

Irina Antonova

List of Publications by Year in Descending Order

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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.

125
papers

888
citations

15
h-index

22
g-index

142
ext. papers

1,045
ext. citations

2.3
avg, IF

4.42
L-index

#	Paper	IF	Citations
125	Nanostructuring of CVD graphene by high-energy heavy ions. <i>Diamond and Related Materials</i> , 2022 , 123, 108880	3.5	2
124	Graphene: Hexagonal Boron Nitride Composite Films with Low-Resistance for Flexible Electronics. <i>Nanomaterials</i> , 2022 , 12, 1703	5.4	1
123	Resistive switching on individual VO nanoparticles encapsulated in fluorinated graphene films. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 20434-20443	3.6	1
122	Robust electrical current modulation in functionalized graphene channels. <i>Journal of Materials Science: Materials in Electronics</i> , 2021 , 32, 1641-1649	2.1	3
121	Growth of Bi ₂ Se ₃ /graphene heterostructures with the room temperature high carrier mobility. <i>Journal of Materials Science</i> , 2021 , 56, 9330-9343	4.3	3
120	Study of the Properties of Two-Dimensional MoS ₂ and WS ₂ Films Synthesized by Chemical-Vapor Deposition. <i>Semiconductors</i> , 2020 , 54, 454-464	0.7	2
119	Fluorinated graphene nanoparticles with 1-3 nm electrically active graphene quantum dots. <i>Nanotechnology</i> , 2020 , 31, 295602	3.4	5
118	Flexibility of Fluorinated Graphene-Based Materials. <i>Materials</i> , 2020 , 13,	3.5	1
117	Electrochemically exfoliated thin BiSe films and van der Waals heterostructures BiSe/graphene. <i>Nanotechnology</i> , 2020 , 31, 125602	3.4	2
116	Graphene Flakes for Electronic Applications: DC Plasma Jet-Assisted Synthesis. <i>Nanomaterials</i> , 2020 , 10,	5.4	5
115	New graphene derivative with N-methylpyrrolidone: suspension, structural, optical and electrical properties. <i>Physical Chemistry Chemical Physics</i> , 2019 , 21, 12494-12504	3.6	2
114	Resistive switching effects in fluorinated graphene films with graphene quantum dots enhanced by polyvinyl alcohol. <i>Nanotechnology</i> , 2019 , 30, 255701	3.4	7
113	Resistive Switching Effect with ON/OFF Current Relation up to 10 ⁹ in 2D Printed Composite Films of Fluorinated Graphene with V ₂ O ₅ Nanoparticles. <i>Advanced Electronic Materials</i> , 2019 , 5, 1900310	6.4	3
112	Graphene-PEDOT: PSS Humidity Sensors for High Sensitive, Low-Cost, Highly-Reliable, Flexible, and Printed Electronics. <i>Materials</i> , 2019 , 12,	3.5	17
111	Fluorinated graphene suspension for flexible and printed electronics: Flakes, 2D films, and heterostructures. <i>Materials and Design</i> , 2019 , 164, 107526	8.1	16
110	Swift heavy-ion irradiation of graphene oxide: Localized reduction and formation of sp ² -hybridized carbon chains. <i>Carbon</i> , 2019 , 141, 390-399	10.4	9
109	Mildly oxidized graphene oxide suspension for printing technologies. <i>Materials Research Express</i> , 2018 , 5, 065608	1.7	3

108	Graphene Antenna on a Biodegradable Substrate for Frequency Range of Cellular Operators 2018 ,		4
107	Nanostructuring few-layer graphene films with swift heavy ions for electronic application: tuning of electronic and transport properties. <i>Nanoscale</i> , 2018 , 10, 14499-14509	7.7	26
106	Films fabricated from partially fluorinated graphene suspension: structural, electronic properties and negative differential resistance. <i>Nanotechnology</i> , 2017 , 28, 074001	3.4	12
105	2D printing technologies using graphene-based materials. <i>Physics-Uspekhi</i> , 2017 , 60, 204-218	2.8	12
104	High carrier mobility in quasi-suspended few-layer graphene on printed graphene oxide layers. <i>Journal of Materials Science</i> , 2017 , 52, 10230-10236	4.3	2
103	Optical and electronic properties of the partially fluorinated graphene suspensions and films. <i>Journal of Materials Science</i> , 2017 , 52, 10993-11003	4.3	1
102	2D printed graphene conductive layers with high carrier mobility. <i>Current Applied Physics</i> , 2017 , 17, 1655-1661	16.61	14
101	Mechanism of resistive switching in films based on partially fluorinated graphene. <i>Semiconductors</i> , 2017 , 51, 1306-1312	0.7	2
100	Fluorinated Graphene Dielectric and Functional Layers for Electronic Applications 2017 ,		1
99	Graphene-based humidity sensors: the origin of alternating resistance change. <i>Nanotechnology</i> , 2017 , 28, 355501	3.4	39
98	Negative differential resistance in partially fluorinated graphene films. <i>Applied Physics Letters</i> , 2017 , 111, 043108	3.4	14
97	Comparison of flash-memory elements using materials based on graphene. <i>Technical Physics Letters</i> , 2017 , 43, 889-892	0.7	1
96	Two-layer and composite films based on oxidized and fluorinated graphene. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 19010-19020	3.6	12
95	2D printing technologies using graphene based materials. <i>Uspekhi Fizicheskikh Nauk</i> , 2017 , 187, 220-234	0.5	4
94	Origin of hole and electron traps in graphene oxide. <i>Materials Research Express</i> , 2016 , 3, 066301	1.7	5
93	Graphene suspensions for 2D printing. <i>Technical Physics Letters</i> , 2016 , 42, 438-441	0.7	11
92	Graphene-oxide films printed on rigid and flexible substrates for a wide spectrum of applications. <i>Semiconductors</i> , 2016 , 50, 1065-1073	0.7	8
91	Resistive switching effect and traps in partially fluorinated graphene films. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 095303	3	12

90	Vertical heterostructures based on graphene and other 2D materials. <i>Semiconductors</i> , 2016 , 50, 66-82	0.7	33
89	Fluorinated graphene films with graphene quantum dots for electronic applications. <i>Journal of Applied Physics</i> , 2016 , 119, 224302	2.5	8
88	Fluorinated graphene suspension for inkjet printed technologies. <i>Nanotechnology</i> , 2016 , 27, 205601	3.4	16
87	Fluorinated graphene dielectric films obtained from functionalized graphene suspension: preparation and properties. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 13257-66	3.6	37
86	Modulation of current in self-forming lateral graphene-based heterostructures. <i>Technical Physics Letters</i> , 2015 , 41, 950-953	0.7	4
85	Functionalization of graphene and few-layer graphene films in an hydrofluoric acid aqueous solution. <i>Nanotechnologies in Russia</i> , 2014 , 9, 51-59	0.6	23
84	Producing arrays of graphene and few-layer graphene quantum dots in a fluorographene matrix. <i>Optoelectronics, Instrumentation and Data Processing</i> , 2014 , 50, 298-303	0.6	1
83	Thin partially reduced oxide-graphene films: structural, optical, and electrical properties. <i>Nanotechnologies in Russia</i> , 2014 , 9, 363-368	0.6	23
82	Comparison of various methods for transferring graphene and few layer graphene grown by chemical vapor deposition to an insulating SiO ₂ /Si substrate. <i>Semiconductors</i> , 2014 , 48, 804-808	0.7	15
81	Colloidal solutions of niobium trisulfide and niobium triselenide. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 5479-5486	7.1	29
80	Self-organized arrays of graphene and few-layer graphene quantum dots in fluorographene matrix: Charge transient spectroscopy. <i>Applied Physics Letters</i> , 2014 , 104, 193108	3.4	16
79	Light-assisted recharging of graphene quantum dots in fluorographene matrix. <i>Journal of Applied Physics</i> , 2014 , 116, 134310	2.5	6
78	Layered structures based on hydrogenated graphene with high carrier mobility. <i>Nanotechnologies in Russia</i> , 2013 , 8, 621-626	0.6	3
77	High carrier mobility in chemically modified graphene on an atomically flat high-resistive substrate. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 285303	3	12
76	Charge deep-level transient spectroscopy of SiO ₂ and Al ₂ O ₃ layers with embedded Ge nanocrystals. <i>Journal of Applied Physics</i> , 2013 , 113, 084308	2.5	11
75	Chemical vapor deposition growth of graphene on copper substrates: current trends. <i>Physics-Uspokhi</i> , 2013 , 56, 1013-1020	2.8	17
74	Tunable properties of few-layer graphene-N-methylpyrrolidone hybrid structures. <i>Nanotechnology</i> , 2012 , 23, 315601	3.4	10
73	Enhanced formation of Ge nanocrystals in Ge : SiO ₂ layers by swift heavy ions. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 285302	3	7

72	Luminescence and deep-level transient spectroscopy of grown dislocation-rich Si layers. <i>AIP Advances</i> , 2012 , 2, 032152	1.5	6
71	Novel Graphene-Based Hybrid Material with Tunable Electronic Properties. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2012 , 20, 543-547	1.8	5
70	Charge spectroscopy of SiO ₂ layers with embedded silicon nanocrystals modified by irradiation with high-energy ions. <i>Semiconductors</i> , 2011 , 45, 582-586	0.7	2
69	Extremely high response of electrostatically exfoliated few layer graphene to ammonia adsorption. <i>Nanotechnology</i> , 2011 , 22, 285502	3.4	20
68	Resonant tunneling in Si/SiGe/Si structures with a single quantum well under surface passivation. <i>Journal of Applied Physics</i> , 2011 , 110, 123710	2.5	
67	Ordered arrays of Si nanocrystals in SiO ₂ : Structural, optical, and electronic properties. <i>Semiconductors</i> , 2010 , 44, 482-487	0.7	5
66	X-ray and infrared spectroscopy of layers produced by cosputtering of spatially separated SiO ₂ and Si sources. <i>Semiconductors</i> , 2010 , 44, 531-536	0.7	7
65	Deep levels and electron transport in AlGa _N /Ga _N heterostructures 2010 , 42, 52		2
64	Charge spectroscopy of Si nanocrystallites embedded in a SiO ₂ matrix. <i>Journal of Applied Physics</i> , 2009 , 106, 064306	2.5	12
63	Deep levels, transport and THz emission properties of SiGe/Si quantum-well structures. <i>Science in China Series D: Earth Sciences</i> , 2009 , 52, 6-9		3
62	Buried porous Si _N x layer in nitrogen-implanted silicon. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 1580-1583		1
61	Confinement levels in SiGe quantum wells studied by charge spectroscopy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 2707-2709		1
60	Charge spectroscopy of Si nanocrystals in a SiO ₂ matrix. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 2704-2706		2
59	Low-dimensional effects in a three-dimensional system of Si quantum dots modified by high-energy ion irradiation. <i>Nanotechnology</i> , 2009 , 20, 185401	3.4	13
58	Deep-level spectroscopy studies of confinement levels in SiGe quantum wells. <i>Journal of Applied Physics</i> , 2009 , 106, 084903	2.5	2
57	The modification of Si nanocrystallites embedded in a dielectric matrix by high energy ion irradiation. <i>Nanotechnology</i> , 2009 , 20, 095205	3.4	10
56	Charge storage, photoluminescence, and cluster statistics in ensembles of Si quantum dots. <i>Physical Review B</i> , 2008 , 77,	3.3	40
55	Raman characterization of hydrogen ion implanted silicon: High-dose effect. <i>Physica B: Condensed Matter</i> , 2008 , 403, 3424-3428	2.8	10

54	Deep levels and electron transport in AlGaIn/GaN heterostructures. <i>Semiconductors</i> , 2008 , 42, 52-58	0.7	7
53	Electrical passivation of Si _{1-x} Ge _x structures by 1-octadecene monolayers. <i>Applied Physics Letters</i> , 2007 , 91, 102116	3.4	10
52	Study of defects in the near-surface layer created in silicon by H ₂ ⁺ or He ⁺ implantation. <i>Vacuum</i> , 2007 , 81, 1047-1050	3.7	0
51	Effect of hydrogen implantation on semiconductor-metal transition and high-pressure thermopower in Si. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 462, 343-346	5.3	6
50	Pressure related defect engineering in silicon-on-insulator-like structures produced by either oxygen or nitrogen ion implantation. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 443-447	1.3	1
49	Electrical passivation of the silicon surface by organic monolayers of 1-octadecene. <i>Semiconductors</i> , 2007 , 41, 991-997	0.7	7
48	Micro-characterisation of Si wafers by high-pressure thermopower technique. <i>Physica B: Condensed Matter</i> , 2006 , 376-377, 177-180	2.8	6
47	Electrical properties of multiple-layer structures formed by implantation of nitrogen or oxygen and annealed under high pressure. <i>Journal of Applied Physics</i> , 2006 , 99, 033506	2.5	7
46	Transformation of electrically active defects as a result of annealing of silicon implanted with high-energy ions. <i>Semiconductors</i> , 2006 , 40, 543-548	0.7	5
45	Electrical properties and photoluminescence of SiO _x layers with Si nanocrystals in relation to the SiO _x composition. <i>Semiconductors</i> , 2006 , 40, 1198-1203	0.7	15
44	Thermoelectric properties of hydrogen ion-irradiated silicon crystals under ultrahigh pressures of up to 20 GPa. <i>Physics of the Solid State</i> , 2006 , 48, 47-50	0.8	4
43	Stabilization of charge at the interface between the buried insulator and silicon in silicon-on-insulator structures. <i>Semiconductors</i> , 2005 , 39, 1153	0.7	
42	Effect of interface states on population of quantum wells in SiGe/Si structures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 1924-1928		3
41	Porous-like structures prepared by temperature-pressure treatment of heavily hydrogenated silicon. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 3329-3333		3
40	Capacitance study of selectively doped SiGe/Si heterostructures. <i>Semiconductor Science and Technology</i> , 2005 , 20, 335-339	1.8	1
39	Production and evolution of defects in neutron-irradiated Si subjected to thermal pre-treatments under hydrostatic pressure. <i>Journal of Physics Condensed Matter</i> , 2005 , 17, S2341-S2349	1.8	6
38	Comparison of Electrical Properties of Silicon-on-Insulator Structures Fabricated with Use of Hydrogen Slicing and BESOI. <i>Electrochemical and Solid-State Letters</i> , 2004 , 7, F21		
37	FIELD EFFECT NANOTRANSISTOR ON ULTRATHIN SILICON-ON-INSULATOR. <i>International Journal of Nanoscience</i> , 2004 , 03, 155-160	0.6	1

36	Formation of electrically active centers in silicon irradiated with electrons and then annealed at temperatures of 400–700°C. <i>Semiconductors</i> , 2004 , 38, 758-762	0.7	3
35	Traps with near-midgap energies at the bonded Si/SiO ₂ interface in silicon-on-insulator structures. <i>Semiconductors</i> , 2004 , 38, 1394-1399	0.7	1
34	Unusual properties of C-T characteristics of hydrogen implanted and annealed Si. <i>EPJ Applied Physics</i> , 2004 , 27, 141-144	1.1	
33	Porous-like silicon prepared from Si:H annealed at high argon pressure. <i>Physica Status Solidi A</i> , 2003 , 197, 236-240		3
32	Defects in silicon heat-treated under uniform stress and irradiated with fast neutrons. <i>Physica Status Solidi A</i> , 2003 , 199, 207-213		4
31	Formation of shallow donors and acceptors in silicon irradiated with either electrons or high-energy ions and annealed at temperatures of 400–700 °C. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2003 , 690-693		
30	Electrical properties of Si:H/p-Si structures fabricated by hydrogen implantation. <i>Semiconductors</i> , 2003 , 37, 92-96	0.7	2
29	The charge accumulation in an insulator and the states at interfaces of silicon-on-insulator structures as a result of irradiation with electrons and gamma-ray photons. <i>Semiconductors</i> , 2003 , 37, 426-432	0.7	7
28	Relaxation of a defect subsystem in silicon irradiated with high-energy heavy ions. <i>Semiconductors</i> , 2003 , 37, 546-550	0.7	
27	Silicon-on-insulator nanotransistors: Prospects and problems of fabrication. <i>Semiconductors</i> , 2003 , 37, 1222-1228	0.7	2
26	Charge fluctuations at the bonding interface in the silicon-on-insulator structures. <i>Semiconductors</i> , 2003 , 37, 1303-1307	0.7	
25	Modification of the bonded interface in silicon-on-insulator structures under thermal treatment in hydrogen ambient. <i>Journal of Applied Physics</i> , 2003 , 93, 426-431	2.5	5
24	Transformation of interface states in silicon-on-insulator structures under annealing in hydrogen atmosphere. <i>Semiconductors</i> , 2002 , 36, 60-64	0.7	
23	X-ray-emission study of the structure of Si:H layers formed by low-energy hydrogen-ion implantation. <i>Semiconductors</i> , 2002 , 36, 568-573	0.7	1
22	Behavior of charge in a buried insulator of silicon-on-insulator structures subjected to electric fields. <i>Semiconductors</i> , 2002 , 36, 800-804	0.7	1
21	DeleCut: Producing High-Quality SOI Structures by Hydrogen Ion Implantation. <i>Russian Microelectronics</i> , 2002 , 31, 232-237	0.5	1
20	Study of the conversion of the VO to the VO ₂ defect in silicon heat-treated under uniform stress conditions. <i>Journal of Applied Physics</i> , 2002 , 91, 1198-1203	2.5	9
19	Characterization of Silicon-on-Insulator Structures by High-Resolution X-Ray Diffraction. <i>Journal of the Electrochemical Society</i> , 2002 , 149, G490	3.9	6

18	Low Dimension Properties of Nanostructures on Ultrathin Layers of Silicon Formed by Oxidation of Ion Cut SOI Wafers and Electron Lithography 2002 , 87-91		
17	Infrared and Photoluminescence Studies on Silicon Oxide Formation in Oxygen-Implanted Silicon Annealed Under Enhanced Pressure. <i>Crystal Research and Technology</i> , 2001 , 36, 943-952	1.3	2
16	Interface states and deep-level centers in silicon-on-insulator structures. <i>Semiconductors</i> , 2001 , 35, 912-917		2
15	Traps at the bonded interface in silicon-on-insulator structures. <i>Applied Physics Letters</i> , 2001 , 79, 4539-4540		13
14	Thermal acceptors in irradiated silicon. <i>Semiconductors</i> , 2000 , 34, 155-160	0.7	6
13	Electrical conductivity of silicon-on-insulator structures prepared by bonding silicon wafers to a substrate using hydrogen implantation. <i>Semiconductors</i> , 2000 , 34, 1054-1057	0.7	9
12	Structural and Electrical Properties of Silicon on Isolator Structures Manufactured on FZ- and CZ-Silicon by Smart-Cut Technology 2000 , 47-54		4
11	Thermal Donor and Oxygen Precipitate Formation in Silicon during 450°C Treatments under Atmospheric and Enhanced Pressure. <i>Journal of the Electrochemical Society</i> , 1999 , 146, 1575-1578	3.9	4
10	Pressure-induced formation of thermal donor centers in silicon after oxygen ion bombardment. <i>Semiconductors</i> , 1999 , 33, 1049-1053	0.7	3
9	Luminescence Properties of Oxygen-Containing Silicon Annealed at Enhanced Argon Pressure. <i>Physica Status Solidi (B): Basic Research</i> , 1999 , 211, 233-238	1.3	10
8	Dependence of photoluminescence of silicon on conditions of pressure-annealing. <i>Journal of Alloys and Compounds</i> , 1999 , 286, 258-264	5.7	9
7	Noncrucial Role of the Defects in the Splitting for Hydrogen Implanted Silicon With High Boron Concentration. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 540, 109		1
6	Formation of oxygen precipitates in silicon. <i>Semiconductors</i> , 1997 , 31, 852-856	0.7	4
5	Transformation of radiation defect clusters in B+ ion-implanted silicon. <i>Physica Status Solidi A</i> , 1996 , 153, 329-336		0
4	Removal of Electrically Active Defects in Silicon by 340 MeV Xe ion Bombardment. <i>Physica Status Solidi A</i> , 1995 , 147, K1-K3		10
3	Formation of clusters in gold doped silicon. <i>Physica Status Solidi A</i> , 1989 , 116, K33-K35		1
2	Diffusion of iron and gold in silicon annealed with millisecond pulses. <i>Physica Status Solidi A</i> , 1983 , 76, K213-K215		6
1	Graphene/Hexagonal Boron Nitride Composite Nanoparticles for 2D Printing Technologies. <i>Advanced Engineering Materials</i> , 2100917	3.5	1

