Koichiro Suekuni

List of Publications by Year
in descending order

111 papers	3,654 citations	136950 32 h-index	138484 58 g-index
112 all docs	112 docs citations	112 times ranked	2080 citing authors

#	Article	IF	Citations
1	High-temperature thermoelectric performance of (W1â^'Ti)18O49. Journal of the European Ceramic Society, 2022, 42, 1486-1492.	5.7	2
2	A prototype thermoelectric module based on p-type colusite together with n-type nanostructured PbTe for power generation. Applied Physics Letters, 2022, 120, 013501.	3.3	6
3	Cuâ€“S-based thermoelectric compounds with a sphalerite-derived disordered crystal structure. Journal of Solid State Chemistry, 2022, 309, 122960.	2.9	1
4	An effective synthesis route for high-performance Î±-MgAgSb thermoelectric material. Journal of Materials Science, 2022, 57, 11265-11273.	3.7	3
5	Synthetic minerals tetrahedrites and colusites for thermoelectric power generation. , 2021, , 197-216.		3
6	Key Role of d⁰ and d¹⁰ Cations for the Design of Semiconducting Colusites: Large Thermoelectric ZT in Cu₂₆Ti₂Sb₆S₃₂ Compounds. Chemistry of Materials, 2021, 33, 3449-3456.	6.7	24
7	Rapid Synthesis of W_18O_49 via Reactive Spark Plasma Sintering with Controlled Anisotropic Thermoelectric Properties. Evergreen, 2021, 8, 344-350.	0.5	2
8	Synergistic Effect of Chemical Substitution and Insertion on the Thermoelectric Performance of Cu₂₆V₂Ge₆S₃₂ Colusite. Inorganic Chemistry, 2021, 60, 11364-11373.	4.0	7
9	A comparative study of thermoelectric Cu2TrTi3S8 (Trâ€¯=â€¯Co and Sc) thiospinels: Enhanced Seebeck coefficient via electronic structure modification. Journal of Alloys and Compounds, 2021, 871, 159548.	5.5	1
10	Thermoelectric properties of In- and Ga-doped spark plasma sintered ZnO ceramics. Ceramics International, 2021, 47, 23927-23934.	4.8	17
11	Thermoelectric quaternary sulfide Cu2+Zn1â^'SnS4 (xÂ=Â0â€“0.3): Effects of Cu substitution for Zn. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 272, 115353.	3.5	0
12	Local-Disorder-Induced Low Thermal Conductivity in Degenerate Semiconductor Cu₂₂Sn₁₀S₃₂. Inorganic Chemistry, 2021, 60, 16273-16285.	4.0	14
13	Cu 2p-1s x-ray emission spectroscopy of mineral tetrahedrite Cu12Sb4S13. Radiation Physics and Chemistry, 2020, 175, 108148.	2.8	2
14	A strategy for boosting the thermoelectric performance of famatinite Cu₃SbS₄. Physical Chemistry Chemical Physics, 2020, 22, 2081-2086.	2.8	29
15	Pressure-induced quenching of planar rattling in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cu</mml:mi><mml:mn>10</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>13</mml:mn></mml:msub></mml:mrow></mml:math> studied by specific heat and x-ray diffraction measurements. Physical Review B, 2020, 102, .	3.2	5
16	Transport properties and electronic density-of-states of Zn-doped colusite Cu26Cr2Ge6S32. Applied Physics Letters, 2020, 117, 173902.	3.3	4
17	Enhancement of the thermoelectric power factor by tuning the carrier concentration in Cu-rich and Ge-poor colusites Cu26+xNb2Ge6â^'xS32. Journal of Materials Chemistry C, 2020, 8, 6442-6449.	5.5	5
18	Toppling the Transport Properties with Cationic Overstoichiometry in Thermoelectric Colusite: [Cu₂₆Cr₂Ge₆]_{1+Î´}S₃₂. ACS Applied Energy Materials, 2020, 3, 4180-4185.	5.1	14

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19	Enargite Cu₃PS₄: A Cuâ€“Sâ€Based Thermoelectric Material with a Wurtziteâ€Derivative Structure. Advanced Functional Materials, 2020, 30, 2000973.	14.9	25
20	Disorder-driven glasslike thermal conductivity in colusite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">u</mml:mi><mml:mn>26</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">V</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mn>6</mml:mn>	2.4	24
21	Precursor of Metalâ€“Semiconductor Transition in Tetrahedrite Probed by Cu-NMR. , 2020, , .		0
22	Copperâ€Rich Thermoelectric Sulfides: Sizeâ€Mismatch Effect and Chemical Disorder in the [TS₄]Cu₆ Complexes of Cu₂₆T₂Ge₆S₃₂ (T=Cr, Mo, W) Colusites. Angewandte Chemie, 2019, 131, 15601-15609.	2.0	5
23	Copperâ€Rich Thermoelectric Sulfides: Sizeâ€Mismatch Effect and Chemical Disorder in the [TS₄]Cu₆ Complexes of Cu₂₆T₂Ge₆S₃₂ (T=Cr, Mo, W) Colusites. Angewandte Chemie - International Edition, 2019, 58, 15455-15463.	13.8	36
24	First-Order Metalâ€“Semiconductor Transition Triggered by Rattling Transition in Tetrahedrite Cu₁₂Sb₄S₁₃: Cu-Nuclear Magnetic Resonance Studies. Journal of the Physical Society of Japan, 2019, 88, 054710.	1.6	7
25	Atomic-scale phonon scatterers in thermoelectric colusites with a tetrahedral framework structure. Journal of Materials Chemistry A, 2019, 7, 228-235.	10.3	41
26	Electronic structure and thermoelectric properties of Sn1.2â^'xNbxTi0.8S3 with a quasi-one-dimensional structure. Journal of Applied Physics, 2019, 125, 175111.	2.5	6
27	Low-Temperature Structural Phase Transitions in Thermoelectric Tetrahedrite, Cu₁₂Sb₄S₁₃, and Tennantite, Cu₁₂As₄S₁₃. Crystal Growth and Design, 2019, 19, 3979-3988.	3.0	8
28	Power generation from the Cu₂₆Nb₂Ge₆S₃₂-based single thermoelectric element with Au diffusion barrier. Journal of Materials Chemistry C, 2019, 7, 5184-5192.	5.5	33
29	Pressure-Induced Collapse of the Guest Eu Off-Centering in Type-I Clathrate Eu₈Ga₁₆Ge₃₀. Journal of the Physical Society of Japan, 2019, 88, 114601.	1.6	2
30	High Power Factors of Thermoelectric Colusites Cu₂₆T₂Ge₆S₃₂ (T = Cr, Mo, W): Toward Functionalization of the Conductive â€œCuâ€“Sâ€•Network. Advanced Energy Materials, 2019, 9, 1803249.	19.5	51
31	Thermoelectric Properties and Electronic Structures of CuTi₂S₄ Thiospinel and Its Derivatives: Structural Design for Spinel-Related Thermoelectric Materials. Inorganic Chemistry, 2019, 58, 1425-1432.	4.0	24
32	Retreat from Stress: Rattling in a Planar Coordination. Advanced Materials, 2018, 30, e1706230.	21.0	57
33	Carrier concentration tuning in thermoelectric thiospinel Cu2CoTi3S8 by oxidative extraction of copper. Journal of Solid State Chemistry, 2018, 259, 5-10.	2.9	17
34	High-Performance Thermoelectric Bulk Colusite by Process Controlled Structural Disordering. Journal of the American Chemical Society, 2018, 140, 2186-2195.	13.7	98
35	Addition of Co, Ni, Fe and their role in the thermoelectric properties of colusite Cu26Nb2Ge6S32. Journal of Alloys and Compounds, 2018, 735, 1838-1845.	5.5	15
36	Static and dynamic structures of liquid Ba8Ga16Sn30: a melt of the thermoelectric clathrate compounds. Journal of Physics Condensed Matter, 2018, 30, 455101.	1.8	1

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37	Effects of Ge and Sn substitution on the metalâ€“semiconductor transition and thermoelectric properties of Cu₁₂Sb₄S₁₃tetrahedrite. Physical Chemistry Chemical Physics, 2017, 19, 8874-8879.	2.8	39
38	Enhancement in the thermoelectric performance of colusites Cu₂₆A₂E₆S₃₂(A = Nb, Ta; E = Sn, Ge) using E-site non-stoichiometry. Journal of Materials Chemistry C, 2017, 5, 4174-4184.	5.5	49
39	Chapter 6 Clathrate-Based Thermoelectrics. , 2016, , 219-236.		1
40	Tuning the charge carrier density in the thermoelectric colusite. Journal of Applied Physics, 2016, 119, .	2.5	35
41	High power factor in thiospinels Cu2TrTi3S8 (Tr= Mn, Fe, Co, Ni) arising from TiS6 octahedron network. Applied Physics Letters, 2016, 109, .	3.3	19
42	Research Update: Cuâ€“S based synthetic minerals as efficient thermoelectric materials at medium temperatures. APL Materials, 2016, 4, .	5.1	99
43	Vanadium-free colusites Cu₂₆A₂Sn₆S₃₂(A = Nb, Ta) for environmentally friendly thermoelectrics. Journal of Materials Chemistry A, 2016, 4, 15207-15214.	10.3	58
44	Metalâ€“Semiconductor Transition Concomitant with a Structural Transformation in Tetrahedrite Cu₁₂Sb₄S₁₃. Journal of the Physical Society of Japan, 2016, 85, 014703.	1.6	30
45	Synthetic Copper-based Sulfide Minerals as Advanced Thermoelectric Materials and the Modularization for Power Generation. Materia Japan, 2015, 54, 335-338.	0.1	2
46	Elastic Softening in the Tetrahedrite Cu12Sb4S13. Physics Procedia, 2015, 75, 443-446.	1.2	6
47	Comparison of local distortions in Ba₈Ga₁₆X₃₀ (X = Si, Ge, Sn): an EXAFS study. Journal of Materials Chemistry C, 2015, 3, 10574-10582.	5.5	9
48	Glasslike versus Crystalline Thermophysical Properties of the Cuâ€“S based Minerals: Tetrahedrite and Colusite. Journal of the Physical Society of Japan, 2015, 84, 103601.	1.6	25
49	Systematic study of electronic and magnetic properties for Cu12â€“xTMxSb4S13 (TMâ€‰=â€‰Mn,	2.5	69
50	High-performance thermoelectric minerals: Colusites Cu26V2M6S32 (Mâ€‰=â€‰Ge, Sn). Applied Physics Letters, 2014, 105, .	3.3	117
51	Development of a Thermal Conductivity Measurement System Using the 3Ï‰ Method and Application to Thermoelectric Particles. Journal of Electronic Materials, 2014, 43, 2151-2156.	2.2	5
52	Tunable electronic properties and low thermal conductivity in synthetic colusites Cu26â^'xZnxV2M6S32 (x â‰¤ 4, M = Ge, Sn). Journal of Applied Physics, 2014, 116, .	2.5	55
53	Microstructural Control and Thermoelectric Properties of Misfit Layered Sulfides (LaS)_{1+m}TS₂ (T = Cr, Nb): The Natural Superlattice Systems. Chemistry of Materials, 2014, 26, 2684-2692.	6.7	39
54	Simultaneous Pressure-Induced Magnetic and Valence Transitions in Type-I Clathrate Eu₈Ga₁₆Ge₃₀. Journal of the Physical Society of Japan, 2014, 83, 013701.	1.6	3

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55	Vertical Bridgman growth of thermoelectric clathrate Ba8Ga16Sn30 with a type-VIII structure. Journal of Crystal Growth, 2014, 402, 312-318.	1.5	8
56	Thermoelectric properties of Mn-doped Mgâ€“Sb single crystals. Journal of Materials Chemistry A, 2014, 2, 12311-12316.	10.3	78
57	Publisherâ€™s Note: Phonon-glass electron-crystal thermoelectric clathrates: Experiments and theory [Rev. Mod. Phys.86, 669 (2014)]. Reviews of Modern Physics, 2014, 86, 841-841.	45.6	14
58	Phonon-glass electron-crystal thermoelectric clathrates: Experiments and theory. Reviews of Modern Physics, 2014, 86, 669-716.	45.6	426
59	Thermoelectric properties in Mn-doped Bi2Se3. Current Applied Physics, 2014, 14, 1041-1044.	2.4	7
60	Percolation Conduction in Hybrid Thermoelectric Material Consisting of Bi0.88Sb0.12 and Barium Ferrite Particles. Journal of Electronic Materials, 2013, 42, 2350-2355.	2.2	3
61	Combined X-ray and neutron diffraction study of vacancies and disorder in the dimorphic clathrate Ba8Ga16Sn30 of type I and VIII. Dalton Transactions, 2013, 42, 14766.	3.3	18
62	Structural and thermoelectric properties of Cu6Fe4Sn12Se32 single crystal. Journal of Alloys and Compounds, 2013, 564, 91-94.	5.5	15
63	High-performance thermoelectric mineral Cu12â^’xNixSb4S13 tetrahedrite. Journal of Applied Physics, 2013, 113, .	2.5	262
64	Characterization of Terahertz Absorption in Clathrate Compound by Compact Spectroscopic Chip. Japanese Journal of Applied Physics, 2013, 52, 028003.	1.5	2
65	Spatial and temporal dynamics of thermal and carrier diffusions in clathrate compounds. , 2013, , .		0
66	Optical conductivity spectra of rattling phonons and charge carriers in the type-VIII clathrate Ba8Ga16Sn30. Physical Review B, 2013, 88, .	3.2	6
67	Anomalous Infrared Spectra of Hybridized Phonons in Type-I Clathrate Ba8Ga16Ge30. Journal of the Physical Society of Japan, 2013, 82, 024601.	1.6	8
68	Strong Coupling of Rattling Phonon to Conduction Electrons in Semimetallic Type-I Clathrate Ba₈Ga₁₆Sn₃₀. Journal of the Physical Society of Japan, 2013, 82, 114603.	1.6	5
69	Optical Conductivity of Rattling Phonons in Type-I Clathrates Ba₈Ga₁₆Ge₃₀ and Ba₈Ga₁₆Sn₃₀. Key Engineering Materials, 2012, 508, 341-346.	0.4	0
70	Lattice instability and elastic dispersion due to the rattling motion in the type-I clathrate Ba8Ga16Sn30. Physical Review B, 2012, 85, .	3.2	19
71	Thermoelectric Properties of Mineral Tetrahedrites Cu$_{10}$Tr$_{2}$Sb$_{4}$S$_{13}$ with Low Thermal Conductivity. Applied Physics Express, 2012, 5, 051201.	2.4	176
72	Electronic Structures and Thermoelectric Properties of Sb-Doped Type-VIII Clathrate Ba₈Ga₁₆Sn₃₀. Materials Transactions, 2012, 53, 636-640.	1.2	6

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73	Thermoelectric properties and structural instability of type-I clathrate Ba8Ga16Sn30 at high temperatures. Solid State Communications, 2012, 152, 1902-1905.	1.9	26
74	Direct Observation of the Spatial and Temporal Dynamics of Thermal Diffusion in Clathrate Compounds. , 2012, , .		0
75	Thermoelectric Properties of Selenospinel Cu6Fe4Sn12Se32. Journal of Electronic Materials, 2012, 41, 1130-1133.	2.2	5
76	Single-Crystal Growth of Bi-Sb-Te Thermoelectric Materials by Halide Chemical Vapor Transport Technique. Journal of Electronic Materials, 2012, 41, 1317-1321.	2.2	4
77	Optical Conductivity Spectral Anomalies in the Off-Center Rattling System<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:msub><mml:mi>Ba</mml:mi><mml:mn>8</mml:mn></mml:msub><mml:msub><mml:mi Physical Review Letters, 2011, 106, 015501.	7.8	36
78	High-Pressure Synthesis and Superconductivity of a New Binary Lanthanum Germanide LaGe₃ with Triangular Ge₃ Cluster Units. Inorganic Chemistry, 2011, 50, 3901-3906.	4.0	24
79	Variable-range-hopping conduction and low thermal conductivity in chalcogenide spinel CuyFe4Sn12X32 (Xâ€‰=â€‰S, Se). Journal of Applied Physics, 2011, 109, 083709.	2.5	13
80	Synthesis of delafossite CuAlO2 p-type semiconductor with a nanoparticle-based Cu(I) acetate-loaded boehmite precursor. Materials Research Bulletin, 2011, 46, 1819-1827.	5.2	22
81	Effect of Al Substitution on the Thermoelectric Properties of the TypeÂVIII Clathrate Ba8Ga16Sn30. Journal of Electronic Materials, 2011, 40, 1124-1128.	2.2	10
82	Carrier Doping in the TypeÂVIII Clathrate Ba8Ga16Sn30 Through Sb Substitution. Journal of Electronic Materials, 2011, 40, 845-850.	2.2	15
83	Emergence of Elastic Softening in Sr8Ga16Si30-xGexwith Increasing Ge Concentration. Journal of the Physical Society of Japan, 2011, 80, SA038.	1.6	2
84	First-principles study of type-I and type-VIII Ba8Ga16Sn30 clathrates. Journal of Applied Physics, 2010, 107, 123720.	2.5	43
85	Enhancement of thermoelectric efficiency in type-VIII clathrate Ba8Ga16Sn30 by Al substitution for Ga. Journal of Applied Physics, 2010, 108, .	2.5	40
86	Off-center rattling and cage vibration of the carrier-tuned type-I clathrate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ba</mml:mtext></mml:mrow><mml:mn>8</mml:mn></mml:msu by Raman scattering. Physical Review B, 2010, 82, .	3.2	28
87	Interplay between thermoelectric and structural properties of type-I clathrate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>K</mml:mtext><mml:mn>8</mml:mn></mml:msub><mml:msub><mml:mrow crystals. Physical Review B, 2010, 81, .	3.2	30
88	Off-center rattling modes and glasslike thermal conductivity in the type-I clathrate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ba</mml:mtext></mml:mrow><mml:mn>8</mml:mn></mml:msu Physical Review B, 2010, 81, .	3.2	39
89	Multiple ferromagnetic structures in an off-center rattling system Eu8Ga16Ge30. Journal of Physics: Conference Series, 2010, 200, 022044.	0.4	8
90	Optimization of thermoelectric properties of type-VIII clathrate Ba8Ga16Sn30 by carrier tuning. Journal of Alloys and Compounds, 2010, 507, 1-5.	5.5	65

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91	Optical conductivity of rattling phonons in type-I clathrateBa8Ga16Ge30. Physical Review B, 2009, 79, .	3.2	31
92	Direct verification of Gaâ€“Ga bond avoidance in the type-I clathrateBa8Ga16Sn30from its x-ray absorption fine structure. Physical Review B, 2009, 80, .	3.2	19
93	Off-Center Guest Vibrations and Their Effect on Lattice Thermal Conductivity in n- and p-Type Î²-Ba8Ga16Sn30. Journal of Electronic Materials, 2009, 38, 1516-1520.	2.2	8
94	p- and n-Type Ba8Ga16Ge30 studied by X-ray photoelectron spectroscopy. Chemical Physics Letters, 2009, 472, 60-64.	2.6	17
95	Off-Center Rattling and Anisotropic Expansion of Type-I Clathrates Studied by Raman Scattering. Physical Review Letters, 2008, 100, 165503.	7.8	53
96	Soft x-ray photoelectron spectroscopy study of type-I clathrates. Science and Technology of Advanced Materials, 2008, 9, 044207.	6.1	6
97	Guest Ion Motion in Cage Structure Crystals Investigated by Raman Scattering. Journal of the Physical Society of Japan, 2008, 77, 142-147.	1.6	8
98	Ba 8 Ga 16 Sn 30 with type-I clathrate structure: Drastic suppression of heat conduction. Applied Physics Letters, 2008, 92, .	3.3	103
99	Simultaneous structure and carrier tuning of dimorphic clathrate<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ba</mml:mtext></mml:mrow><mml:mn>8</mml:mn></mml:m Physical Review B, 2008, 77, .	3.2	144
100	Energetics of endohedral atoms in type-I clathrates observed by soft x-ray spectroscopy. Physical Review B, 2008, 78, .	3.2	28
101	Raman Scattering of Type-I Clathrate Compounds. Journal of the Physical Society of Japan, 2008, 77, 254-256.	1.6	1
102	Universal Relation between Guest Free Space and Lattice Thermal Conductivity Reduction by Anharmonic Rattling in Type-I Clathrates. Journal of the Physical Society of Japan, 2008, 77, 61-66.	1.6	20
103	Low-temperature thermoelectric properties of Yb₁₄MSb₁₁(M = Mn, Zn). Journal of Physics Condensed Matter, 2007, 19, 376211.	1.8	10
104	Raman scattering of type-I clathrate compounds: A₈Ga₁₆Ge₃₀(A =) Tj ETQq0 0 0 rgBT /Overlock Conference Series, 2007, 92, 012151.	0.4	2
105	Cage-size control of guest vibration and thermal conductivity inSr8Ga16Si30â^'xGex. Physical Review B, 2007, 75, .	3.2	112
106	Raman scattering study of the guest ion motion in caged crystals. , 2006, , .		1
107	Dynamical properties of guest ions in the type-I clathrate compoundsX8Ga16Ge30(X=Eu,Sr,Ba)investigated by Raman scattering. Physical Review B, 2006, 74, .	3.2	108
108	Carrier-tuning of single-crystalline Ba8Ga16Ge30. Physica B: Condensed Matter, 2006, 383, 124-125.	2.7	59

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109	Tunable charge carriers and thermoelectricity of single-crystal Ba8Ga16Sn30. Journal of Physics Condensed Matter, 2006, 18, 1585-1592.	1.8	25
110	Glasslike versus crystalline thermal conductivity in carrier-tunedBa8Ga16X30clathrates(X=Ge,Sn). Physical Review B, 2006, 74, .	3.2	131
111	Probing Glasslike Excitations in Single-Crystalline Sr8Ga16Ge30 by Specific Heat and Thermal Conductivity. Journal of the Physical Society of Japan, 2005, 74, 2145-2148.	1.6	56