Peter J Klar

List of Publications by Year
in descending order

131 papers	3,525 citations	218677 26 h-index	149698 56 g-index
132 all docs	132 docs citations	132 times ranked	4464 citing authors

#	Article	IF	Citations
1	Binary copper oxide semiconductors: From materials towards devices. Physica Status Solidi (B): Basic Research, 2012, 249, 1487-1509.	1.5	547
2	Assessing the structural properties of graphitic and non-graphitic carbons by Raman spectroscopy. Carbon, 2020, 161, 359-372.	10.3	289
3	Space micropropulsion systems for Cubesats and small satellites: From proximate targets to furthermost frontiers. Applied Physics Reviews, 2018, 5, .	11.3	242
4	(Ga, In)(N, As)-fine structure of the band gap due to nearest-neighbor configurations of the isovalent nitrogen. Physical Review B, 2001, 64, .	3.2	233
5	Ultrathin Terahertz Planar Elements. Advanced Optical Materials, 2013, 1, 186-191.	7.3	207
6	Trends in the electronic structure of dilute nitride alloys. Semiconductor Science and Technology, 2009, 24, 033001.	2.0	101
7	Ion thrusters for electric propulsion: Scientific issues developing a niche technology into a game changer. Review of Scientific Instruments, 2020, 91, 061101.	1.3	96
8	Correlation of intrinsic point defects and the Raman modes of cuprous oxide. Physical Review B, 2014, 90, .	3.2	88
9	Synthesis and characterization of highly ordered bifunctional aromatic periodic mesoporous organosilicas with different pore sizes. Journal of Materials Chemistry, 2006, 16, 2809-2818.	6.7	86
10	Optimizing thermochromic VO2 by co-doping with W and Sr for smart window applications. Applied Physics Letters, 2017, 110, .	3.3	70
11	Controlled Iron-Doping of Macrotextured Nanocrystalline Titania. Chemistry of Materials, 2003, 15, 4028-4033.	6.7	68
12	Raman studies of ZnO:Co thin films. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 112-117.	1.8	67
13	Correlation of electrochromic properties and oxidation states in nanocrystalline tungsten trioxide. Physical Chemistry Chemical Physics, 2015, 17, 15903-15911.	2.8	66
14	Influence of doping with alkaline earth metals on the optical properties of thermochromic VO2. Journal of Applied Physics, 2015, 117, .	2.5	61
15	Copper oxide thin films by chemical vapor deposition: Synthesis, characterization and electrical properties. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 531-536.	1.8	59
16	Raman studies of the intermediate tin-oxide phase. Physical Review Materials, 2017, 1, .	2.4	54
17	Vibrational Spectroscopy of Periodic Mesoporous Organosilicas (PMOs) and Their Precursors:â€‰ A Closer Look. Journal of Physical Chemistry C, 2007, 111, 5648-5660.	3.1	52
18	Charge Transport in Single NCM Cathode Active Material Particles for Lithium-Ion Batteries Studied under Well-Defined Contact Conditions. ACS Energy Letters, 2019, 4, 2117-2123.	17.4	48

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19	Crystalline ZnO with an enhanced surface area obtained by nanocasting. Applied Physics Letters, 2007, 90, 123108.	3.3	45
20	Global changes of the band structure and the crystal lattice of Ga(N,As) due to hydrogenation. Physical Review B, 2003, 67, .	3.2	42
21	Monitoring the thermally induced transition from sp3-hybridized into sp2-hybridized carbons. Carbon, 2021, 172, 214-227.	10.3	41
22	Recent developments in metastable dilute-N IIIâ€“V semiconductors. Progress in Solid State Chemistry, 2003, 31, 301-349.	7.2	34
23	Molecular propellants for ion thrusters. Plasma Sources Science and Technology, 2019, 28, 084001.	3.1	34
24	Tailoring the magnetoresistance of MnAsâ•GaAs:Mn granular hybrid nanostructures. Applied Physics Letters, 2008, 92, 223119.	3.3	29
25	Comparison of the Magnetic and Optical Properties of Wideâ€Gap (II,Mn)VI Nanostructures Confined in Mesoporous Silica. European Journal of Inorganic Chemistry, 2005, 2005, 3597-3611.	2.0	28
26	Materials processing using radio-frequency ion-sources: Ion-beam sputter-deposition and surface treatment. Review of Scientific Instruments, 2019, 90, 023901.	1.3	27
27	Performance of an iodine-fueled radio-frequency ion-thruster. European Physical Journal D, 2018, 72, 1.	1.3	26
28	Experimental and theoretical investigation of the conduction band edge ofGaNxP1â’x. Physical Review B, 2006, 74, .	3.2	25
29	Magnetic Interactions in Granular Paramagneticâ€“Ferromagnetic GaAs: Mn/MnAs Hybrids. Journal of Superconductivity and Novel Magnetism, 2006, 18, 315-320.	0.5	23
30	Synthesis of tin oxides SnO_{2â€“x} in the entire composition range (x = 0 to 1) by ionâ€beam sputterâ€deposition. Physica Status Solidi - Rapid Research Letters, 2015, 9, 326-330.	2.4	23
31	Comparison of the magnetic properties of GaInAs/MnAs and GaAs/MnAs hybrids with random and ordered arrangements of MnAs nanoclusters. Journal of Applied Physics, 2010, 107, 013701.	2.5	22
32	Influence of magnetic-field-induced tuning of disorder and band structure on the magnetoresistance of paramagnetic dilute magnetic semiconductors. Physical Review B, 2004, 69, .	3.2	21
33	Waveguide Fabry-PÃ©rot microcavity arrays. Applied Physics Letters, 2011, 99, .	3.3	19
34	Nanostructured Composites of Bi_{1â€“x}Sb_x Nanoparticles and Carbon Nanotubes and the Characterization of Their Thermoelectric Properties. ACS Applied Materials & Interfaces, 2017, 9, 44756-44765.	8.0	19
35	Influence of ordered arrangements of cluster chains on the hopping transport in GaAs:Mn/MnAs hybrids at low temperatures. Physical Review B, 2011, 83, .	3.2	18
36	Doping-Induced Universal Conductance Fluctuations in GaN Nanowires. Nano Letters, 2015, 15, 7822-7828.	9.1	18

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37	Seebeck coefficients of n-type (Ga,In)(N,As), (B,Ga,In)As, and GaAs. Applied Physics Letters, 2008, 93, 042107.	3.3	17
38	Effect of nanostructuring on the band structure and the galvanomagnetic properties in Bi1â^'xSbx alloys. Journal of Applied Physics, 2013, 114, .	2.5	17
39	In Situ Monitoring of Lateral Hydrogen Diffusion in Amorphous and Polycrystalline WO₃ Thin Films. Advanced Materials Interfaces, 2018, 5, 1701587.	3.7	17
40	Effect of the cluster magnetization on the magnetotransport at low temperatures in ordered arrays of MnAs nanoclusters on (111)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>B</mml:mi></mml:math>GaAs. Physical Review B, 2011, 84, .	3.2	16
41	NiO films on sapphire as potential antiferromagnetic pinning layers. Journal of Applied Physics, 2017, 122, .	2.5	16
42	Tuning of the averagepâ^'dexchange in (Ga,Mn)As by modification of the Mn electronic structure. Physical Review B, 2004, 70, .	3.2	15
43	Atomically Thin Sheets of Leadâ€Free 1D Hybrid Perovskites Feature Tunable Whiteâ€Light Emission from Selfâ€Trapped Excitons. Advanced Materials, 2021, 33, e2100518.	21.0	15
44	Vibrational properties ofGaAs0.915N0.085under hydrostatic pressures up to20GPa. Physical Review B, 2005, 71, .	3.2	14
45	Effects of artificially structured micrometer holes on the transport behavior of Al-doped ZnO layers. Applied Physics Letters, 2008, 93, .	3.3	14
46	Local structure of Mn in hydrogenated<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ga</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>Mn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>As</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Physical Review B, 2008, 78, .	3.2	14
47	Modifying grapheneâ€™s lattice dynamics by hot-electron injection from single gold nanoparticles. Communications Physics, 2019, 2, .	5.3	14
48	Dimensional dependence of the dynamics of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Mn</mml:mi><mml:mspace width="0.2em" /><mml:mn>3</mml:mn><mml:msup><mml:mi>d</mml:mi><mml:mn>5</mml:mn></mml:msup></mml:mrow></mml:math>luminescence in (Zn, Mn)S nanowires and nanobelts. Physical Review B, 2007, 76, .	3.2	13
49	Understanding the Impact of Microstructure on Charge Transport in Polycrystalline Materials Through Impedance Modelling. Journal of the Electrochemical Society, 2021, 168, 090516.	2.9	13
50	Quantitative description of the temporal behavior of the internalMn3d5luminescence in ensembles ofZn0.99Mn0.01Squantum dots. Physical Review B, 2007, 75, .	3.2	12
51	An advanced electric propulsion diagnostic (AEPD) platform for in-situ characterization of electric propulsion thrusters and ion beam sources. European Physical Journal D, 2016, 70, 1.	1.3	12
52	Miniaturized Electrospray Thrusters. IEEE Transactions on Plasma Science, 2018, 46, 214-218.	1.3	12
53	Vibrational properties of GaP and GaP1â€“xNx under hydrostatic pressures up to 30 GPa. Physica Status Solidi (B): Basic Research, 2007, 244, 336-341.	1.5	11
54	Analyzing Nanometer-Thin Cathode Particle Coatings for Lithium-Ion Batteriesâ€”The Example of TiO₂ on NCM622. ACS Applied Energy Materials, 2021, 4, 7168-7181.	5.1	11

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55	Effect of localized B and N states on the magneto-transport of (B,Ga,In)As and (Ga,In)(N,As). Physica Status Solidi (B): Basic Research, 2007, 244, 431-436.	1.5	10
56	Possibility of enhancing the thermoelectric figure of merit of ZnO by sulfur incorporation. Applied Physics Letters, 2013, 103, .	3.3	10
57	Effect of Bismuth Nanotubes on the Thermoelectric Properties of BiSb Alloy Nanocomposites. Journal of Electronic Materials, 2014, 43, 2127-2133.	2.2	10
58	Global model of a radio-frequency ion thruster based on a holistic treatment of electron and ion density profiles. European Physical Journal D, 2019, 73, 1.	1.3	10
59	Minimal number of atoms to constitute a magnet: Suppression of magnetic order in spherical MnS nanoparticles. Physical Review B, 2008, 78, .	3.2	9
60	Nonferromagnetic nanocrystalline ZnO:Co thin films doped with Zn interstitials. Journal of Applied Physics, 2009, 105, 073918.	2.5	9
61	Structural and Thermoelectric Properties of Nanostructured Nominally Stoichiometric Pb1â^'x Bi x Te Prepared by Mechanical Alloying. Journal of Electronic Materials, 2017, 46, 5781-5791.	2.2	9
62	Impact of Composition x on the Refractive Index of Ni_xO. Physica Status Solidi (B): Basic Research, 2018, 255, 1700463.	1.5	9
63	Mechanisms of enhancement of light emission in nanostructures of IIâ€“VI compounds doped with manganese. Low Temperature Physics, 2007, 33, 192-196.	0.6	8
64	Evidence of localized boron impurity states in (B,Ga,In)As in magnetotransport experiments under hydrostatic pressure. Physical Review B, 2011, 83, .	3.2	8
65	Domain formation in rectangular magnetic nanoparticle assemblies. Physical Review B, 2018, 98, .	3.2	8
66	From stannous oxide to stannic oxide epitaxial films grown by pulsed laser deposition with a metal tin target. Applied Surface Science, 2019, 466, 765-771.	6.1	8
67	RuVO2 alloy epitaxial films: Lowered insulatorâ€“metal transition temperature and retained modulation capacity. Applied Physics Letters, 2020, 116, 192103.	3.3	8
68	Non-invasive assessment of plasma parameters inside an ion thruster combining optical emission spectroscopy and principal component analysis. EPJ Techniques and Instrumentation, 2021, 8, .	1.3	8
69	Quantitative modeling of the annealing-induced changes of the magnetotransport in Ga1â^'xMnxAs alloys. Journal of Applied Physics, 2007, 102, 073712.	2.5	7
70	Optical and magnetic properties of quasi oneâ€dimensional dilute magnetic ZnMnS and antiferromagnetic MnS. Physica Status Solidi (B): Basic Research, 2010, 247, 2522-2536.	1.5	7
71	Effect of localized boron impurities on the line shape of the fundamental band gap transition in photomodulated reflectance spectra of (B,Ga,In)As. Physical Review B, 2011, 83, .	3.2	7
72	Scaling approach to hopping magnetoresistivity in dilute magnetic semiconductors. Physical Review B, 2013, 88, .	3.2	7

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73	Hierarchical structures of magnetic nanoparticles for controlling magnetic interactions on three different length scales. Journal of Applied Physics, 2017, 121, .	2.5	7
74	Selective-area growth and transport properties of MnAs/InAs heterojunction nanowires. Journal of Materials Research, 2019, 34, 3863-3876.	2.6	7
75	Anomalous Angle-Dependent Magnetotransport Properties of Single InAs Nanowires. Nano Letters, 2020, 20, 618-624.	9.1	7
76	Investigation of the dipole interaction in and between ordered arrangements of magnetic nanoparticles. Physical Review B, 2020, 101, .	3.2	7
77	Performance of a rf neutralizer operating with noble gases and iodine. EPJ Applied Physics, 2020, 91, 10901.	0.7	7
78	Consistent description of mesoscopic transport: Case study of current-dependent magnetoconductance in single GaN:Ge nanowires. Physical Review B, 2019, 100, .	3.2	6
79	Controlled thin-film deposition of Î± or Î² Ga2O3 by ion-beam sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	6
80	Comparing Raman mapping and electron microscopy for characterizing compositional gradients in thermoelectric materials. Scripta Materialia, 2020, 179, 61-64.	5.2	6
81	Determining the band alignment of copper-oxide gallium-oxide heterostructures. Journal of Applied Physics, 2021, 129, .	2.5	6
82	Global models for radio-frequency ion thrusters. EPJ Techniques and Instrumentation, 2021, 8, .	1.3	6
83	Taking internally wetted capillary electrospray emitters to the sub-ten-micrometer scale with 3D microlithography. AIP Advances, 2021, 11, .	1.3	6
84	Influence of Codoping on the Magnetoresistance of Paramagnetic (Ga,Mn)As. Journal of Superconductivity and Novel Magnetism, 2003, 16, 159-162.	0.5	5
85	Annealing-induced transition from a (311)A-oriented Ga0.98Mn0.02As alloy to a GaMnAs/MnAs hybrid structure studied by angle-dependent magnetotransport. Journal of Applied Physics, 2008, 103, .	2.5	5
86	Development of a Radio-Frequency Generator for RF Ion Thrusters. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2016, 14, Pb_33-Pb_39.	0.2	5
87	Selective-area growth and magnetic characterization of MnAs/AlGaAs nanoclusters on insulating Al2O3 layers crystallized on Si(111) substrates. Applied Physics Letters, 2016, 108, 043108.	3.3	5
88	Patterning 2D materials for devices by mild lithography. RSC Advances, 2021, 11, 29887-29895.	3.6	5
89	Concentration and size dependence of the dynamics of the Mn 3d5 luminescence in wire-like arrangements of (Zn,Mn)S nanoparticles. Physica Status Solidi (B): Basic Research, 2006, 243, 839-843.	1.5	4
90	Metal insulator transition in nâ€BGaInAs. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 858-861.	0.8	4

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91	Photoluminescence under magnetic field and hydrostatic pressure for probing the electronic properties of GaAsN. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 107-113.	1.8	4
92	On the Growth of Stannic Oxide by Ion Beam Sputter Deposition (IBSD). Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700623.	1.8	4
93	Structure and Thermoelectric Properties of Nanostructured Bi1â^'xSbx Alloys Synthesized by Mechanical Alloying. Journal of Electronic Materials, 2018, 47, 6007-6015.	2.2	4
94	A surfaceâ€enhanced Ramanâ€spectroscopic study: Verification of the interparticle gap dependence of field enhancement by triangulation of spherical gold nanoparticle trimers. Journal of Raman Spectroscopy, 2019, 50, 1807-1816.	2.5	4
95	Progress in Sputter Growth of Î² â€Ga 2 O 3 by Applying Pulsedâ€Mode Operation. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1901009.	1.8	4
96	The transport properties of InAs nanowires: an introduction to MnAs/InAs heterojunction nanowires for spintronics. Journal Physics D: Applied Physics, 2020, 53, 333002.	2.8	4
97	Embedding Quaternary V_{1â€“xâ€“y}Sr_xW_yO₂ into Multilayer Systems to Enhance Its Thermochromic Properties for Smart Glass Applications. ACS Applied Electronic Materials, 2022, 4, 513-520.	4.3	4
98	Combination of optical emission spectroscopy and multivariate data analysis techniques as a versatile non-invasive tool for characterizing xenon/krypton mixed gas plasma inside operating ion thrusters. Journal of Applied Physics, 2022, 131, .	2.5	4
99	Phase Control of Multivalent Vanadium Oxides VO_x by Ionâ€Beam Sputterâ€Deposition. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	4
100	Regular Arrays of (Zn,Mn)S Quantum Wires with Well-Defined Diameters in the Nanometer Range. Journal of Superconductivity and Novel Magnetism, 2003, 16, 99-102.	0.5	3
101	Hydrostatic pressure experiments on dilute nitride alloys. Physica Status Solidi (B): Basic Research, 2007, 244, 24-31.	1.5	3
102	Hole confinement in quantum islands in Ga(AsSb)â^•GaAsâ^•(AlGa)As heterostructures. Applied Physics Letters, 2008, 92, 161101.	3.3	3
103	Comparison of the structural and thermoelectric properties of ball-milled and co-reduced Bi1-xSbx nanoalloys. AIP Conference Proceedings, 2012, , .	0.4	3
104	Analysis of magnetic random telegraph noise in individual arrangements of a small number of coupled MnAs nanoclusters. Physical Review B, 2015, 92, .	3.2	3
105	Effect of the interface morphology on the lateral electron transport in (001) GaP/Si heterostructures. Journal of Applied Physics, 2019, 126, .	2.5	3
106	Raman Spectroscopic Study of the Optical Phonons of Mg 2 Si 1â^' x Sn x Solid Solutions. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900574.	2.4	3
107	Microscopic origin of near- and far-field contributions to tip-enhanced optical spectra of few-layer MoS2. Nanoscale, 2021, 13, 17116-17124.	5.6	3
108	Title is missing!. Journal of Superconductivity and Novel Magnetism, 2003, 16, 423-426.	0.5	2

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109	Selective adsorption of solvents in a multiscale device. Microfluidics and Nanofluidics, 2007, 3, 299-305.	2.2	2
110	Zero-phonon lines of nitrogen-cluster states in GaNxAs1â^'x: H identified by time-resolved photoluminescence. Journal of Materials Science, 2008, 43, 4344-4347.	3.7	2
111	Optical properties of Ga(NAsP) lattice matched to Si. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 2638-2643.	0.8	2
112	Analysis of the optical parameters of amorphous ternary oxides Sn 1 â^' xZn xO and Sn 1 â^' xNi xO processed by combinatorial ion-beam sputter deposition. Journal of Applied Physics, 2018, 124, 155701.	2.5	2
113	Band alignment of AlxGa1â€“xN/Cu2O heterojunctions in dependence on alloy composition x and its effect on the photovoltaic properties. Journal of Applied Physics, 2018, 123, .	2.5	2
114	Improved thermoelectric properties of nanostructured composites out of Bi1â^'xSbx nanoparticles and carbon phases. AIP Advances, 2018, 8, 075319.	1.3	2
115	Assessing the benefits of customizable ion-beam profiles for homogeneously coating or treating the surfaces of non-planar substrates. Review of Scientific Instruments, 2020, 91, 013905.	1.3	2
116	Frequency- and magnetic-field-dependent properties of ordered magnetic nanoparticle arrangements. Physical Review B, 2021, 103, .	3.2	2
117	Performance comparison of LaB6 and C12A7:e-emitters for space electric propulsion cathodes. IOP Conference Series: Materials Science and Engineering, 2022, 1226, 012093.	0.6	2
118	Influence of nonâ€random incorporation of Mn ions on the magnetotransport properties of Ga_{1â€“x}Mn_xAs alloys. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 819-823.	0.8	1
119	Local N environment in the dilute nitrides Ga(N,P), Ga(N,As), and Ga(N,Sb). Physica Status Solidi (B): Basic Research, 2013, 250, 755-759.	1.5	1
120	Thermally Switchable Terahertz Metasurface Devices. , 2019, , .		1
121	Perovskite Photoemitters: Atomically Thin Sheets of Leadâ€Free 1D Hybrid Perovskites Feature Tunable Whiteâ€Light Emission from Selfâ€Trapped Excitons (Adv. Mater. 23/2021). Advanced Materials, 2021, 33, 2170177.	21.0	1
122	Polarization-dependence of the Raman response of free-standing strained Ce_{0.8}Gd_{0.2}O₂ membranes. Physical Chemistry Chemical Physics, 2021, 23, 6903-6913.	2.8	1
123	Thrust measurement of an ion thruster by a force probe approach and comparison to a thrust balance. AIP Advances, 2022, 12, 045218.	1.3	1
124	Correlation between lasing properties and band alignment of edge emitting lasers with (Ga,In)(N,As)/Ga(N,As) active regions. Physica Status Solidi (B): Basic Research, 2003, 235, 417-422.	1.5	0
125	Time-Resolved Photoluminescence of Nitrogen-Cluster States in Dilute Ga(NAs)/GaAs Heterostructures. , 2007, , .		0
126	Ga(AsSb)/GaAs/(AlGa)As heterostructures: additional holeâ€confinement due to quantum islands. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 411-414.	0.8	0

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127	Optical studies on paramagnetic/superparamagnetic ZnO:Co films grown by magnetron sputtering. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1655-1657.	0.8	0
128	Magnetotransport in Zn1â^'xMnxSe:Cl under hydrostatic pressure. Physica Status Solidi (B): Basic Research, 2013, 250, 732-735.	1.5	0
129	Electron spin flip Raman spectroscopy of the diluted magnetic semiconductor Zn_{1â€x}Mn_xSe below the metalâ€insulator transition. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 542-545.	0.8	0
130	Self-Consistent Numerical 0D/3D Hybrid Modeling of Radio-Frequency Ion Thrusters. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2016, 14, Pb_23-Pb_32.	0.2	0
131	Design and test of an apparatus for transient measurements of the thermalconductivity and volumetric heat capacity of solids. Turkish Journal of Physics, 2019, 43, 37-50.	1.1	0