Georg J Schmitz

List of Publications by Year in descending order

73 papers	1,514 citations	567281 15 h-index	315739 38 g-index
84 all docs	84 docs citations	84 times ranked	912 citing authors

#	Article	IF	Citations
1	A phase field concept for multiphase systems. Physica D: Nonlinear Phenomena, 1996, 94, 135-147.	2.8	778
2	Influence of Y2BaCuO5 particles on the growth morphology of peritectically solidified YBa2Cu3O7â”x. Journal of Materials Research, 1993, 8, 2774-2779.	2.6	79
3	Superconducting foams. Superconductor Science and Technology, 2002, 15, L21-L24.	3.5	65
4	Melt-texture joining of YBa2Cu3Oybulks. Superconductor Science and Technology, 2001, 14, 363-370.	3.5	35
5	Manufacture of high-aspect-ratio micro-hair sensor arrays. Journal of Micromechanics and Microengineering, 2005, 15, 1904-1910.	2.6	30
6	3D simulation of temperature, electric field and current density evolution in superconducting components. Superconductor Science and Technology, 2003, 16, 645-653.	3.5	29
7	Mono-domain YBa2Cu3Oysuperconductor fabrics prepared by an infiltration process. Superconductor Science and Technology, 2000, 13, 716-721.	3.5	24
8	Processing of Y2BaCuO5foams. Superconductor Science and Technology, 2003, 16, 608-612.	3.5	24
9	Magnetic and transport properties of YBa2Cu3Oy superconductor foams. Physica C: Superconductivity and Its Applications, 2003, 390, 286-290.	1.2	22
10	ICMEg â€“ the Integrated Computational Materials Engineering expert group â€“ a new European coordination action. Integrating Materials and Manufacturing Innovation, 2014, 3, 20-24.	2.6	20
11	Superconducting YBCO Foams as Trapped Field Magnets. Materials, 2019, 12, 853.	2.9	20
12	Towards a metadata scheme for the description of materials â€“ the description of microstructures. Science and Technology of Advanced Materials, 2016, 17, 410-430.	6.1	19
13	Microstructural aspects of joining superconductive components using solder. Superconductor Science and Technology, 1998, 11, 73-75.	3.5	17
14	Single-domain Yba2Cu3Oy thick films and fabrics prepared by an infiltration and growth process. Journal of Materials Research, 2001, 16, 955-966.	2.6	17
15	Simulation of microstructure formation in technical aluminum alloys using the multiphase-field method. Transactions of the Indian Institute of Metals, 2009, 62, 299-304.	1.5	16
16	Synthesis of polycrystalline BaZrO3 coatings. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 53, 115-118.	3.5	14
17	Towards integrative computational materials engineering of steel components. Production Engineering, 2011, 5, 373-382.	2.3	14
18	Theory-training deep neural networks for an alloy solidification benchmark problem. Computational Materials Science, 2020, 180, 109687.	3.0	14

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19	Texture formation in melt-solidified YBa2Cu3Oz thick films by artificial surface reliefs. Journal of Crystal Growth, 2002, 241, 512-534.	1.5	13
20	Multi-Phase-Field Modeling of Solidification in Technical Steel Grades. Transactions of the Indian Institute of Metals, 2012, 65, 613-615.	1.5	13
21	Isothermal production of uniaxially textured YBCO superconductors using constitutional gradients. Physica C: Superconductivity and Its Applications, 1997, 275, 205-210.	1.2	12
22	Electrical performance of single domain YBa2Cu3Oy fabrics. Physica C: Superconductivity and Its Applications, 2002, 366, 93-101.	1.2	12
23	Creep strength of centrifugally cast Al-rich TiAl alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 510-511, 373-376.	5.6	12
24	Containerless solidification of YBa2Cu3O7-x in a drop tube. Journal of Materials Research, 1993, 8, 411-414.	2.6	11
25	AixViPMaPÂ®â€”an Operational Platform for Microstructure Modeling Workflows. Integrating Materials and Manufacturing Innovation, 2019, 8, 122-143.	2.6	11
26	Properties of YBa2Cu3Oy-textured superconductor foams. Physica C: Superconductivity and Its Applications, 2004, 408-410, 655-656.	1.2	9
27	Fabrication of Micropatterned Surfaces by Improved Investment Casting. Advanced Engineering Materials, 2007, 9, 265-270.	3.5	9
28	An ICME Process Chain for Diffusion Brazing of Alloy 247. Integrating Materials and Manufacturing Innovation, 2018, 7, 70-85.	2.6	9
29	Simulation of phase transitions in multiphase systems: peritectic solidification of (RE)Ba2Cu3O7-x superconductors. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 53, 23-27.	3.5	8
30	Processing, microstructure and transport currents of (100)/(100) and (110)/(110) domain boundaries in multi-seeded YBa2Cu3Oyfabrics. Superconductor Science and Technology, 2002, 15, 48-53.	3.5	8
31	Recent developments in processing and properties of large grain superconducting YBCO fabrics. Superconductor Science and Technology, 2002, 15, 727-734.	3.5	8
32	YBCO Melt-processing development by numerical simulation. Journal of Low Temperature Physics, 1996, 105, 1451-1456.	1.4	7
33	Texturing of (RE)BaCuO thick films by geometrical arrangement of reactive precursors. Superconductor Science and Technology, 1998, 11, 950-953.	3.5	7
34	Processing of single domain Yâ€“Baâ€“Cuâ€“O with pre-defined 3D interconnected porosity for bulk reinforcement. Superconductor Science and Technology, 2003, 16, L40-L43.	3.5	7
35	Current Flow and Flux Pinning Properties of YBCO Foam Struts. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	7
36	Microstructure and transport properties of melt-textured joint of YBCO. Physica C: Superconductivity and Its Applications, 2002, 372-376, 1187-1190.	1.2	6

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37	Low temperature processing of single domain YBa2Cu3Oy thick films from Y2O3 fabrics on Agâ€“Pd alloy substrates. Physica C: Superconductivity and Its Applications, 2002, 372-376, 1200-1203.	1.2	6
38	Orientations of Y2BaCuO5 and YBCO within melt-textured and directional solidified samples studied by EBSD. Physica C: Superconductivity and Its Applications, 2003, 392-396, 589-595.	1.2	6
39	Entropy and Geometric Objects. Entropy, 2018, 20, 453.	2.2	6
40	Flux Pinning Analysis of Superconducting YBCO Foam Struts. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	6
41	Modeling of Peritectic YBa₂Cu₃O_{7â”x} Growth Using Transparent Organic Analogues. Journal of Materials Research, 1997, 12, 2002-2008.	2.6	5
42	Development of multiphase ribbons as substrates for biaxially textured (RE)â€“Baâ€“Cuâ€“O thick film coatings. Physica C: Superconductivity and Its Applications, 2001, 354, 342-348.	1.2	5
43	Effects of surface relief on the texture formation of melt-solidified YBa2Cu3Oz thick films on metal substrates. Physica C: Superconductivity and Its Applications, 2002, 372-376, 842-845.	1.2	5
44	Phase-Field Modeling and Experimental Observation of Microstructures in Solidifying Sn-Ag-Cu Solders. Journal of Electronic Materials, 2013, 42, 2658-2666.	2.2	5
45	A Phase-Field Perspective on Mereotopology. AppliedMath, 2022, 2, 54-103.	0.6	5
46	Transport properties of thick film YBa2Cu3Oy fabrics. Physica C: Superconductivity and Its Applications, 2002, 372-376, 1631-1634.	1.2	4
47	(RE)BaCuO melt processing: from bulks towards thick films. Physica C: Superconductivity and Its Applications, 2002, 378-381, 607-616.	1.2	4
48	Quantitative mereology: An essay to align physics laws with a philosophical concept. Physics Essays, 2020, 33, 479-488.	0.4	4
49	Controlled microstructure formation in high temperature superconductors by melt processing. Journal of the Less Common Metals, 1990, 164-165, 1413-1419.	0.8	3
50	Macroscopic and microscopic modeling of the growth of YBaCuO bulk material. IEEE Transactions on Applied Superconductivity, 1997, 7, 1739-1742.	1.7	3
51	Modelling of REBaCuO growth using transparent organic analogues and numerical simulations. Physica C: Superconductivity and Its Applications, 1997, 282-287, 519-520.	1.2	3
52	A process for a new form of YBa2Cu3Oy having dimensions of thick films and microstructure of single domain bulks. Physica C: Superconductivity and Its Applications, 2000, 341-348, 2463-2464.	1.2	3
53	Single domain YBa2Cu3Oythick films on metallic substrates. Superconductor Science and Technology, 2003, 16, 402-406.	3.5	3
54	A novel process for textured thick film YBa2Cu3Oycoated conductors based on a constitutional gradients principle. Superconductor Science and Technology, 2005, 18, 869-873.	3.5	3

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55	Creep strength of a binary Al₆₂Ti₃₈ alloy. International Journal of Materials Research, 2010, 101, 676-679.	0.3	3
56	A Combined Entropy/Phase-Field Approach to Gravity. Entropy, 2017, 19, 151.	2.2	3
57	Cloud-Based ICME Software Training. Education Sciences, 2021, 11, 5.	2.6	3
58	Transport properties of hot-forming textured Bi:2223 and single domain YBa2Cu3Oy fabric materials. Physica C: Superconductivity and Its Applications, 2003, 386, 202-205.	1.2	2
59	Modern preparation methods of oriented thick films of superconducting cuprates. Crystallography Reports, 2004, 49, 233-239.	0.6	2
60	Scenario for Data Exchange at the Microstructure Scale. Integrating Materials and Manufacturing Innovation, 2017, 6, 127-133.	2.6	2
61	A Flowchart Scheme for Information Retrieval in ICME Settings. Minerals, Metals and Materials Series, 2017, , 57-68.	0.4	2
62	Improved contact resistances by melt dipping of Y1BA2CU3O7 â˜' x. Journal of the Less Common Metals, 1990, 164-165, 1566-1570.	0.8	1
63	Directional solidification and microstructural studies of the peritectic Y₂BaCuO₅ phase. Journal of Materials Research, 2001, 16, 1123-1134.	2.6	1
64	Development and application of a new freckle criterion for technical remelting processes. MATEC Web of Conferences, 2014, 14, 05002.	0.2	1
65	Integrated Computational Materials and Production Engineering (ICMPE). , 2017, , 253-364.		1
66	ICME-A Mere Coupling of Models or a Discipline of Its Own?. , 0, , 285-290.		1
67	Improved pinning in Bi2Sr2Ca1Cu2O8by bubbles or voids?. Superconductor Science and Technology, 1992, 5, S180-S183.	3.5	0
68	Combined time-of-flight and mass spectroscopy for determination of the temperature of undercooled melts. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1994, 178, 93-97.	5.6	0
69	Unidirectional Solidification and Single Crystal Growth of Al-rich Ti-Al Alloys. Materials Research Society Symposia Proceedings, 2008, 1128, 30301.	0.1	0
70	Entropy and Geometric Objects. Proceedings (mdpi), 2018, 2, 153.	0.2	0
71	Simulation of Crystal Growth in (RE)Ba2Cu3Ox. , 2000, , 423-427.		0
72	In situ TEM Observation of Precipitation Reactions in Ti40Al60 and Ti38Al62 Alloys and Symmetry Relations of the Phases Involved. , 2008, , .		0

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73	Towards Bridging the Data Exchange Gap Between Atomistic Simulation and Larger Scale Models. Minerals, Metals and Materials Series, 2017, , 45-55.	0.4	0