S Joseph Poon

List of Publications by Year
in descending order

110 papers	7,026 citations	71102 41 h-index	56724 83 g-index
112 all docs	112 docs citations	112 times ranked	4307 citing authors

#	Article	IF	Citations
1	Multi-Principal-Element Approach to High-Performance Thermoelectric Materials. , 2022, , 491-499.		1
2	Rare-earth-free ferrimagnetic Mn4N sub-20Ânm thin films as potential high-temperature spintronic material. AIP Advances, 2021, 11, 015334.	1.3	11
3	Skyrmionicsâ€”Computing and memory technologies based on topological excitations in magnets. Journal of Applied Physics, 2021, 130, .	2.5	42
4	Tunable magnetic skyrmions in ferrimagnetic Mn4N. Applied Physics Letters, 2021, 119, .	3.3	18
5	Amorphous Ferrimagnets: an Ideal Host for Ultra-Small Skyrmions. Journal of Superconductivity and Novel Magnetism, 2020, 33, 269-273.	1.8	2
6	Tuning interfacial Dzyaloshinskii-Moriya interactions in thin amorphous ferrimagnetic alloys. Scientific Reports, 2020, 10, 7447.	3.3	30
7	Robust Formation of Ultrasmall Room-Temperature NeÃ©l Skyrmions in Amorphous Ferrimagnets from Atomistic Simulations. Scientific Reports, 2019, 9, 9964.	3.3	22
8	High Entropy Alloys Mined From Binary Phase Diagrams. Scientific Reports, 2019, 9, 15501.	3.3	48
9	Enhanced Figure of Merit in Bismuth-Antimony Fine-Grained Alloys at Cryogenic Temperatures. Scientific Reports, 2019, 9, 14892.	3.3	17
10	Half Heusler compounds: promising materials for mid-to-high temperature thermoelectric conversion. Journal Physics D: Applied Physics, 2019, 52, 493001.	2.8	48
11	Critical evaluation of p-type doping effects in Bi-Sb alloys. AIP Advances, 2019, 9, 075321.	1.3	0
12	Thickness dependence of ferrimagnetic compensation in amorphous rare-earth transition-metal thin films. Applied Physics Letters, 2018, 113, .	3.3	11
13	Elastic mismatch induced reduction of the thermal conductivity of silicon with aluminum nano-inclusions. Applied Physics Letters, 2018, 112, .	3.3	1
14	Semi-metals as potential thermoelectric materials. Scientific Reports, 2018, 8, 9876.	3.3	71
15	Processing and Properties of Ni-Based Bulk Metallic Glass via Spark Plasma Sintering of Pulverized Amorphous Ribbons. MRS Advances, 2017, 2, 3815-3820.	0.9	4
16	Ballistic transport of long wavelength phonons and thermal conductivity accumulation in nanograined silicon-germanium alloys. Applied Physics Letters, 2017, 111, .	3.3	14
17	High thermoelectric figure of merit by resonant dopant in half-Heusler alloys. AIP Advances, 2017, 7, .	1.3	41
18	Exchange bias and bistable magneto-resistance states in amorphous TbFeCo thin films. Applied Physics Letters, 2016, 108, .	3.3	12

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19	Micromagnetic simulation of ferrimagnetic TbFeCo films with exchange coupled nanophases. Journal of Magnetism and Magnetic Materials, 2016, 417, 197-202.	2.3	11
20	Half-Heusler Alloys for Efficient Thermoelectric Power Conversion. Journal of Electronic Materials, 2016, 45, 5554-5560.	2.2	37
21	Radiation effects on the magnetism and the spin dependent transport in magnetic materials and nanostructures for spintronic applications. Journal of Materials Research, 2015, 30, 1430-1439.	2.6	13
22	Critical analysis of lattice thermal conductivity of half-Heusler alloys using variations of Callaway model. Journal of Applied Physics, 2015, 117, .	2.5	36
23	Weibull modulus of hardness, bend strength, and tensile strength of Niâ^'Taâ^'Coâ^'X metallic glass ribbons. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 634, 176-182.	5.6	12
24	Uncovering high thermoelectric figure of merit in (Hf,Zr)NiSn half-Heusler alloys. Applied Physics Letters, 2015, 107, .	3.3	55
25	The Effects of Sc Alloying in Y56Al24Ni10Co10 Glasses on the Local Atomic Structure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 1990-1993.	2.2	1
26	Tunable perpendicular magnetic anisotropy in GdFeCo amorphous films. Journal of Magnetism and Magnetic Materials, 2013, 339, 51-55.	2.3	51
27	Thermal conductivity of core-shell nanocomposites for enhancing thermoelectric performance. Applied Physics Letters, 2013, 102, .	3.3	13
28	Strain-induced enhancement of coercivity in amorphous TbFeCo films. Journal of Applied Physics, 2013, 113, .	2.5	29
29	Structural and magnetic properties of Cr-diluted CoFeB. Journal of Applied Physics, 2013, 114, 153902.	2.5	4
30	Contributions of electron and phonon transport to the thermal conductivity of GdFeCo and TbFeCo amorphous rare-earth transition-metal alloys. Journal of Applied Physics, 2012, 111, .	2.5	11
31	Magnetic properties and thermal stability of (Fe,Co)-Mo-B-P-Si metallic glasses. Journal of Applied Physics, 2012, 111, .	2.5	27
32	Perpendicular magnetization of Co20Fe50Ge30 films induced by MgO interface. Applied Physics Letters, 2012, 101, .	3.3	12
33	Effective medium approach to thermal conductivity: applying to core-shell nanocomposites. Emerging Materials Research, 2012, 1, 286-291.	0.7	2
34	Recent Advances in Nanostructured Thermoelectric Half-Heusler Compounds. Nanomaterials, 2012, 2, 379-412.	4.1	287
35	Half-Heusler phases and nanocomposites as emerging high-ZT thermoelectric materials. Journal of Materials Research, 2011, 26, 2795-2802.	2.6	136
36	Introduction of resonant states and enhancement of thermoelectric properties in half-Heusler alloys. Physical Review B, 2011, 83, .	3.2	50

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37	Enhanced Thermoelectric Figure of Merit of p-Type Half-Heuslers. Nano Letters, 2011, 11, 556-560.	9.1	362
38	Nanostructure model of thermal conductivity for high thermoelectric performance. Journal of Applied Physics, 2011, 110, .	2.5	17
39	Fluctuations of the Local Atomic Environment with Chemical Alloying in Fe Bulk Metallic Glasses. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 1481-1485.	2.2	0
40	Elastic properties of Ca-based metallic glasses predicted by first-principles simulations. Physical Review B, 2011, 84, .	3.2	21
41	Conductivity of icosahedral AlPdRe. Physical Review B, 2011, 84, .	3.2	8
42	Superconductivity in Transition Metal Doped MoB4. Journal of Superconductivity and Novel Magnetism, 2010, 23, 417-422.	1.8	18
43	Influence of erbium on the electronic structure of Fe(65â^'x)Mo14C15B6Erx (x=0,1,2) bulk metallic glasses. Journal of Applied Physics, 2009, 105, 023518.	2.5	9
44	Ductility improvement of amorphous steels: Roles of shear modulus and electronic structure. Acta Materialia, 2008, 56, 88-94.	7.9	188
45	Electronic structure of transition metal-doped XNiSn and XCoSb (X = Hf,Zr) phases in the vicinity of the band gap. Journal of Physics Condensed Matter, 2008, 20, 255220.	1.8	23
46	Thermoelectric properties of p-type half-Heusler alloys Zr1â^'xTixCoSnySb1â^'y (0.0<x<0.5;) Tj ETQq0 0 0 rgBT /Overlock 1	2.5	43
47	Tough Fe-based bulk metallic glasses. Applied Physics Letters, 2008, 92, .	3.3	113
48	(Zr,Hf)Co(Sb,Sn) half-Heusler phases as high-temperature (>700Â°C)â€ˆp-type thermoelectric materials. Applied Physics Letters, 2008, 93, .	3.3	189
49	Poissonâ€™s Ratio and Intrinsic Plasticity of Metallic Glasses. Applied Physics Letters, 2008, 92, .	3.3	61
50	Electronic structure of Fe-based amorphous alloys studied using electron-energy-loss spectroscopy. Physical Review B, 2008, 77, .	3.2	15
51	Mechanical properties, glass transition temperature, and bond enthalpy trends of high metalloid Fe-based bulk metallic glasses. Applied Physics Letters, 2008, 92, .	3.3	46
52	Local organization and atomic clustering in multicomponent amorphous steels. Physical Review B, 2008, 78, .	3.2	33
53	Formation of Bulk Metallic Glasses and Their Composites. MRS Bulletin, 2007, 32, 624-628.	3.5	100
54	The role of Y/lanthanides on the glass forming ability of amorphous steel. Applied Physics Letters, 2007, 91, 141910.	3.3	21

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55	Photoemission study of ternary to penternary Fe-based metallic glasses: Chemical analysis of surface and bulk. Journal of Applied Physics, 2007, 102, 033501.	2.5	8
56	Fatigue behavior of an Fe48Cr15Mo14Er2C15B6 amorphous steel. Journal of Materials Research, 2007, 22, 544-550.	2.6	30
57	Comment on â€œExtrinsic origin of the insulating behavior of polygrain icosahedral Al-Pd-Re quasicrystalsâ€. Physical Review B, 2007, 76, .	3.2	6
58	Glass transition in metallic glasses: A microscopic model of topological fluctuations in the bonding network. Physical Review B, 2007, 76, .	3.2	152
59	Mechanical properties of iron-based bulk metallic glasses. Journal of Materials Research, 2007, 22, 344-351.	2.6	166
60	Effects of carbon content on the mechanical properties of amorphous steel alloys. Scripta Materialia, 2007, 57, 289-292.	5.2	45
61	Thermoelectric Properties of Half-Heusler Bismuthides ZrCo1â^'x Ni x Bi (xÂ=Â0.0 to 0.1). Journal of Electronic Materials, 2007, 36, 732-735.	2.2	13
62	Recent Developments in Bulk Thermoelectric Materials. MRS Bulletin, 2006, 31, 199-205.	3.5	407
63	Effect of substitutions on the thermoelectric figure of merit of half-Heusler phases at 800â€‰Â°C. Applied Physics Letters, 2006, 88, 042106.	3.3	223
64	Neutron Irradiation and Annealing Recovery in the AlPdRe Quasicrystal. AIP Conference Proceedings, 2006, , .	0.4	0
65	Recent results at the metal-insulator transition of icosahedral AlPdRe. Philosophical Magazine, 2006, 86, 655-661.	1.6	3
66	Critical Poissonâ€™s ratio for plasticity in Feâ€“Moâ€“Câ€“Bâ€“Ln bulk amorphous steel. Applied Physics Letters, 2006, 88, 211905.	3.3	203
67	Modeling the atomic structure of amorphous steels using crystalline approximants. Physical Review B, 2005, 72, .	3.2	11
68	Ductile titanium-based glassy alloy ingots. Applied Physics Letters, 2005, 86, 091907.	3.3	169
69	Mgâ€“Caâ€“Zn Bulk Metallic Glasses with High Strength and Significant Ductility. Journal of Materials Research, 2005, 20, 1935-1938.	2.6	132
70	Indentation fracture toughness of amorphous steel. Journal of Materials Research, 2005, 20, 783-786.	2.6	51
71	Enhanced bulk metallic glass formability by combining chemical compatibility and atomic size effects. Journal of Applied Physics, 2005, 97, 013512.	2.5	32
72	Critical exponents at the metal-insulator transition in AlPdRe quasicrystals. Physical Review B, 2005, 71, .	3.2	16

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73	On glass formability of Alâ€“Gdâ€“Ni (Fe). Scripta Materialia, 2004, 50, 1451-1455.	5.2	30
74	Feâ€“Mnâ€“Crâ€“Moâ€“(Y,Ln)â€“Câ€“B (Ln = Lanthanides) bulk metallic glasses as formable amorphous steel alloys. Journal of Materials Research, 2004, 19, 3046-3052.	2.6	97
75	CaAl-based bulk metallic glasses with high thermal stability. Applied Physics Letters, 2004, 84, 37-39.	3.3	108
76	Fe-based bulk metallic glasses with diameter thickness larger than one centimeter. Journal of Materials Research, 2004, 19, 1320-1323.	2.6	505
77	Metallic glass ingots based on yttrium. Applied Physics Letters, 2003, 83, 2575-2577.	3.3	197
78	Phase Transitions in Al87Ni7Nd6. Materials Research Society Symposia Proceedings, 2003, 806, 374.	0.1	0
79	Synthesis of iron-based bulk metallic glasses as nonferromagnetic amorphous steel alloys. Applied Physics Letters, 2003, 83, 1131-1133.	3.3	175
80	Monitoring an insulator-metal transition in icosahedral AlPdRe by neutron irradiation. Physical Review B, 2002, 66, .	3.2	13
81	Local Order in Amorphous Fe-alloys. Materials Research Society Symposia Proceedings, 2002, 754, 1.	0.1	0
82	Grain structure effects on the lattice thermal conductivity of Ti-based half-Heusler alloys. Applied Physics Letters, 2002, 81, 43-45.	3.3	133
83	Electrical transport properties of TiCoSb half-Heusler phases that exhibit high resistivity. Journal of Physics Condensed Matter, 2001, 13, 77-89.	1.8	109
84	Reductions in the Lattice Thermal Conductivity of Ball-milled and Shock compacted TiNiSn1â^'XSbX Half-Heusler alloys. Materials Research Society Symposia Proceedings, 2001, 691, 1.	0.1	3
85	Evidence for an insulating ground state in high-resistivity icosahedral AlPdRe from the magnetoresistance. Physical Review B, 2001, 63, .	3.2	26
86	Role of Atomic Size on Glass Formability and Thermal Stability of Al-Based Amorphous Alloys. Materials Transactions, JIM, 2000, 41, 1406-1409.	0.9	22
87	Effect of substitutional doping on the thermal conductivity of Ti-based Half-Heusler compounds. Materials Research Society Symposia Proceedings, 2000, 626, 521.	0.1	5
88	Thermoelectric properties of semimetallic (Zr, Hf)CoSb half-Heusler phases. Journal of Applied Physics, 2000, 88, 1952-1955.	2.5	175
89	Effect of Sb doping on the thermoelectric properties of Ti-based half-Heusler compounds, TiNiSn1â^'xSbx. Applied Physics Letters, 2000, 77, 2476-2478.	3.3	195
90	Correlation of amorphization effects in titanium solid solutions via mechanical milling and annealing. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1999, 79, 97-106.	0.6	2

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91	Bulk titanium-rich alloys containing nanoscale disordered regions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 1821-1824.	2.2	1
92	Thermoelectric Properties of the Half-Heusler Compound (Zr,Hf)(Ni,Pd)Sn. Materials Research Society Symposia Proceedings, 1998, 545, 403.	0.1	14
93	Metal-Insulator Transitionlike Behavior In Several Icosahedral Phases. Materials Research Society Symposia Proceedings, 1998, 553, 365.	0.1	4
94	Sharp Feature in the Pseudogap of Quasicrystals Detected by NMR. Physical Review Letters, 1997, 79, 1070-1073.	7.8	48
95	Formation of bulk metallic glasses in neodymium-based alloys. Philosophical Magazine Letters, 1994, 70, 371-377.	1.2	76
96	Optical Conductivity of Insulating Al-Based Alloys: Comparison of Quasiperiodic and Periodic Systems. Physical Review Letters, 1994, 73, 1865-1868.	7.8	86
97	Deformation-induced nanocrystal formation in shear bands of amorphous alloys. Nature, 1994, 367, 541-543.	27.8	488
98	Synchrotron X-ray studies of diffuse scattering in an Alâ€“Cuâ€“Co two-dimensional decagonal quasicrystal. Philosophical Magazine Letters, 1992, 66, 241-251.	1.2	9
99	Structures of shear planes, intersection areas and translation domains in the Al5CuLi3Frank-Kasper phase. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1991, 64, 483-493.	0.6	9
100	Stability investigation of a decagonal Alâ€”Cuâ€”Co quasicrystal. Philosophical Magazine Letters, 1991, 63, 211-216.	1.2	17
101	The effect of temperature on stability of the Alâ€”Cuâ€”Co decagonal phase. Philosophical Magazine Letters, 1991, 64, 307-315.	1.2	18
102	Atomic structure of amorphous Al₉₀Fe_xCe_{10â^'x}. Journal of Materials Research, 1990, 5, 2807-2812.	2.6	134
103	On the structural nature of aluminium-based metallic glasses. Philosophical Magazine Letters, 1990, 61, 297-303.	1.2	41
104	Low-temperature specific heat of icosahedral and amorphous Pdâ^'Uâ^'Si alloys. Zeitschrift FÃ¼r Physik B-Condensed Matter, 1988, 70, 31-35.	1.1	13
105	Mechanical properties of a new class of metallic glasses based on aluminum. Journal of Applied Physics, 1988, 64, 6863-6865.	2.5	90
106	Structural relationship between icosahedral and Frank-Kasper phases of Al-Li-Cu. Philosophical Magazine Letters, 1987, 56, 63-68.	1.2	33
107	High Temperature Superconductors in the La1+xBa2-xCu3Oy System. Materials Research Society Symposia Proceedings, 1987, 99, 101.	0.1	4
108	Sintering and Microstructure - Property Relations for YBa2Cu3Ox. Materials Research Society Symposia Proceedings, 1987, 99, 245.	0.1	6

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109	Quasicrystalline grain boundary precipitates in aluminium alloys through solidâ€solid transformations. Journal of Microscopy, 1987, 146, 323-335.	1.8	9
110	Comparison of quasicrystalline (T2) and crystalline (R) structures in AlCuLi using high-resolution X-ray diffraction. Philosophical Magazine Letters, 1987, 56, 259-264.	1.2	15