Janusz Edward Jacak

List of Publications by Year
in descending order

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	Formal derivation of the Laughlin function and its generalization for other topological phases of FQHE. Scientific Reports, 2022, 12, 616.	1.6	1
2	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
3	Routes for Metallization of Perovskite Solar Cells. Materials, 2022, 15, 2254.	1.3	35
4	Topological Classification of Correlations in 2D Electron Systems in Magnetic or Berry Fields. Materials, 2021, 14, 1650.	1.3	1
5	Limits of Applicability of the Composite Fermion Model. Materials, 2021, 14, 4267.	1.3	0
6	Topological approach to electron correlations at fractional quantum Hall effect. Annals of Physics, 2021, 430, 168493.	1.0	6
7	Quantum generators of random numbers. Scientific Reports, 2021, 11, 16108.	1.6	22
8	Homotopy Phases of FQHE with Long-Range Quantum Entanglement in Monolayer and Bilayer Hall Systems. Nanomaterials, 2020, 10, 1286.	1.9	0
9	New wave-type mechanism of saltatory conduction in myelinated axons and micro-saltatory conduction in C fibres. European Biophysics Journal, 2020, 49, 343-360.	1.2	5
10	Quantum random number generators with entanglement for public randomness testing. Scientific Reports, 2020, 10, 164.	1.6	10
11	Metallization of solar cells, exciton channel of plasmon photovoltaic effect in perovskite cells. Nano Energy, 2020, 75, 104751.	8.2	49
12	Magnetic flux quantum in 2D correlated states of multiparticle charged system. New Journal of Physics, 2020, 22, 093027.	1.2	4
13	Material dependence of plasmon-induced efficiency enhancement of solar cells metal-nano-modified. , 2020, , .		0
14	Ion plasmon collective oscillations underlying saltatory conduction in myelinated axons and topological-homotopy concept of memory. Advances in Quantum Chemistry, 2020, 82, 113-157.	0.4	0
15	Explanation of an unexpected occurrence of $oldsymbol {u=pmrac{1}{2}}$ fractional quantum Hall effect states in monolayer graphene. Journal of Physics Condensed Matter, 2019, 31, 475601.	0.7	7
16	Application of Coreâ€"Shell Metallic Nanoparticles in Hybridized Perovskite Solar Cellâ€"Various Channels of Plasmon Photovoltaic Effect. Materials, 2019, 12, 3192.	1.3	5
17	Plasmons and Plasmonâ€"Polaritons in Finite Ionic Systems: Toward Soft-Plasmonics of Confined Electrolyte Structures. Applied Sciences (Switzerland), 2019, 9, 1159.	1.3	6
18	New Channel of Plasmon Photovoltaic Effect in Metalized Perovskite Solar Cells. Journal of Physical Chemistry C, 2019, 123, 30633-30639.	1.5	15

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19	On Modeling of Plasmon-Induced Enhancement of the Efficiency of Solar Cells Modified by Metallic Nano-Particles. Nanomaterials, 2019, 9, 3.	1.9	32
20	Identifying Particle Correlations in Quantum Hall Regime. Annalen Der Physik, 2018, 530, 1700221.	0.9	5
21	Application of path-integral quantization to indistinguishable particle systems topologically confined by a magnetic field. Physical Review A, 2018, 97, .	1.0	16
22	Many-body wave functions for correlated systems in magnetic fields: Monte Carlo simulations in the lowest Landau level. Journal of Physics Condensed Matter, 2018, 30, 365601.	0.7	3
23	Phase diagrams for superfluidity of indirect excitons in double Hall systems GaAs/GaAlAs/GaAs and bilayer-graphene/hBN/bilayer-graphene. Europhysics Letters, 2018, 123, 16001.	0.7	6
24	Superfluidity of indirect excitons vs quantum Hall correlation in double Hall systems: Different types of physical mechanisms of correlation organization in Hall bilayers. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 2994-3003.	0.9	3
25	Plasmon-induced enhancement of efficiency of solar cells modified by metallic nano-particles: Material dependence. Journal of Applied Physics, 2018, 124, 073107.	1.1	5
26	Topological origin and not purely antisymmetric wave functions of many-body states in the lowest Landau level. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160758.	1.0	5
27	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
28	Unconventional fractional quantum Hall effect in bilayer graphene. Scientific Reports, 2017, 7, 8720.	1.6	19
29	Ultra-Quantum 2D Materials: Graphene, Bilayer Graphene, and Other Hall Systemsâ€"New Non-Local Quantum Theory of Hall Physics. , 2016, , .		0
30	Commensurability condition and hierarchy of fillings for FQHE in higher Landau levels in conventional 2DEG systems and in grapheneâ€"monolayer and bilayer. Physica Scripta, 2016, 91, 015802.	1.2	4
31	Explanation of Î½ = â^'Â½ fractional quantum Hall state in bilayer graphene. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150330.	1.0	2
32	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
33	Unconventional fractional quantum Hall effect in monolayer and bilayer graphene. Science and Technology of Advanced Materials, 2016, 17, 149-165.	2.8	2
34	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
35	Commensurability condition and fractional quantum Hall effect hierarchy in higher Landau levels. JETP Letters, 2015, 102, 19-25.	0.4	13
36	Hierarchy of fillings for the FQHE in monolayer graphene. Scientific Reports, 2015, 5, 14287.	1.6	16

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37	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
38	Fractional quantum Hall effect revisited. Physica B: Condensed Matter, 2015, 475, 122-139.	1.3	5
39	Difference in hierarchy of FQHE between monolayer and bilayer graphene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 2130-2134.	0.9	11
40	Homotopy Approach to Fractional Quantum Hall Effect. Applied Mathematics, 2015, 06, 345-358.	0.1	3
41	On triggering role of carrier mobility for Laughlin state organization. JETP Letters, 2014, 98, 684-688.	0.4	4
42	The Triggering Role of Carrier Mobility in the Fractional Quantum Hall Effect Formationâ€”An Evidence in Graphene. Journal of Modern Physics, 2013, 04, 1591-1596.	0.3	0
43	EXPLANATION OF COMPOSITE FERMION STRUCTURE IN FRACTIONAL QUANTUM HALL SYSTEMS. International Journal of Modern Physics B, 2012, 26, 1230011.	1.0	4
44	Laser irradiation effects on the CdTe/ZnTe quantum dot structure studied by Raman and AFM spectroscopy. Journal of Applied Physics, 2012, 112, 063520.	1.1	6
45	Mechanism of plasmon-mediated enhancement of photovoltaic efficiency. Journal Physics D: Applied Physics, 2011, 44, 055301.	1.3	24
46	Plasmons in metallic nanospheres: Towards efficiency enhancement of metallic nano-modified solar cells. Optical Materials, 2011, 33, 1449-1452.	1.7	0
47	Cyclotron braid group approach to Laughlin correlations. Advances in Theoretical and Mathematical Physics, 2011, 15, 449-469.	0.4	1
48	Composite Fermions in Braid Group Terms. Open Systems and Information Dynamics, 2010, 17, 53-71.	0.5	0
49	Cyclotron braid group structure for composite fermions. Journal of Physics Condensed Matter, 2010, 22, 355602.	0.7	10
50	Recovery of Laughlin correlations with cyclotron braids. Europhysics Letters, 2010, 92, 60002.	0.7	17
51	Undamped collective surface plasmon oscillations along metallic nanosphere chains. Journal of Applied Physics, 2010, 108, 084304.	1.1	27
52	Surface and volume plasmons in metallic nanospheres in a semiclassical RPA-type approach: Near-field coupling of surface plasmons with the semiconductor substrate. Physical Review B, 2010, 82, .	1.1	55
53	Radius dependent shift in surface plasmon frequency in large metallic nanospheres: Theory and experiment. Journal of Applied Physics, 2010, 107, 124317.	1.1	44
54	New implementation of composite fermions in terms of subgroups of a braid group. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 374, 346-350.	0.9	14

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55	Spin qubit and its decoherence in QD in a diluted magnetic semiconductor medium. AIP Conference Proceedings, 2007, , .	0.3	0
56	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
57	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
58	Bilayer Graphene as the Material for Study of the Unconventional Fractional Quantum Hall Effect. , 0, , .		0