

Konstantin G Batrakov

List of Publications by Year in descending order

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63
papers

896
citations

516215

16
h-index

476904

29
g-index

66
all docs

66
docs citations

66
times ranked

929
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Flexible transparent graphene/polymer multilayers for efficient electromagnetic field absorption. Scientific Reports, 2014, 4, 7191. | 1.6 | 131 |
| 2 | Enhanced microwave-to-terahertz absorption in graphene. Applied Physics Letters, 2016, 108, . | 1.5 | 99 |
| 3 | Terahertz processes in carbon nanotubes. Journal of Nanophotonics, 2010, 4, 041665. | 0.4 | 52 |
| 4 | Main principles of passive devices based on graphene and carbon films in microwave-THz frequency range. Journal of Nanophotonics, 2017, 11, 032504. | 0.4 | 48 |
| 5 | Carbon nanotube as a Cherenkov-type light emitter and free electron laser. Physical Review B, 2009, 79, . | 1.1 | 47 |
| 6 | Terahertz probing of onion-like carbon-PMMA composite films. Diamond and Related Materials, 2008, 17, 1608-1612. | 1.8 | 45 |
| 7 | Electromagnetic and thermal properties of three-dimensional printed multilayered nano-carbon/poly(lactic) acid structures. Journal of Applied Physics, 2016, 119, . | 1.1 | 44 |
| 8 | Enhanced microwave shielding effectiveness of ultrathin pyrolytic carbon films. Applied Physics Letters, 2013, 103, . | 1.5 | 40 |
| 9 | Multiphoton resonant excitations and high-harmonic generation in bilayer graphene. Physical Review B, 2013, 88, . | 1.1 | 40 |
| 10 | Band gaps in jagged and straight graphene nanoribbons tunable by an external electric field. Journal of Physics Condensed Matter, 2015, 27, 145305. | 0.7 | 33 |
| 11 | Edge-modified zigzag-shaped graphene nanoribbons: Structure and electronic properties. Physics of the Solid State, 2014, 56, 2135-2145. | 0.2 | 27 |
| 12 | Parametric (quasi-Cerenkov) X-ray free electron lasers. Journal Physics D: Applied Physics, 1991, 24, 1250-1257. | 1.3 | 22 |
| 13 | First lasing of a volume FEL (VFEL) at a wavelength range $\lambda \approx 1/4$ Å. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 483, 21-23. | 0.7 | 21 |
| 14 | Tunable Perfect THz Absorber Based on a Stretchable Ultrathin Carbon-Polymer Bilayer. Materials, 2019, 12, 143. | 1.3 | 21 |
| 15 | Plasmon polariton deceleration in graphene structures. Journal of Nanophotonics, 2012, 6, 061719. | 0.4 | 20 |
| 16 | Nonlinear theory of graphene interaction with strong laser radiation beyond the Dirac cone approximation: Coherent control of quantum states in nano-optics. Physical Review B, 2013, 88, . | 1.1 | 18 |
| 17 | Zigzag-Shaped Superlattices on the Basis of Graphene Nanoribbons: Structure and Electronic Properties. Russian Physics Journal, 2016, 59, 633-639. | 0.2 | 17 |
| 18 | Graphene layered systems as a terahertz source with tuned frequency. Physical Review B, 2017, 95, . | 1.1 | 16 |

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|----|---|-----|-----------|
| 19 | Toward the nano-FEL: Undulator and Cherenkov mechanisms of light emission in carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008, 40, 1065-1068. | 1.3 | 13 |
| 20 | Onion-Like Carbon in Microwaves: Electromagnetic Absorption Bands and Percolation Effect. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2009, 4, 257-260. | 0.1 | 13 |
| 21 | Stimulated emission of electron beam in nanotube bundles. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008, 40, 2370-2374. | 1.3 | 11 |
| 22 | Progress of the volume FEL (VFEL) experiments in millimeter range. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2003, 507, 137-140. | 0.7 | 10 |
| 23 | Radiative instability of electron beam in carbon nanotubes. , 2006, 6328, 206. | | 10 |
| 24 | Experimental observation of frequency tuning of X-ray radiation from nonrelativistic electrons in crystals. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 363, 448-452. | 0.9 | 10 |
| 25 | Electromagnetic Properties of Graphene-like Films in Ka-Band. <i>Applied Sciences (Switzerland)</i> , 2014, 4, 255-264. | 1.3 | 8 |
| 26 | Experimental observation of radiation frequency tuning in "OLSE-10" prototype of volume free electron laser. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006, 252, 86-91. | 0.6 | 7 |
| 27 | Mechanisms of terahertz emission from carbon nanotubes. <i>Physica B: Condensed Matter</i> , 2010, 405, 3054-3056. | 1.3 | 7 |
| 28 | Formation of distributed feedback in an FEL under multi-wave diffraction. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1995, 358, 493-496. | 0.7 | 6 |
| 29 | Development of tunable source on the basis of parametric X-radiation. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005, 543, 55-57. | 0.7 | 6 |
| 30 | Generation and Propagation of Electromagnetic Waves in Carbon Nanotubes: New Proposition for Optoelectronics and Bio-medical Applications. <i>Synthesis and Reactivity in Inorganic, Metal Organic, and Nano Metal Chemistry</i> , 2007, 37, 341-346. | 0.6 | 6 |
| 31 | Outstanding Radiation Tolerance of Supported Graphene: Towards 2D Sensors for the Space Millimeter Radioastronomy. <i>Nanomaterials</i> , 2021, 11, 170. | 1.9 | 6 |
| 32 | The effect of spin oscillation of relativistic particles passing through substance and the possibility of constituent quark rescattering observation at -hyperon-proton collision. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 1998, 24, 2049-2064. | 1.4 | 5 |
| 33 | Cherenkov synchronism: Non-relativistic electron beam in multi-walled carbon nanotube and multi-layer graphene. <i>Physica B: Condensed Matter</i> , 2010, 405, 3050-3053. | 1.3 | 4 |
| 34 | Stretching and Tunability of Graphene-Based Passive Terahertz Components. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1800683. | 0.7 | 4 |
| 35 | Coherent bremsstrahlung and parametric X-ray radiation from nonrelativistic electrons in a crystal. <i>Technical Physics Letters</i> , 2006, 32, 392-395. | 0.2 | 3 |
| 36 | Effect of graphene grains size on the microwave electromagnetic shielding effectiveness of graphene/polymer multilayers. <i>Journal of Nanophotonics</i> , 2017, 11, 032511. | 0.4 | 3 |

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|----|---|-----|-----------|
| 37 | Dielectric Response of Onion-Like Carbon-Based Polymethyl Methacrylate Composites. Journal of Nanoelectronics and Optoelectronics, 2009, 4, 261-266. | 0.1 | 3 |
| 38 | Induced Radiation from a Relativistic Electron Beam in Periodic Structures. Physica Status Solidi (B): Basic Research, 1992, 169, 235-244. | 0.7 | 2 |
| 39 | Testing of CP, CPT, and causality violation with light propagation in vacuum in the presence of uniform electric and magnetic fields. Physical Review D, 2002, 66, . | 1.6 | 2 |
| 40 | Application of volume diffraction grating for TeraHertz lasing in volume FEL (VFEL). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 507, 93-96. | 0.7 | 2 |
| 41 | Electrodynamics of Graphene/Polymer Multilayers in the GHz Frequency Domain. NATO Science for Peace and Security Series B: Physics and Biophysics, 2016, , 45-67. | 0.2 | 2 |
| 42 | Carbon films as perfect electromagnetic wave absorbers and anti-reflectors. Micro and Nano Letters, 2017, 12, 312-314. | 0.6 | 2 |
| 43 | Surface quasi-Cherenkov free-electron laser. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 341, 274-276. | 0.7 | 1 |
| 44 | Visible surface quasi-Cherenkov FEL. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1995, 358, 508-511. | 0.7 | 1 |
| 45 | Evaluation of the Carrier Frequency of a Single Microwave Pulse from the OLSE-10 Volume Free-Electron Laser. Instruments and Experimental Techniques, 2004, 47, 771-774. | 0.1 | 1 |
| 46 | <title>Simulation of the PXR and CBS spectra radiated by non-relativistic electrons in thin crystals</title>. , 2007, , . | | 1 |
| 47 | Electromagnetic wave slowing down in graphene bilayer. , 2009, , . | | 1 |
| 48 | Enhanced electromagnetic properties of ultrathin pyrolytic carbon films in Ka-band. , 2015, , . | | 1 |
| 49 | Surface Plasmon Retardation in Graphene Bilayer. Springer Proceedings in Physics, 2013, , 103-115. | 0.1 | 1 |
| 50 | Parametric X-ray FEL operating with external Bragg reflectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 375, 292-294. | 0.7 | 0 |
| 51 | Phenomenon of a deuteron ($\hat{I}^{\hat{C}}\hat{a}^{\hat{r}}$ hyperon) spin oscillation and rotation as a method of the N-N of the N-N (quark-quark) scattering amplitude investigation. European Physical Journal D, 2000, 50, 165-170. | 0.4 | 0 |
| 52 | Dependence of volume FEL (VFEL) threshold conditions on undulator parameters. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 483, 531-533. | 0.7 | 0 |
| 53 | Use of dynamical undulator mechanism to produce short wavelength radiation in volume FEL (VFEL). Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 507, 35-39. | 0.7 | 0 |
| 54 | Experimental observation of frequency tunable x-rays generated by interaction of nonrelativistic electrons with a silicon crystal. X-Ray Spectrometry, 2007, 36, 343-347. | 0.9 | 0 |

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|----|--|-----|-----------|
| 55 | Challenges and Perspectives of Nanoelectromagnetics in the THz Range. , 2015, , . | | 0 |
| 56 | Microwave Absorption in Graphene Films: Theory and Experiment. Journal of Applied Spectroscopy, 2016, 83, 650-655. | 0.3 | 0 |
| 57 | Carbon thin films as effective absorbers of microwave radiation: Experiment and EMC applications. , 2017, , . | | 0 |
| 58 | Electron beam induced terahertz Čerenkov radiation from multilayer graphene sandwiches. , 2017, , . | | 0 |
| 59 | Enhanced electromagnetic response of ultrathin carbon films in thz frequency range. , 2017, , . | | 0 |
| 60 | Electromagnetic response properties of nanocarbon structures. , 2017, , . | | 0 |
| 61 | Carbon based ultralight microwave shields. , 2017, , . | | 0 |
| 62 | Electrodynamics of graphene heterostructures and electromagnetic applications. , 2018, , . | | 0 |
| 63 | CHERENKOV-TYPE STIMULATED EMISSION IN GRAPHENE-BASED SYSTEMS. , 2018, 62, 33-40. | 0.0 | 0 |