

# Janusz Edward Jacak

## List of Publications by Year in descending order

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Version: 2024-02-01

58  
papers

556  
citations

623188

14  
h-index

676716

22  
g-index

61  
all docs

61  
docs citations

61  
times ranked

310  
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface and volume plasmons in metallic nanospheres in a semiclassical RPA-type approach: Near-field coupling of surface plasmons with the semiconductor substrate. <i>Physical Review B</i> , 2010, 82, .	1.1	55
2	Metallization of solar cells, exciton channel of plasmon photovoltaic effect in perovskite cells. <i>Nano Energy</i> , 2020, 75, 104751.	8.2	49
3	Radius dependent shift in surface plasmon frequency in large metallic nanospheres: Theory and experiment. <i>Journal of Applied Physics</i> , 2010, 107, 124317.	1.1	44
4	Routes for Metallization of Perovskite Solar Cells. <i>Materials</i> , 2022, 15, 2254.	1.3	35
5	On Modeling of Plasmon-Induced Enhancement of the Efficiency of Solar Cells Modified by Metallic Nano-Particles. <i>Nanomaterials</i> , 2019, 9, 3.	1.9	32
6	Undamped collective surface plasmon oscillations along metallic nanosphere chains. <i>Journal of Applied Physics</i> , 2010, 108, 084304.	1.1	27
7	Mechanism of plasmon-mediated enhancement of photovoltaic efficiency. <i>Journal Physics D: Applied Physics</i> , 2011, 44, 055301.	1.3	24
8	Quantum generators of random numbers. <i>Scientific Reports</i> , 2021, 11, 16108.	1.6	22
9	Unconventional fractional quantum Hall effect in bilayer graphene. <i>Scientific Reports</i> , 2017, 7, 8720.	1.6	19
10	Recovery of Laughlin correlations with cyclotron braids. <i>Europhysics Letters</i> , 2010, 92, 60002.	0.7	17
11	Hierarchy of fillings for the FQHE in monolayer graphene. <i>Scientific Reports</i> , 2015, 5, 14287.	1.6	16
12	Application of path-integral quantization to indistinguishable particle systems topologically confined by a magnetic field. <i>Physical Review A</i> , 2018, 97, .	1.0	16
13	New Channel of Plasmon Photovoltaic Effect in Metalized Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2019, 123, 30633-30639.	1.5	15
14	New implementation of composite fermions in terms of subgroups of a braid group. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 374, 346-350.	0.9	14
15	Commensurability condition and fractional quantum Hall effect hierarchy in higher Landau levels. <i>JETP Letters</i> , 2015, 102, 19-25.	0.4	13
16	Difference in hierarchy of FQHE between monolayer and bilayer graphene. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2015, 379, 2130-2134.	0.9	11
17	Cyclotron braid group structure for composite fermions. <i>Journal of Physics Condensed Matter</i> , 2010, 22, 355602.	0.7	10
18	Quantum random number generators with entanglement for public randomness testing. <i>Scientific Reports</i> , 2020, 10, 164.	1.6	10

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19	Explanation of an unexpected occurrence of $\nu = \frac{p}{m} \frac{e^2}{h}$ fractional quantum Hall effect states in monolayer graphene. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 475601.	0.7	7
20	Laser irradiation effects on the CdTe/ZnTe quantum dot structure studied by Raman and AFM spectroscopy. <i>Journal of Applied Physics</i> , 2012, 112, 063520.	1.1	6
21	Phase diagrams for superfluidity of indirect excitons in double Hall systems GaAs/GaAlAs/GaAs and bilayer-graphene/hBN/bilayer-graphene. <i>Europhysics Letters</i> , 2018, 123, 16001.	0.7	6
22	Plasmons and Plasmon-Polaritons in Finite Ionic Systems: Toward Soft-Plasmonics of Confined Electrolyte Structures. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1159.	1.3	6
23	Topological approach to electron correlations at fractional quantum Hall effect. <i>Annals of Physics</i> , 2021, 430, 168493.	1.0	6
24	Fractional quantum Hall effect revisited. <i>Physica B: Condensed Matter</i> , 2015, 475, 122-139.	1.3	5
25	Topological origin and not purely antisymmetric wave functions of many-body states in the lowest Landau level. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20160758.	1.0	5
26	Identifying Particle Correlations in Quantum Hall Regime. <i>Annalen Der Physik</i> , 2018, 530, 1700221.	0.9	5
27	Plasmon-induced enhancement of efficiency of solar cells modified by metallic nano-particles: Material dependence. <i>Journal of Applied Physics</i> , 2018, 124, 073107.	1.1	5
28	Application of Core-Shell Metallic Nanoparticles in Hybridized Perovskite Solar Cell-Variation Channels of Plasmon Photovoltaic Effect. <i>Materials</i> , 2019, 12, 3192.	1.3	5
29	New wave-type mechanism of saltatory conduction in myelinated axons and micro-saltatory conduction in C fibres. <i>European Biophysics Journal</i> , 2020, 49, 343-360.	1.2	5
30	EXPLANATION OF COMPOSITE FERMION STRUCTURE IN FRACTIONAL QUANTUM HALL SYSTEMS. <i>International Journal of Modern Physics B</i> , 2012, 26, 1230011.	1.0	4
31	On triggering role of carrier mobility for Laughlin state organization. <i>JETP Letters</i> , 2014, 98, 684-688.	0.4	4
32	Commensurability condition and hierarchy of fillings for FQHE in higher Landau levels in conventional 2DEG systems and in graphene-monolayer and bilayer. <i>Physica Scripta</i> , 2016, 91, 015802.	1.2	4
33	Magnetic flux quantum in 2D correlated states of multiparticle charged system. <i>New Journal of Physics</i> , 2020, 22, 093027.	1.2	4
34	Many-body wave functions for correlated systems in magnetic fields: Monte Carlo simulations in the lowest Landau level. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 365601.	0.7	3
35	Superfluidity of indirect excitons vs quantum Hall correlation in double Hall systems: Different types of physical mechanisms of correlation organization in Hall bilayers. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2018, 382, 2994-3003.	0.9	3
36	Homotopy Approach to Fractional Quantum Hall Effect. <i>Applied Mathematics</i> , 2015, 06, 345-358.	0.1	3

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37	Explanation of $\hat{\nu} = \hat{\nu}^*$ fractional quantum Hall state in bilayer graphene. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150330.	1.0	2
38	Unconventional fractional quantum Hall effect in monolayer and bilayer graphene. Science and Technology of Advanced Materials, 2016, 17, 149-165.	2.8	2
39	Quantum cryptography: Theoretical protocols for quantum key distribution and tests of selected commercial QKD systems in commercial fiber networks. International Journal of Quantum Information, 2016, 14, 1630002.	0.6	2
40	Quantum mechanism of extremely high energy processes at neutron star collapse and of quasar luminosity. Journal of High Energy Physics, 2022, 2022, 1.	1.6	2
41	Quantum key distribution security constraints caused by controlled quality of dark channel for non-entangled and entangled photon quantum cryptography setups. Optical and Quantum Electronics, 2016, 48, 1.	1.5	1
42	Topological approach to quantum Hall effects and its important applications: higher Landau levels, graphene and its bilayer. European Physical Journal B, 2017, 90, 1.	0.6	1
43	Topological Classification of Correlations in 2D Electron Systems in Magnetic or Berry Fields. Materials, 2021, 14, 1650.	1.3	1
44	Cyclotron braid group approach to Laughlin correlations. Advances in Theoretical and Mathematical Physics, 2011, 15, 449-469.	0.4	1
45	Formal derivation of the Laughlin function and its generalization for other topological phases of FQHE. Scientific Reports, 2022, 12, 616.	1.6	1
46	Quantum information processing on spin degrees of freedom in QDs placed in diluted magnetic semiconductor. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 3702-3706.	0.8	0
47	Dephasing of orbital and spin degrees of freedom in semiconductor quantum dots due to phonons and magnons. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 3707-3712.	0.8	0
48	Spin qubit and its decoherence in QD in a diluted magnetic semiconductor medium. AIP Conference Proceedings, 2007, , .	0.3	0
49	Composite Fermions in Braid Group Terms. Open Systems and Information Dynamics, 2010, 17, 53-71.	0.5	0
50	Plasmons in metallic nanospheres: Towards efficiency enhancement of metallic nano-modified solar cells. Optical Materials, 2011, 33, 1449-1452.	1.7	0
51	Stability assessment of QKD procedures in commercial quantum cryptography systems versus quality of dark channel. International Journal of Quantum Information, 2015, 13, 1550064.	0.6	0
52	Ultra-Quantum 2D Materials: Graphene, Bilayer Graphene, and Other Hall Systems – New Non-Local Quantum Theory of Hall Physics. , 2016, , .		0
53	Bilayer Graphene as the Material for Study of the Unconventional Fractional Quantum Hall Effect. , 0, , .		0
54	Homotopy Phases of FQHE with Long-Range Quantum Entanglement in Monolayer and Bilayer Hall Systems. Nanomaterials, 2020, 10, 1286.	1.9	0

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55	Limits of Applicability of the Composite Fermion Model. <i>Materials</i> , 2021, 14, 4267.	1.3	0
56	The Triggering Role of Carrier Mobility in the Fractional Quantum Hall Effect Formation—An Evidence in Graphene. <i>Journal of Modern Physics</i> , 2013, 04, 1591-1596.	0.3	0
57	Material dependence of plasmon-induced efficiency enhancement of solar cells metal-nano-modified. , 2020, , .		0
58	Ion plasmon collective oscillations underlying saltatory conduction in myelinated axons and topological-homotopy concept of memory. <i>Advances in Quantum Chemistry</i> , 2020, 82, 113-157.	0.4	0