

# George S Nolas

## List of Publications by Year in descending order

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98  
papers

3,476  
citations

257450

24  
h-index

144013

57  
g-index

100  
all docs

100  
docs citations

100  
times ranked

3633  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermoelectrics. Springer Series in Materials Science, 2001, , .	0.6	1,222
2	Recent Developments in Bulk Thermoelectric Materials. MRS Bulletin, 2006, 31, 199-205.	3.5	407
3	Better thermoelectrics through glass-like crystals. Nature Materials, 2015, 14, 1182-1185.	27.5	212
4	Preparation and Crystal Growth of Na <sub>24</sub> Si <sub>136</sub> . Journal of the American Chemical Society, 2009, 131, 9642-9643.	13.7	91
5	Synthesis and thermoelectric properties of Cu excess Cu <sub>2</sub> ZnSnSe <sub>4</sub> . Physica Status Solidi - Rapid Research Letters, 2014, 8, 61-64.	2.4	73
6	Origin of the magnetic anomaly and tunneling effect of europium on the ferromagnetic ordering in $x\text{Eu}_{1-x}\text{Sr}_{1-x}\text{Ga}_{16}\text{Ge}_{70}$ . Physical Review B, 2011, 84, .	3.2	70
7	Neutron and nuclear inelastic scattering study of the Einstein oscillators in Ba-, Sr-, and Eu-filled germanium clathrates. Physical Review B, 2005, 72, .	3.2	63
8	Synthesis and Characterization of Nanostructured Stannite Cu <sub>2</sub> ZnSnSe <sub>4</sub> and Ag <sub>2</sub> ZnSnSe <sub>4</sub> for Thermoelectric Applications. ACS Applied Materials & Interfaces, 2015, 7, 9752-9757.	8.0	57
9	Bournonite PbCuSb <sub>3</sub> : Stereochemically Active Lone Pair Electrons that Induce Low Thermal Conductivity. ChemPhysChem, 2015, 16, 3264-3270.	2.1	56
10	Synthesis and Structural Characterization of Na <sub>x</sub> Si <sub>136</sub> (0 < x < 1) Tj ETQq0 0 0 rgBT /Overlock 10 Chemistry, 2012, 51, 8686-8692.	4.0	53
11	BC8 Silicon (Si-III) is a Narrow-Gap Semiconductor. Physical Review Letters, 2017, 118, 146601.	7.8	53
12	Framework Contraction in Na-Stuffed Si <sub>136</sub> . Inorganic Chemistry, 2010, 49, 5338-5340.	4.0	52
13	Facile Chemical Synthesis of Nanocrystalline Thermoelectric Alloys Based on Bi <sup>3+</sup> Sb <sup>3+</sup> Te <sup>2+</sup> Se. Crystal Growth and Design, 2010, 10, 3983-3989.	3.0	52
14	Simple Approach for Selective Crystal Growth of Intermetallic Clathrates. Chemistry of Materials, 2011, 23, 1491-1495.	6.7	52
15	Thermal conductivity measurement under hydrostatic pressure using the 3 $\pi$ method. Review of Scientific Instruments, 2004, 75, 4578-4584.	1.3	48
16	Thermoelectric Clathrates. American Scientist, 2001, 89, 136.	0.1	48
17	Thermal conductivity of YbB <sub>44</sub> Si <sub>2</sub> . Journal of Applied Physics, 2007, 102, 073510.	2.5	46
18	Apparatus for the measurement of electrical resistivity, Seebeck coefficient, and thermal conductivity of thermoelectric materials between 300 K and 12 K. Review of Scientific Instruments, 2016, 87, 015105.	1.3	39

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19	Synthesis and Structural Characterization of Single-Crystal $K_{7.5}Si_{46}$ and $K_{17.8}Si_{136}$ Clathrates. <i>Crystal Growth and Design</i> , 2011, 11, 4533-4537.	3.0	38
20	Zintl Phases as Reactive Precursors for Synthesis of Novel Silicon and Germanium-Based Materials. <i>Materials</i> , 2019, 12, 1139.	2.9	38
21	Synthesis, Crystal Structure, and High Temperature Transport Properties of <i>p</i> -Type $Cu_2ZnFeSnSe_4$ . <i>Inorganic Chemistry</i> , 2013, 52, 14364-14367.	4.0	33
22	Enhanced thermoelectric properties of $Cu_2ZnSnSe_4$ with Ga-doping. <i>Journal of Alloys and Compounds</i> , 2015, 650, 844-847.	5.5	33
23	Synthesis, transport properties, and electronic structure of $Cu_2CdSnTe_4$ . <i>Applied Physics Letters</i> , 2014, 104, .	3.3	25
24	Synthesis, crystal structure and electrical properties of the tetrahedral quaternary chalcogenides $CuM_2InTe_4$ (M=Zn, Cd). <i>Journal of Solid State Chemistry</i> , 2016, 242, 50-54.	2.9	25
25	Clathrates and beyond: Low-density allotropy in crystalline silicon. <i>Applied Physics Reviews</i> , 2016, 3, .	11.3	24
26	Laser additive manufacturing of powdered bismuth telluride. <i>Journal of Materials Research</i> , 2018, 33, 4031-4039.	2.6	23
27	Synthesis and crystal structure of $Na_{1-x}Ge_{3+z}$ : a novel zeolite-like framework phase in the $Na\text{-}Ge$ system. <i>Chemical Communications</i> , 2007, , 837-839.	4.1	22
28	Precursor Routes to Complex Ternary Intermetallics: Single-Crystal and Microcrystalline Preparation of Clathrate-I $Na_8Al_8Si_{38}$ from $NaSi + NaAlSi$ . <i>Inorganic Chemistry</i> , 2015, 54, 5316-5321.	4.0	21
29	Transport Properties of the Binary Type I Clathrate $K_8Ge_{44}\text{-}j_2$ . <i>International Journal of Applied Ceramic Technology</i> , 2007, 4, 332-338.	2.1	20
30	Polaronic transport in Ag-based quaternary chalcogenides. <i>Journal of Applied Physics</i> , 2017, 122, .	2.5	20
31	Synthesis, crystal structure, and transport properties of $Cu_{2.2}Zn_{0.8}SnSe_4xTe_x$ (0.1 $\leq x \leq$ 0.4). <i>Dalton Transactions</i> , 2015, 44, 9014-9019.	3.3	19
32	Composition controlled synthesis of Bi rich $Bi_{1-x}Sbx$ alloy nanocrystals by a low temperature polyol process. <i>CrystEngComm</i> , 2011, 13, 2753.	2.6	18
33	Crystal structure and high temperature transport properties of Yb-filled p-type skutterudites $Yb_xCo_{2.5}Fe_{1.5}Sb_{12}$ . <i>Journal of Solid State Chemistry</i> , 2014, 209, 1-5.	2.9	18
34	Electronic structure properties of $CuZn_2InTe_4$ and $AgZn_2InTe_4$ quaternary chalcogenides. <i>Journal of Applied Physics</i> , 2019, 125, 155101.	2.5	17
35	Synthesis and Characterization of Nanocrystalline $FeSb_2$ for Thermoelectric Applications. <i>European Journal of Inorganic Chemistry</i> , 2012, 2012, 55-58.	2.0	16
36	Synthesis, characterization and alloying of $Cu_2ZnSnQ_4$ (Q=S, Se and Te) nanocrystals. <i>Journal of Solid State Chemistry</i> , 2015, 226, 215-218.	2.9	16

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37	Synthesis, Structure, Te Alloying, and Physical Properties of $\text{CuSbS}_2$ . <i>Inorganic Chemistry</i> , 2017, 56, 14040-14044.	4.0	16
38	Controllable Synthesis of Bismuth Chalcogenide Core-shell Nanorods. <i>Crystal Growth and Design</i> , 2014, 14, 533-536.	3.0	15
39	Synthesis, transport properties and electronic structure of p-type $\text{Cu}_{1+x}\text{Mn}_{2-x}\text{InTe}_4$ ( $x = 0, 0.2, 0.3$ ). <i>Dalton Transactions</i> , 2020, 49, 2273-2279.	3.3	12
40	Solution-Based Synthesis and Low-Temperature Transport Properties of $\text{CsBi}_4\text{Te}_6$ . <i>ACS Applied Materials &amp; Interfaces</i> , 2012, 4, 772-776.	8.0	11
41	Synthesis, SPS processing and low temperature transport properties of polycrystalline $\text{FeSb}_2$ with nano-scale grains. <i>Materials Letters</i> , 2014, 122, 289-291.	2.6	11
42	High-temperature thermoelectric properties of p-type skutterudites $\text{Ba}_{0.15}\text{Yb}_x\text{Co}_3\text{FeSb}_{12}$ and $\text{Yb}_y\text{Co}_3\text{FeSb}_9\text{As}_3$ . <i>Journal of Materials Science</i> , 2015, 50, 34-39.	3.7	11
43	Synthesis, crystal structure, and transport properties of quaternary tetrahedral chalcogenides. <i>Journal of Materials Chemistry C</i> , 2015, 3, 10436-10441.	5.5	11
44	Precursor routes to quaternary intermetallics: Synthesis, crystal structure, and physical properties of clathrate-II $\text{Cs}_8\text{Na}_{16}\text{Al}_{24}\text{Si}_{112}$ . <i>Journal of Solid State Chemistry</i> , 2016, 237, 81-85.	2.9	11
45	Synthesis and transport properties of Cu-excess $\text{Cu}(\text{Zn}, \text{Cd})_2\text{InTe}_4$ quaternary chalcogenides. <i>Journal of Alloys and Compounds</i> , 2018, 743, 543-546.	5.5	11
46	Enhanced thermoelectric performance of heavy-fermion compounds $\text{Yb}_{TM_2}\text{Zn}_{20}$ ( $TM = \text{Co}, \text{Rh}, \text{Ir}$ ) at low temperatures. <i>Science Advances</i> , 2019, 5, eaaw6183.	10.3	11
47	Wittichenite $\text{Cu}_3\text{BiS}_3$ : Synthesis and Physical Properties. <i>Journal of Electronic Materials</i> , 2018, 47, 2374-2377.	2.2	10
48	Rapid crystal growth of type-II clathrates $\text{A}_8\text{Na}_{16}\text{Si}_{136}$ ( $A = \text{K}, \text{Rb}$ ). <i>Tj ETQq0,0,0 rgBT, Overlock</i>	2.6	9
49	Nano and Micro Structures Formed during Laser Processing of Selenium Doped Bismuth Telluride. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100185.	3.7	9
50	High Pressure Synthesis of New Filled Skutterudites. <i>Materials Research Society Symposia Proceedings</i> , 2001, 691, 1.	0.1	8
51	X-ray absorption spectroscopy studies of local structure and electronic properties of $\text{Na}_x\text{Co}_2\text{S}_2$ . <a href="http://www.w3.org/1998/Math/MathML">http://www.w3.org/1998/Math/MathML</a> display="inline" < mml:mrow < mml:msub < mml:mrow < mml:mtext > Na </mml:mtext> </mml:mrow> < mml:mi>x</mml:mi> </mml:msub>		

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55	Binary Alkali-Metal Silicon Clathrates by Spark Plasma Sintering: Preparation and Characterization. <i>Materials</i> , 2016, 9, 593.	2.9	8
56	Structural, Chemical, Electrical, and Thermal Properties of <i>n</i> -Type NbFeSb. <i>Inorganic Chemistry</i> , 2019, 58, 1826-1833.	4.0	8
57	Intrinsic anharmonicity and thermal properties of ultralow thermal conductivity $\text{Ba}_{26}\text{K}_{12}\text{Sb}_{14}\text{Si}_{140}$ . <i>Physical Review Materials</i> , 2021, 5, .		
58	Electronic Structure and Thermoelectric Properties of Ytterbium-Filled Skutterudites. <i>Materials Research Society Symposia Proceedings</i> , 2001, 691, 1.	0.1	7
59	Synthesis and low-temperature transport properties of polycrystalline $\text{NiSe}_2$ . <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013, 210, 2725-2728.	1.8	7
60	Zintl Ions within Framework Channels: The Complex Structure and Low-Temperature Transport Properties of $\text{Na}_4\text{Ge}_{13}$ . <i>Inorganic Chemistry</i> , 2018, 57, 2002-2012.	4.0	7
61	Compositional Effects and Electron Lone-pair Distortions in Doped Bournonites. <i>ChemPhysChem</i> , 2018, 19, 2635-2644.	2.1	7
62	Synthesis, Structure, and Electrical Properties of the Single Crystal $\text{Ba}_8\text{Cu}_{16}\text{As}_{30}$ . <i>Inorganic Chemistry</i> , 2018, 57, 9327-9334.	4.0	7
63	Grain orientation and transport properties of textured $\text{Bi}_2\text{Te}_3$ alloys. <i>Materials Science in Semiconductor Processing</i> , 2021, 133, 105979.	4.0	7
64	Advanced Thermoelectrics. <i>Journal of Applied Physics</i> , 2020, 127, 060401.	2.5	7
65	High temperature thermoelectric properties of $\text{Ba}_x\text{Yb}_y\text{Fe}_3\text{CoSb}_{12}$ p-type skutterudites. <i>Journal of Materials Research</i> , 2015, 30, 2558-2563.	2.6	6
66	High Temperature Transport Properties of Yb and In Double-Filled p-Type Skutterudites. <i>Crystals</i> , 2017, 7, 256.	2.2	6
67	Influence of guest loading on thermal properties of $\text{Na}_x\text{Si}_{136}$ clathrates. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 435401.	1.8	5
68	Control of thermal expansion in a low-density framework modification of silicon. <i>Applied Physics Letters</i> , 2018, 112, 181901.	3.3	5
69	Structural, Electronic, and Thermal Properties of $\text{CdSnAs}_2$ . <i>Inorganic Chemistry</i> , 2020, 59, 3079-3084.	4.0	5
70	Synthesis, Bottom up Assembly and Thermoelectric Properties of Sb-Doped PbS Nanocrystal Building Blocks. <i>Materials</i> , 2021, 14, 853.	2.9	5
71	Low-Temperature $^{23}\text{Na}$ MAS NMR Reveals Dynamic Effects and Compositions for the Large and Small Channels in the Zeolite-Like Ge-Framework of $\text{Na}_x\text{Ge}_3\text{Z}$ . <i>Materials. Journal of Physical Chemistry C</i> , 2014, 118, 28890-28897.	3.1	4
72	Crystal Growth through Field-Assisted Electrochemical Redox and Ion-Exchange Reactions: A Case Study of $\text{K}_{4.2}\text{Na}_{3.8}\text{Si}_{46}$ Clathrate-I. <i>Crystal Growth and Design</i> , 2015, 15, 4731-4734.	3.0	4

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73	Thermal Properties of the Very Low Thermal Conductivity Ternary Chalcogenide $\text{Cu}_4\text{Bi}_4\text{M}_9$ ( $\text{M} = \text{S, Se}$ ) <i>TJ ETOq1</i> 1 0.784314	2.4	4
74	Synthesis and Thermoelectric Properties of Lead Chalcogenide Nanocomposites. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1044, 1.	0.1	3
75	Synthesis and Characterization of Inorganic Clathrate-II Materials. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1044, 1.	0.1	3
76	Synthesis and structural properties of type I potassium SiGe alloy clathrates. <i>Materials Letters</i> , 2015, 149, 123-126.	2.6	3
77	Structure and Transport Properties of Dense Polycrystalline Clathrate-II $(\text{K,Ba})_{16}(\text{Ga,Sn})_{136}$ Synthesized by a New Approach Employing SPS. <i>Materials</i> , 2016, 9, 732.	2.9	3
78	Purification and crystal growth of single-crystalline tellurium tubes and rods. <i>Materials Letters</i> , 2017, 194, 20-22.	2.6	3
79	Thermal Properties of the Quaternary Chalcogenide $\text{BaCdSnSe}_4$ . <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000363.	2.4	3
80	Thermal properties of $\text{BaCu}_2\text{SnQ}_4$ ( $\text{Q} = \text{S, Se}$ ) quaternary chalcogenides. <i>Applied Physics Letters</i> , 2020, 117, 092101.	3.3	3
81	The effect on the optical modes of quaternary chalcogenides upon metal and chalcogen substitution. <i>Applied Physics Letters</i> , 2020, 116, 082103.	3.3	3
82	Off-stoichiometric semiconductors $\text{Cu}_{1.33+x}\text{Zn}_{1.33-x}\text{In}_{1.33}\text{Se}_4$ ( $x = 0, 0.1, 0.2$ and $0.3$ ): Synthesis, structure, and thermal and electrical properties. <i>Journal of Solid State Chemistry</i> , 2021, 297, 122058.	2.9	3
83	Synthesis, structure, electronic and thermal properties of sphalerite $\text{CuZn}_2\text{InS}_4$ . <i>Dalton Transactions</i> , 2021, 50, 17611-17617.	3.3	3
84	Structural and thermal properties of ultralow thermal conductivity $\text{Ba}_3\text{Cu}_2\text{Sn}_3\text{Se}_{10}$ . <i>Dalton Transactions</i> , 2022, 51, 6220-6225.	3.3	3
85	Synthesis and characterization of phase-pure clathrate-II $\text{Rb}_{12.9}\text{Si}_{136}$ . <i>Journal of Solid State Chemistry</i> , 2022, 311, 123152.	2.9	3
86	Porosity Effects on the Thermoelectric Properties of Nanostructured Bismuth. <i>Journal of Electronic Materials</i> , 2016, 45, 1970-1973.	2.2	2
87	Transport properties of topologically non-trivial bismuth tellurobromides $\text{BiTeBr}$ . <i>Journal of Applied Physics</i> , 2019, 126, 105105.	2.5	2
88	Synthesis, crystal structure, and transport properties of $\text{Cu}_2\text{SnTe}_3$ . <i>Journal of Solid State Chemistry</i> , 2020, 290, 121566.	2.9	2
89	Synthetic Approaches to Intermetallic Clathrates. <i>Springer Series in Materials Science</i> , 2014, , 65-90.	0.6	2
90	Synthesis, Crystal Structure, and Physical Properties of $\text{BaSnS}_2$ . <i>Physica Status Solidi - Rapid Research Letters</i> , 2022, 16, .	2.4	2

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91	Synthesis and Characterization of Bulk and Thin Film Clathrates for Solid State Power Conversion Applications. , 2006, , .		1
92	Bulk Materials Research for Thermoelectric Power Generation Applications. Materials Research Society Symposia Proceedings, 2007, 1044, 1.	0.1	1
93	Transport Properties of GdTe $1.8 \times 10^{-4}$ x As x ( x = 0, 0.04). European Journal of Inorganic Chemistry, 2020, 2020, 2424-2427. Fermi surface of the flat-band intermetallics	2.0	1
94	$P = \frac{d}{3}$		