	1.7	3
29	Single device for laser source measurements from the ultraviolet to the far infrared. *Applied Optics*, **2000**, 39, 4361-5	1.7	2
28	Band-engineered semiconductor optical waveguides for integral transform implementation. *Journal of Applied Physics*, **1999**, 85, 3409-3412	2.5	1
27	Optical analogue structures to mesoscopic devices. *Progress in Quantum Electronics*, **1999**, 23, 131-188	9.1	55
26	Implementation of the spatial and the temporal cross-ambiguity function for waveguide fields and optical pulses. *Applied Optics*, **1999**, 38, 822-7	1.7	2
25	Experimental demonstration of a continuously variant fractional fourier transformer. *Applied Optics* , **1999**, 38, 4985-9	1.7	3

24	Phase-space measurements of micro-optical objects. *Applied Optics*, **1999**, 38, 5019-23	1.7	1
23	Optical actuation of micromechanical tunneling structures with applications in spectrum analysis and optical computing. *Applied Optics*, **1999**, 38, 6773-8	1.7	9
22	Variant fractional Fourier transformer for optical pulses. *Optics Letters*, **1999**, 24, 933-5	3	9
21	Optical modelling of quantum dots. *Optics Communications*, **1998**, 150, 331-338	2	6
20	Temporal implementation of Fourier-related transforms. *Optics Communications*, **1998**, 145, 33-37	2	18
19	Recovery of the refractive-index profile from the wigner distribution of an optical waveguide. *Applied Optics*, **1998**, 37, 2357-60	1.7	1
18	Hemispherical-rod microlens as a variant fractional Fourier transformer. *Optics Letters*, **1998**, 23, 1499-501	3	6
17	Time-frequency characterization of magnetostatic envelope soliton waves. *Applied Physics Letters*, **1997**, 70, 714-716	3.4	1
16	Beam-propagation method based on the Wigner transform: a new formulation. *Optics Letters*, **1997**, 22, 1050-2	3	2
15	Optical modeling of quantum wire arrays. *IEEE Journal of Quantum Electronics*, **1997**, 33, 375-381	2	8
14	Near and far field optical beam characterization using the fractional Fourier transform. *Optics Communications*, **1997**, 141, 5-9	2	9
13	The modeling of the quantum tunneling time through heterostructures using optical layered media. *Optics Communications*, **1997**, 133, 129-134	2	8
12	Phase space characterization of solitons with the Wigner transform. *Optics Communications*, **1997**, 137, 437-444	2	3
11	Time-frequency modeling of atomic force microscopy. *Optics Communications*, **1997**, 140, 220-225	2	1
10	Wigner-transform implementation in the time-frequency domain. *Applied Optics*, **1996**, 35, 7025-30	1.7	11
9	Integrated optic-devices characterization with the Wigner transform. *IEEE Journal of Selected Topics in Quantum Electronics*, **1996**, 2, 181-186	3.8	4
8	Tunneling-time asymmetry in resonant quantum structures. *IEEE Journal of Quantum Electronics*, **1996**, 32, 1150-1154	2	22
7	Tunneling-time properties in type II quantum resonant structures. *IEEE Journal of Quantum Electronics*, **1996**, 32, 1932-1936	2	3

6	Calculation of the tunneling time through type II resonant heterostructures. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1996**, 210, 121-124	2.3	8
5	Design considerations for tunnel diode non-linear transmission lines. *Journal of Infrared, Millimeter and Terahertz Waves*, **1995**, 16, 1719-1732		1
4	Experimental observation of microwave envelope solitons of dipolar magnetostatic waves. *Applied Physics Letters*, **1994**, 65, 249-250	3.4	4
3	Experimental evidence of magnetostatic soliton propagation at microwave frequencies. *Applied Physics Letters*, **1991**, 59, 1788-1789	3.4	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	Low-losses coupled-lines silicon micromachined band-pass filters for the 45 GHz frequency band		1