Emanuel Guilmeau

List of Publications by Year
in descending order

115 papers	4,592 citations	76326 40 h-index	128289 60 g-index
115 all docs	115 docs citations	115 times ranked	3482 citing authors

#	Article	IF	Citations
1	Thermoelectric Ceramics for Energy Harvesting. Journal of the American Ceramic Society, 2013, 96, 1-23.	3.8	286
2	:Ge, a promising n-type thermoelectric oxide composite. Solid State Communications, 2008, 146, 97-101.	1.9	158
3	Transport and thermoelectric properties in Copper intercalated TiS2 chalcogenide. Applied Physics Letters, 2011, 99, .	3.3	149
4	Structural stability of the synthetic thermoelectric ternary and nickel-substituted tetrahedrite phases. Journal of Alloys and Compounds, 2015, 634, 253-262.	5.5	147
5	Preparation of Ni-doped ZnO ceramics for thermoelectric applications. Journal of the European Ceramic Society, 2011, 31, 2957-2963.	5.7	117
6	Tuning the transport and thermoelectric properties of In2O3 bulk ceramics through doping at In-site. Journal of Applied Physics, 2009, 106, .	2.5	99
7	High-Performance Thermoelectric Bulk Colusite by Process Controlled Structural Disordering. Journal of the American Chemical Society, 2018, 140, 2186-2195.	13.7	98
8	Invited Article: A round robin test of the uncertainty on the measurement of the thermoelectric dimensionless figure of merit of Co0.97Ni0.03Sb3. Review of Scientific Instruments, 2015, 86, 011301.	1.3	92
9	Synthesis of calcium carbonate polymorphs in the presence of polyacrylic acid. Journal of Crystal Growth, 2008, 310, 2832-2841.	1.5	79
10	On the strong impact of doping in the triangular antiferromagnet CuCrO2. Solid State Communications, 2009, 149, 962-967.	1.9	73
11	Intrinsic magnetic properties of In2O3 and transition metal-doped-In2O3. Journal of Magnetism and Magnetic Materials, 2008, 320, 983-989.	2.3	72
12	Thermoelectric ceramics for generators. Journal of the European Ceramic Society, 2008, 28, 41-48.	5.7	70
13	Electron doping and phonon scattering in Ti 1+ x S 2 thermoelectric compounds. Acta Materialia, 2014, 78, 86-92.	7.9	70
14	Improving the thermoelectric properties of SrTiO3-based ceramics with metallic inclusions. Journal of Alloys and Compounds, 2018, 731, 723-730.	5.5	70
15	The effect of MgO addition on the formation and the superconducting properties of the Bi2223 phase. Physica C: Superconductivity and Its Applications, 2003, 387, 382-390.	1.2	69
16	From oxides to selenides and sulfides: The richness of the CdI₂ type crystallographic structure for thermoelectric properties. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 69-81.	1.8	69
17	The Influence of Mobile Copper Ions on the Glass-Like Thermal Conductivity of Copper-Rich Tetrahedrites. Chemistry of Materials, 2017, 29, 4080-4090.	6.7	66
18	Tuning the thermoelectric properties of A-site deficient SrTiO₃ ceramics by vacancies and carrier concentration. Physical Chemistry Chemical Physics, 2016, 18, 26475-26486.	2.8	63

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19	Thermoelectric Materials: A New Rapid Synthesis Process for Nontoxic and Highâ€Performance Tetrahedrite Compounds. Journal of the American Ceramic Society, 2016, 99, 51-56.	3.8	62
20	Low thermal conductivity in ternary Cu4Sn7S16 compound. Acta Materialia, 2015, 97, 180-190.	7.9	61
21	A copper-containing oxytelluride as a promising thermoelectric material for waste heat recovery. Journal of Materials Chemistry A, 2013, 1, 520-523.	10.3	59
22	On the effects of substitution, intercalation, non-stoichiometry and block layer concept in TiS₂ based thermoelectrics. Physical Chemistry Chemical Physics, 2015, 17, 24541-24555.	2.8	59
23	Revisiting some chalcogenides for thermoelectricity. Science and Technology of Advanced Materials, 2012, 13, 053003.	6.1	58
24	Searching for new thermoelectric materials: some examples among oxides, sulfides and selenides. Journal of Physics Condensed Matter, 2016, 28, 013001.	1.8	56
25	Thermoelectric properties of Ca3Co4O9â€"Co3O4 composites. Ceramics International, 2015, 41, 10038-10043.	4.8	55
26	Thermoelectric propertiesâ€"texture relationship in highly oriented Ca3Co4O9 composites. Applied Physics Letters, 2004, 85, 1490-1492.	3.3	54
27	Thermoelectric Oxides: Effect of Doping in Delafossites and Zinc Oxide. Journal of Electronic Materials, 2009, 38, 1104-1108.	2.2	54
28	Solution-based synthesis routes to thermoelectric Bi2Ca2Co1.7Ox. Journal of the European Ceramic Society, 2011, 31, 1763-1769.	5.7	53
29	Promising thermoelectric properties in AgxMo9Se11 compounds (3.4â‰xâ‰3.9). Applied Physics Letters, 2011, 98, 162106.	3.3	52
30	High Power Factors of Thermoelectric Colusites Cu₂₆<i>T</i>₂Ge₆S₃₂ (<i>T</i> = Cr, Mo, W): Toward Functionalization of the Conductive â€œCuâ€"Sâ€•Network. Advanced Energy Materials, 2019, 9, 1803249.	19.5	51
31	Improvement of Bi2Sr2Co1.8Ox thermoelectric properties by laser floating zone texturing. Solid State Ionics, 2009, 180, 827-830.	2.7	45
32	Improved thermoelectric properties in directionally grown Bi2Sr2Co1.8Oy ceramics by Pb for Bi substitution. Materials Research Bulletin, 2011, 46, 2537-2542.	5.2	45
33	The crucial role of selenium for sulphur substitution in the structural transitions and thermoelectric properties of Cu₅FeS₄ bornite. Dalton Transactions, 2017, 46, 2174-2183.	3.3	45
34	Synthesis and thermoelectric properties of Bi2.5Ca2.5Co2Ox layered cobaltites. Journal of Materials Research, 2005, 20, 1002-1008.	2.6	44
35	ZrSe₃-Type Variant of TiS₃: Structure and Thermoelectric Properties. Chemistry of Materials, 2014, 26, 5585-5591.	6.7	44
36	Thermal conductivity and stability of Al-doped ZnO nanostructured ceramics. Journal of the European Ceramic Society, 2018, 38, 5015-5020.	5.7	43

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37	Structural analysis and thermoelectric properties of mechanically alloyed colusites. Journal of Materials Chemistry C, 2016, 4, 7455-7463.	5.5	42
38	Inversion Boundaries and Phonon Scattering in Ga:ZnO Thermoelectric Compounds. Inorganic Chemistry, 2017, 56, 480-487.	4.0	42
39	Copper Hyper-Stoichiometry: The Key for the Optimization of Thermoelectric Properties in Stannoidite Cu_{8+<i>x</i>}Fe_{3â€“<i>x</i>}Sn₂S₁₂. Journal of Physical Chemistry C, 2017, 121, 16454-16461.	3.1	42
40	Magnetic properties of bulk Fe-doped indium oxide. Journal of Physics Condensed Matter, 2007, 19, 236224.	1.8	41
41	Atomic-scale phonon scatterers in thermoelectric colusites with a tetrahedral framework structure. Journal of Materials Chemistry A, 2019, 7, 228-235.	10.3	41
42	Structural and thermoelectric properties of n-type isocubanite CuFe₂S₃. Inorganic Chemistry Frontiers, 2017, 4, 424-432.	6.0	40
43	Designing a Thermoelectric Copper-Rich Sulfide from a Natural Mineral: Synthetic Germanite Cu₂₂Fe₈Ge₄S₃₂. Inorganic Chemistry, 2017, 56, 13376-13381.	4.0	40
44	Fabrication and properties of textured Bi-based cobaltite thermoelectric rods by zone melting. Journal of the European Ceramic Society, 2007, 27, 3697-3700.	5.7	39
45	Enhancement of the thermoelectric properties of directionally grown Biâ€“Caâ€“Coâ€“O through Pb for Bi substitution. Journal of the European Ceramic Society, 2010, 30, 1815-1820.	5.7	39
46	Design of Apparatus for Ni/Mg2Si and Ni/MnSi1.75 Contact Resistance Determination for Thermoelectric Legs. Journal of Electronic Materials, 2014, 43, 2023-2028.	2.2	39
47	Thermoelectric properties in the series Ti1-xTaxS2. Journal of Applied Physics, 2014, 115, .	2.5	39
48	Enhancement of the thermoelectric performances of In2O3 by the coupled substitution of M2+/Sn4+ for In3+. Journal of Applied Physics, 2008, 104, .	2.5	37
49	Improved Thermoelectric Properties of Bi-M-Co-O (MÂ=ÂSr, Ca) Misfit Compounds by Laser Directional Solidification. Journal of Electronic Materials, 2010, 39, 1601-1605.	2.2	37
50	Thermoelectric properties of TiS2 mechanically alloyed compounds. Journal of the European Ceramic Society, 2016, 36, 1183-1189.	5.7	37
51	Enhancement of Electrical Properties of the Thermoelectric Compound Ca3Co4O9 through Use of Large-grained Powder. Journal of Materials Research, 2005, 20, 2491-2497.	2.6	36
52	Copperâ€Rich Thermoelectric Sulfides: Sizeâ€Mismatch Effect and Chemical Disorder in the [<i>T</i>S₄]Cu₆ Complexes of Cu₂₆<i>T</i>₂Ge₆S₃₂ (<i>T</i>=Cr, Mo, W) Colusites. Angewandte Chemie - International Edition, 2019, 58, 15455-15463.	13.8	36
53	Recent developments in high-performance thermoelectric sulphides: an overview of the promising synthetic colusites. Journal of Materials Chemistry C, 2021, 9, 773-795.	5.5	33
54	Silver intercalation in SPS dense TiS₂: staging and thermoelectric properties. Dalton Transactions, 2015, 44, 7887-7895.	3.3	32

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55	The impact of charge transfer and structural disorder on the thermoelectric properties of cobalt intercalated TiS₂. Journal of Materials Chemistry C, 2016, 4, 1871-1880.	5.5	32
56	Mg substitution in CuCrO2 delafossite compounds. Solid State Communications, 2011, 151, 1798-1801.	1.9	31
57	CdI2 structure type as potential thermoelectric materials: Synthesis and high temperature thermoelectric properties of the solid solution TiSxSe2â^'x. Journal of Alloys and Compounds, 2012, 521, 121-125.	5.5	31
58	Substituting Copper with Silver in the BiMOCh Layered Compounds (M = Cu or Ag; Ch = S, Se, or Te): Crystal, Electronic Structure, and Optoelectronic Properties. Chemistry of Materials, 2018, 30, 549-558.	6.7	31
59	Thermoelectric anisotropy and texture of intercalated TiS2. Applied Physics Letters, 2017, 111, .	3.3	30
60	Abnormal Grain Growth as a Method To Enhance the Thermoelectric Performance of Nb-Doped Strontium Titanate Ceramics. ACS Sustainable Chemistry and Engineering, 2018, 6, 15988-15994.	6.7	30
61	Rietveld texture analysis of complex oxides: examples of polyphased Bi2223 superconducting and Co349 thermoelectric textured ceramics characterization using neutron and X-ray diffraction. Journal of Applied Crystallography, 2005, 38, 199-210.	4.5	28
62	Mass Fluctuation Effect in Ti1â^'x Nb x S2 Bulk Compounds. Journal of Electronic Materials, 2014, 43, 1590-1596.	2.2	28
63	Textured Al-doped ZnO ceramics with isotropic grains. Journal of the European Ceramic Society, 2014, 34, 4247-4256.	5.7	26
64	Thermoelectric properties of In0.2Co4Sb12 skutterudites with embedded PbTe or ZnO nanoparticles. Journal of Alloys and Compounds, 2014, 589, 513-523.	5.5	25
65	Synthesis and Thermoelectric Properties in the 2D Ti1 â€" xNbxS3 Trichalcogenides. Materials, 2015, 8, 2514-2522.	2.9	25
66	Thermoelectric Cuâ€"S-Based Materials Synthesized via a Scalable Mechanochemical Process. ACS Sustainable Chemistry and Engineering, 2021, 9, 2003-2016.	6.7	25
67	Crystal Structure Classification of Copperâ€Based Sulfides as a Tool for the Design of Inorganic Functional Materials. Angewandte Chemie - International Edition, 2022, 61, .	13.8	25
68	Effects of Grain Size on the Thermoelectric Properties of Cu₂SnS₃: An Experimental and First-Principles Study. ACS Applied Energy Materials, 2021, 4, 12604-12612.	5.1	25
69	A new wide band gap thermoelectric quaternary selenide Cu2MgSnSe4. Journal of Applied Physics, 2015, 118, .	2.5	24
70	XBi₄S₇ (X = Mn, Fe): New Costâ€Efficient Layered <i>n</i>â€Type Thermoelectric Sulfides with Ultralow Thermal Conductivity. Advanced Functional Materials, 2019, 29, 1904112.	14.9	24
71	Key Role of d⁰ and d¹⁰ Cations for the Design of Semiconducting Colusites: Large Thermoelectric <i>ZT</i> in Cu₂₆Ti₂Sb₆S₃₂ Compounds. Chemistry of Materials, 2021, 33, 3449-3456.	6.7	24
72	Disorder-driven glass-like thermal conductivity in colusite <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><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	2.4	24

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73	Modulated Misfit Structure of the Thermoelectric [Bi0.84CaO2]2[CoO2]1.69 Cobalt Oxide. Inorganic Chemistry, 2008, 47, 2464-2471.	4.0	23
74	Ordered-Defect Sulfides as Thermoelectric Materials. Journal of Electronic Materials, 2014, 43, 2029-2034.	2.2	23
75	High temperature neutron powder diffraction study of the Cu 12 Sb 4 S 13 and Cu 4 Sn 7 S 16 phases. Journal of Solid State Chemistry, 2017, 247, 83-89.	2.9	23
76	Ordered sphalerite derivative Cu₅Sn₂S₇: a degenerate semiconductor with high carrier mobility in the Cuâ€“Snâ€“S diagram. Journal of Materials Chemistry A, 2021, 9, 10812-10826.	10.3	23
77	Rietveld Texture Analysis of Alumina Ceramics by Neutron Diffraction. Chemistry of Materials, 2005, 17, 102-106.	6.7	22
78	Up-scaled synthesis process of sulphur-based thermoelectric materials. RSC Advances, 2016, 6, 10044-10053.	3.6	22
79	A scalable synthesis route for multiscale defect engineering in the sustainable thermoelectric quaternary sulfide Cu26V2Sn6S32. Acta Materialia, 2020, 195, 229-239.	7.9	22
80	Microwave sintering of Ge-doped In2O3 thermoelectric ceramics prepared by slip casting process. Journal of the European Ceramic Society, 2015, 35, 145-151.	5.7	21
81	Controlling the Thermoelectric Properties of Nb-Doped TiO₂ Ceramics through Engineering Defect Structures. ACS Applied Materials & Interfaces, 2021, 13, 57326-57340.	8.0	21
82	Modelling of the magnetic behaviour of random granular superconductors by the single junction model. Superconductor Science and Technology, 2001, 14, 904-909.	3.5	20
83	Transport and magnetic properties of highly densified CoS2 ceramic. Journal of Applied Physics, 2013, 114, .	2.5	20
84	Role of cobalt for titanium substitution on the thermoelectric properties of the thiospinel CuTi2S4. Journal of Alloys and Compounds, 2019, 781, 1169-1174.	5.5	20
85	Thermal Stability of the Crystal Structure and Electronic Properties of the High Power Factor Thermoelectric Colusite Cu₂₆Cr₂Ge₆S₃₂. Chemistry of Materials, 2020, 32, 830-840.	6.7	19
86	Effect of Bi Substitution on Microstructure and Thermoelectric Properties of Polycrystalline [Ca2CoO3]pCoO2. Japanese Journal of Applied Physics, 2006, 45, 4152-4158.	1.5	18
87	Phonon Scattering and Electron Doping by 2D Structural Defects in In/ZnO. ACS Applied Materials & Interfaces, 2018, 10, 6415-6423.	8.0	18
88	Electronic Band Structure Engineering and Enhanced Thermoelectric Transport Properties in Pb-Doped BiCuOS Oxysulfide. Chemistry of Materials, 2018, 30, 1085-1094.	6.7	18
89	Sinter-forging of strongly textured Bi2223 discs with largeJcs: nucleation and growth of Bi2223 from Bi2212 crystallites. Superconductor Science and Technology, 2002, 15, 1436-1444.	3.5	17
90	Neutron diffraction texture analysis and thermoelectric properties of BiCaCoO misfit compounds. Materials Research Bulletin, 2008, 43, 394-400.	5.2	17

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91	Ba6â^ˆ3x Nd8+2x Ti18O54 Tungsten Bronze: A New High-Temperature n-Type Oxide Thermoelectric. Journal of Electronic Materials, 2016, 45, 1894-1899.	2.2	17
92	Crossover from Germanite to Renierite-Type Structures in Cu_{22â€“<i>x</i>}Zn_{<i>x</i>}Fe₈Ge₄S₃₂ Thermoelectric Sulfides. ACS Applied Energy Materials, 2019, 2, 7679-7689.	5.1	17
93	Structure, microstructure and thermoelectric properties of germanite-type Cu22Fe8Ge4S32 compounds. Journal of Alloys and Compounds, 2020, 831, 154767.	5.5	16
94	The effect of Bi2201 phase on the intergranular critical field and current density in Bi2223 superconductors. Physica C: Superconductivity and Its Applications, 2002, 377, 304-312.	1.2	15
95	The BiCu1â^’OS oxysulfide: Copper deficiency and electronic properties. Journal of Solid State Chemistry, 2016, 237, 292-299.	2.9	15
96	Phase formation, microstructure development and thermoelectric properties of (ZnO)kIn2O3 ceramics. Journal of the European Ceramic Society, 2017, 37, 2833-2842.	5.7	15
97	A Tunable Structural Family with Ultralow Thermal Conductivity: Copper-Deficient Cu_{1â€“<i>x</i>}â–¡_{<i>x</i>}Pb_{1â€“<i>x</i>}Bi_{1+<i>x</i>}S₃. Journal of the American Chemical Society, 2022, 144, 1846-1860.	13.7	15
98	Structural features and thermoelectric properties of Alâ€doped (ZnO)₅In₂O₃ homologous phases. Journal of the American Ceramic Society, 2017, 100, 3712-3721.	3.8	14
99	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
100	Local-Disorder-Induced Low Thermal Conductivity in Degenerate Semiconductor Cu₂₂Sn₁₀S₃₂. Inorganic Chemistry, 2021, 60, 16273-16285.	4.0	14
101	High thermoelectric power factor in Fe-substituted Mo3Sb7. Applied Physics Letters, 2010, 96, 262103.	3.3	13
102	Tetrahedrites synthesized via scalable mechanochemical process and spark plasma sintering. Journal of the European Ceramic Society, 2020, 40, 1922-1930.	5.7	13
103	Long-Range Cationic Order Collapse Triggered by S/Cl Mixed-Anion Occupancy Yields Enhanced Thermoelectric Properties in Cu₅Sn₂S₇. Chemistry of Materials, 2021, 33, 9425-9438.	6.7	11
104	Promoted crystallisation and cationic ordering in thermoelectric Cu₂₆V₂Sn₆S₃₂ colusite by eccentric vibratory ball milling. Dalton Transactions, 2020, 49, 15828-15836.	3.3	10
105	Tuning of dimensionless figure of merit via boundary scattering in In2O3-Î´. Journal of Applied Physics, 2011, 110, 124304.	2.5	9
106	Synergistic Effect of Chemical Substitution and Insertion on the Thermoelectric Performance of Cu₂₆V₂Ge₆S₃₂ Colusite. Inorganic Chemistry, 2021, 60, 11364-11373.	4.0	7
107	Mechanochemical synthesis of iodine-substituted BiCuOS. Journal of Solid State Chemistry, 2018, 263, 157-163.	2.9	6
108	Issues and opportunities from Peltier effect in functionally-graded colusites: From SPS temperature modeling to enhanced thermoelectric performances. Applied Materials Today, 2021, 22, 100948.	4.3	6

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109	Crystal Structure Classification of Copperâ€Based Sulfides as a Tool for the Design of Inorganic Functional Materials. Angewandte Chemie, 2022, 134, .	2.0	6
110	Structural study and evaluation of thermoelectric properties of single-phase isocubanite (CuFe₂S₃) synthesized <i>via</i> an ultra-fast efficient microwave radiation technique. Sustainable Energy and Fuels, 2021, 5, 5804-5813.	4.9	6
111	Copperâ€Rich Thermoelectric Sulfides: Sizeâ€Mismatch Effect and Chemical Disorder in the [<i>T</i>S₄]Cu₆ Complexes of Cu₂₆<i>T</i>₂Ge₆S₃₂ (<i>T</i>=Cr, Mo, W) Colusites. Angewandte Chemie, 2019, 131, 15601-15609.	2.0	5
112	Time-Resolved In Situ Neutron Diffraction Study of Cu22Fe8Ge4S32 Germanite: A Guide for the Synthesis of Complex Chalcogenides. Chemistry of Materials, 2020, 32, 8993-9000.	6.7	4
113	Transport properties and electronic density-of-states of Zn-doped colusite Cu26Cr2Ge6S32. Applied Physics Letters, 2020, 117, 173902.	3.3	4
114	Synthetic minerals tetrahedrites and colusites for thermoelectric power generation. , 2021, , 197-216.		3
115	Bismuth Doping in Nanostructured Tetrahedrite: Scalable Synthesis and Thermoelectric Performance. Nanomaterials, 2021, 11, 1386.	4.1	3