Artur Erbe

List of Publications by Year
in descending order

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123	3,941	126858	133188
papers	citations	33 h-index	59 g-index

126	126	126	5184
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-mobility band-like charge transport in a semiconducting two-dimensional metalâ€“organic framework. Nature Materials, 2018, 17, 1027-1032.	13.3	341
2	Revealing the Role of Anchoring Groups in the Electrical Conduction Through Singleâ€Molecule Junctions. Small, 2010, 6, 1529-1535.	5.2	200
3	Benzenedithiol: A Broad-Range Single-Channel Molecular Conductor. Nano Letters, 2011, 11, 3734-3738.	4.5	192
4	Magnetic vortex cores as tunable spin-wave emitters. Nature Nanotechnology, 2016, 11, 948-953.	15.6	169
5	Nanomechanical Resonator Shuttling Single Electrons at Radio Frequencies. Physical Review Letters, 2001, 87, 096106.	2.9	165
6	Charge Transport Characteristics of Diarylethene Photoswitching Single-Molecule Junctions. Nano Letters, 2012, 12, 3736-3742.	4.5	163
7	Emission and propagation of 1D and 2D spin waves with nanoscale wavelengths in anisotropic spin textures. Nature Nanotechnology, 2019, 14, 328-333.	15.6	115
8	Targets for high repetition rate laser facilities: needs, challenges and perspectives. High Power Laser Science and Engineering, 2017, 5, .	2.0	106
9	Demonstration of a Broadband Photodetector Based on a Twoâ€Dimensional Metalâ€“Organic Framework. Advanced Materials, 2020, 32, e1907063.	11.1	103
10	DNA-Mold Templated Assembly of Conductive Gold Nanowires. Nano Letters, 2018, 18, 2116-2123.	4.5	93
11	Layer Reduction in Driven 2D-Colloidal Systems through Microchannels. Physical Review Letters, 2006, 97, 208302.	2.9	85
12	Control over Janus micromotors by the strength of a magnetic field. Nanoscale, 2013, 5, 1332-1336.	2.8	84
13	Mechanical mixing in nonlinear nanomechanical resonators. Applied Physics Letters, 2000, 77, 3102-3104.	1.5	83
14	Direct Measurement of Electrical Transport Through Gâ€Quadruplex DNA with Mechanically Controllable Break Junction Electrodes. Angewandte Chemie - International Edition, 2010, 49, 3313-3316.	7.2	83
15	Nanomechanical resonators operating as charge detectors in the nonlinear regime. Europhysics Letters, 2000, 50, 101-106.	0.7	74
16	A mechanically flexible tunneling contact operating at radio frequencies. Applied Physics Letters, 1998, 73, 3751-3753.	1.5	71
17	Influence of Laser Light on Electronic Transport through Atomic-Size Contacts. Physical Review Letters, 2007, 99, 086801.	2.9	68
18	Subharmonic Resonant Optical Excitation of Confined Acoustic Modes in a Free-Standing Semiconductor Membrane at GHz Frequencies with a High-Repetition-Rate Femtosecond Laser. Physical Review Letters, 2011, 106, 077401.	2.9	65

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19	Frustration-induced magic number clusters of colloidal magnetic particles. Physical Review E, 2008, 77, 031407.	0.8	62
20	Various driving mechanisms for generating motion of colloidal particles. Journal of Physics Condensed Matter, 2008, 20, 404215.	0.7	57
21	Topology and Origin of Effective Spin Meron Pairs in Ferromagnetic Multilayer Elements. Physical Review Letters, 2013, 110, 177201.	2.9	55
22	Single- and Multigrain Nanojunctions with a Self-Assembled Monolayer of Conjugated Molecules. Physical Review Letters, 2004, 92, 186805.	2.9	54
23	Temperature-Dependent Charge Transport through Individually Contacted DNA Origami-Based Au Nanowires. Langmuir, 2016, 32, 10159-10165.	1.6	49
24	Recent progress in contact, mobility, and encapsulation engineering of InSe and GaSe. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 662-693.	8.5	49
25	Lightâ€Induced Switching of Tunable Singleâ€Molecule Junctions. Advanced Science, 2015, 2, 1500017.	5.6	48
26	Confined longitudinal acoustic phonon modes in free-standing Si membranes coherently excited by femtosecond laser pulses. Physical Review B, 2009, 79, .	1.1	47
27	Observation of negative differential resistance in DNA molecular junctions. Applied Physics Letters, 2010, 96, .	1.5	45
28	Evidence of a nanomechanical resonator being driven into chaotic response via the Ruelleâ€“Takens route. Applied Physics Letters, 2002, 81, 1884-1886.	1.5	44
29	Nanostructured silicon for studying fundamental aspects of nanomechanics. Journal of Physics Condensed Matter, 2002, 14, R905-R945.	0.7	44
30	Effective Hexagonal Boron Nitride Passivation of Few-Layered InSe and GaSe to Enhance Their Electronic and Optical Properties. ACS Applied Materials & Interfaces, 2019, 11, 43480-43487.	4.0	44
31	Non-monotonic crossover from single-file to regular diffusion in micro-channels. Scientific Reports, 2012, 2, 1015.	1.6	38
32	Currentâ€“voltage characteristics of single-molecule diarylethene junctions measured with adjustable gold electrodes in solution. Beilstein Journal of Nanotechnology, 2012, 3, 798-808.	1.5	38
33	Electrical characterization of DNA in mechanically controlled break-junctions. New Journal of Physics, 2008, 10, 023030.	1.2	36
34	Self-Driven Broadband Photodetectors Based on MoSe₂/FePS₃ van der Waals nâ€“p Type-II Heterostructures. ACS Applied Materials & Interfaces, 2022, 14, 11927-11936.	4.0	35
35	Density reduction and diffusion in driven two-dimensional colloidal systems through microchannels. Physical Review E, 2010, 81, 041402.	0.8	33
36	Transport phenomena and dynamics of externally and self-propelled colloids in confined geometry. European Physical Journal: Special Topics, 2013, 222, 2923-2939.	1.2	33

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37	Electron-phonon interaction in suspended highly doped silicon nanowires. Nanotechnology, 2002, 13, 491-494.	1.3	31
38	Tunable coupled nanomechanical resonators for single-electron transport. New Journal of Physics, 2002, 4, 86-86.	1.2	30
39	Capped colloids as light-mills in optical traps. New Journal of Physics, 2006, 8, 216-216.	1.2	28
40	Control of topography, stress and diffusion at moleculeâ€“metal interfaces. Nanotechnology, 2006, 17, 1272-1277.	1.3	28
41	Gated molecular devices using self-assembled monolayers. Nanotechnology, 2003, 14, 254-257.	1.3	25
42	A wired-AND transistor: Polarity controllable FET with multiple inputs. , 2018, , .		24
43	Universal ultrafast detector for short optical pulses based on graphene. Optics Express, 2015, 23, 28728.	1.7	23
44	Complex Metal Nanostructures with Programmable Shapes from Simple DNA Building Blocks. Advanced Materials, 2021, 33, e2100381.	11.1	23
45	Modification of vibrational damping times in thin gold films by self-assembled molecular layers. Applied Physics Letters, 2011, 98, 261908.	1.5	22
46	Observation of Ultrafast Solid-Density Plasma Dynamics Using Femtosecond X-Ray Pulses from a Free-Electron Laser. Physical Review X, 2018, 8, .	2.8	21
47	Enhanced Trion Emission in Monolayer MoSe₂ by Constructing a Typeâ€Ⅱ Van Der Waals Heterostructure. Advanced Functional Materials, 2021, 31, 2104960.	7.8	21
48	Charge detection with nanomechanical resonators. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 6, 821-827.	1.3	19
49	Non-equilibrium dynamics of magnetically anisotropic particles under oscillating fields. European Physical Journal E, 2016, 39, 69.	0.7	19
50	Direct observation of antiferromagnetically oriented spin vortex states in magnetic multilayer elements. Applied Physics Letters, 2011, 98, .	1.5	18
51	Bistable self-assembly in homogeneous colloidal systems for flexible modular architectures. Soft Matter, 2016, 12, 2737-2743.	1.2	18
52	Role of solvents in the electronic transport properties of single-molecule junctions. Beilstein Journal of Nanotechnology, 2016, 7, 1055-1067.	1.5	17
53	Nanomechanical vibrating wire resonator for phonon spectroscopy in liquid helium. Nanotechnology, 2000, 11, 165-168.	1.3	16
54	Parametric frequency tuning of phase-locked nanoelectromechanical resonators. Applied Physics Letters, 2001, 79, 3521-3523.	1.5	16

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55	Silicon-on-insulator based nanoresonators for mechanical mixing at radio frequencies. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 1114-1117.	1.7	16
56	Acoustic laser cleaning of silicon surfaces. Applied Physics A: Materials Science and Processing, 2007, 89, 109-113.	1.1	16
57	Review of the Electrical Characterization of Metallic Nanowires on DNA Templates. International Journal of Molecular Sciences, 2018, 19, 3019.	1.8	16
58	Towards Reconfigurable Electronics: Silicidation of Top-Down Fabricated Silicon Nanowires. Applied Sciences (Switzerland), 2019, 9, 3462.	1.3	16
59	Molecular nano-junctions formed with different metallic electrodes. Nanotechnology, 2005, 16, 495-500.	1.3	15
60	Exciton localization in MoSe2monolayers induced by adsorbed gas molecules. Applied Physics Letters, 2019, 114, 172106.	1.5	15
61	Prevalence of Coulomb blockade in electro-migrated junctions with conjugated and non-conjugated molecules. Nanotechnology, 2005, 16, 3110-3114.	1.3	14
62	A single-channel microparticle sieve based on Brownian ratchets. Lab on A Chip, 2012, 12, 1238.	3.1	14
63	Photoluminescence dynamics in few-layer InSe. Physical Review Materials, 2020, 4, .	0.9	14
64	Thiolated Nucleotides for Immobilisation of DNA Oligomers on Gold Surfaces. ChemPhysChem, 2008, 9, 1241-1244.	1.0	13
65	Local and nonlocal spin Seebeck effect in lateral Ptâ€“Cr2O3â€“Pt devices at low temperatures. APL Materials, 2021, 9, .	2.2	13
66	Dynamic control and modal analysis of coupled nano-mechanical resonators. Applied Physics Letters, 2003, 82, 3333-3335.	1.5	11
67	Quasiantiferromagnetic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>120</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>NÃ©el state in two-dimensional clusters of dipole-quadrupole-interacting particles on a hexagonal lattice. Physical Review B, 2009, 80, .	1.1	11
68	Control of vortex pair states by post-deposition interlayer exchange coupling modification. Physical Review B, 2012, 85, .	1.1	11
69	CMOSâ€Compatible Controlled Hyperdoping of Silicon Nanowires. Advanced Materials Interfaces, 2018, 5, 1800101.	1.9	11
70	Field-responsive colloidal assemblies defined by magnetic anisotropy. Physical Review E, 2019, 100, 012608.	0.8	11
71	Metal-assisted chemically etched silicon nanopillars hosting telecom photon emitters. Journal of Applied Physics, 2022, 132, .	1.1	10
72	Stochastic transport of particles across single barriers. Journal of Physics Condensed Matter, 2012, 24, 464120.	0.7	9

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73	Mid- and far-infrared localized surface plasmon resonances in chalcogen-hyperdoped silicon. Nanoscale, 2022, 14, 2826-2836.	2.8	9
74	Self-excitation in nanoelectromechanical charge shuttles below the field emission regime. New Journal of Physics, 2005, 7, 240-240.	1.2	8
75	Characterization of magnetic colloids by means of magnetooptics. European Physical Journal E, 2007, 23, 129-33.	0.7	8
76	Ultrafast spectroscopy of super high frequency mechanical modes of doubly clamped beams. Applied Physics Letters, 2013, 103, .	1.5	8
77	Electronic transport through short ds<scp>DNA</scp> measured with mechanically controlled break junctions: New thiolâ€“gold binding protocol improves conductance. Physica Status Solidi (B): Basic Research, 2013, 250, 2342-2348.	0.7	8
78	Fabrication and temperature-dependent electrical characterization of a C-shape nanowire patterned by a DNA origami. Scientific Reports, 2021, 11, 1922.	1.6	8
79	Comparing schemes of displacement detection and subharmonic generation in nanomachined mechanical resonators. Nanotechnology, 2003, 14, 799-802.	1.3	7
80	Influence of chopped laser light onto the electronic transport through atomic-sized contacts. Journal of Microscopy, 2008, 229, 407-414.	0.8	7
81	Nanopatterned polymer brushes by reactive writing. Nanoscale, 2016, 8, 7513-7522.	2.8	7
82	Formation and crystallographic orientation of NiSi2â€“Si interfaces. Journal of Applied Physics, 2020, 128, 085301.	1.1	7
83	Nanomechanical resonators operating at radio frequencies. Physica B: Condensed Matter, 1999, 272, 575-577.	1.3	6
84	Nanoscale patterning in application to materials and device structures. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 3132.	1.6	6
85	Interlayer-coupled spin vortex pairs and their response to external magnetic fields. Physical Review B, 2012, 85, .	1.1	6
86	Determination of potential landscapes using video microscopy. Colloid and Polymer Science, 2012, 290, 575-578.	1.0	6
87	Formation of n- and p-type regions in individual Si/SiO₂ core/shell nanowires by ion beam doping. Nanotechnology, 2018, 29, 474001.	1.3	6
88	Focused ion beam modification of non-local magnon-based transport in yttrium iron garnet/platinum heterostructures. Applied Physics Letters, 2019, 114, 252401.	1.5	6
89	Anisotropy of colloidal components propels field-activated stirrers and movers. Physical Review Research, 2020, 2, .	1.3	6
90	Electrical characterization of alkane monolayers using micro-transfer printing: tunneling and molecular transport. New Journal of Physics, 2008, 10, 075001.	1.2	5

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91	Electrical characterization of two-dimensional materials and their heterostructures. IOP Conference Series: Materials Science and Engineering, 2017, 198, 012002.	0.3	5
92	Nanoscale n++-p junction formation in GeOI probed by tip-enhanced Raman spectroscopy and conductive atomic force microscopy. Journal of Applied Physics, 2019, 125, 245703.	1.1	5
93	Singleâ€Molecule Doping: Conductance Changed By Transition Metal Centers in Salen Molecules. Advanced Electronic Materials, 2021, 7, 2100252.	2.6	5
94	Autocorrected off-axis holography of two-dimensional materials. Physical Review Research, 2020, 2, .	1.3	5
95	Electrical Characterization of Germanium Nanowires Using a Symmetric Hall Bar Configuration: Size and Shape Dependence. Nanomaterials, 2021, 11, 2917.	1.9	5
96	Time efficient fabrication of ultra large scale nano dot arrays using electron beam lithography. Microelectronic Engineering, 2012, 97, 55-58.	1.1	4
97	Comparative Studies of Light-Responsive Swimmers: Janus Nanorods versus Spherical Particles. Langmuir, 2020, 36, 12504-12512.	1.6	4
98	Negative resistance for colloids driven over two barriers in a microchannel. Soft Matter, 2021, 17, 516-522.	1.2	4
99	Control over self-assembled Janus clusters by the strength of magnetic field in $$hbox {H}_{2}hbox {O}_{2}$$. European Physical Journal E, 2021, 44, 23.	0.7	4
100	Molecular Electronics: A Review of Experimental Results. Acta Physica Polonica A, 2009, 115, 455-461.	0.2	4
101	Statistical Investigation of Current-Voltage Characterization in Single Molecule-Metal Junctions. Acta Physica Polonica A, 2012, 121, 410-415.	0.2	4
102	Controlled Silicidation of Silicon Nanowires Using Flash Lamp Annealing. Langmuir, 2021, , .	1.6	4
103	Terahertz control of photoluminescence emission in few-layer InSe. Applied Physics Letters, 2022, 120, .	1.5	4
104	Mechanical properties of suspended structures at radio frequencies. Physica B: Condensed Matter, 2000, 280, 553-554.	1.3	3
105	Auf dem Weg zur â€žQuantenâ€Mechanikâ€œ: Nanomechanische Resonatoren dienen als schnelle Schalter und Frequenzgeber. Physik Journal, 2000, 56, 31-36.	0.1	3
106	Switchable zero-bias anomaly in individual C60 molecules contacted with tunable aluminum electrodes. Low Temperature Physics, 2013, 39, 259-264.	0.2	3
107	Lateral spin transfer torque induced magnetic switching at room temperature demonstrated by x-ray microscopy. Scientific Reports, 2013, 3, 2945.	1.6	3
108	Effect of Waveform of ac Voltage on the Morphology and Crystallinity of Electrochemically Assembled Platinum Nanowires. Langmuir, 2014, 30, 5655-5661.	1.6	3

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109	DNA Wires and Electron Transport Through DNA. , 0, , 79-136.		3
110	Rotational friction of dipolar colloids measured by driven torsional oscillations. Scientific Reports, 2016, 6, 34193.	1.6	3
111	Local Formation of InAs Nanocrystals in Si by Masked Ion Implantation and Flash Lamp Annealing. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, 1700188.	0.8	3
112	Stacked topological spin textures as emitters for multidimensional spin wave modes. , 2015, , .		2
113	A Twoâ€Parameter Model for Colloidal Particles with an Extended Magnetic Cap. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900506.	0.8	2
114	Towards Scalable Reconfigurable Field Effect Transistor using Flash Lamp Annealing. , 2020, , .		2
115	Broadband Photodetectors: Demonstration of a Broadband Photodetector Based on a Twoâ€Dimensional Metalâ€“Organic Framework (Adv. Mater. 9/2020). Advanced Materials, 2020, 32, 2070071.	11.1	2
116	Sensitivity of PS/CoPd Janus particles to an external magnetic field. RSC Advances, 2021, 11, 17051-17057.	1.7	2
117	Nanomechanical resonators operating in the radio frequency regime as single charge detectors. , 1999, , 121-130.		1
118	Silicon-based nanoelectronics and nanoelectromechanics. Superlattices and Microstructures, 2000, 27, 597-601.	1.4	1
119	Characterization of gas permeability of polymer membranes for encapsulation of 2D-material sensors. , 2021, , .		1
120	Conductance of molecular nanojunctions: roles of surface topography and metal contacts. , 2005, 5592, 91.		0
121	Contacting metallic nanoparticles on transparent substrates. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1311-1315.	0.8	0
122	Nano-Electromechanical Systems: Displacement Detection and the Mechanical Single Electron Shuttle. Lecture Notes in Physics, 2001, , 215-227.	0.3	0
123	Characterization of Nanoscale Molecular Junctions. , 2004, , 1-12.		0