Hans G HÃ¶gberg

List of Publications by Year
in descending order

120 papers	4,829 citations	109321 35 h-index	106344 65 g-index
120 all docs	120 docs citations	120 times ranked	3244 citing authors

#	Article	IF	Citations
1	Review of transition-metal diboride thin films. Vacuum, 2022, 196, 110567.	3.5	48
2	Ti thin films deposited by high-power impulse magnetron sputtering in an industrial system: Process parameters for a low surface roughness. Vacuum, 2022, 195, 110698.	3.5	8
3	Effect of low-energy ion assistance on the properties of sputtered ZrB2 films. Vacuum, 2022, 195, 110688.	3.5	3
4	Chemical vapor deposition of sp2-boron nitride films on Al2O3 (0001), (112Â¯), (11Â¯02), and (101Â¯) substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	2.1	3
5	Rhombohedral boron nitride epitaxy on ZrB2. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	7
6	Elucidating Pathfinding Elements from the Kubi Gold Mine in Ghana. Minerals (Basel, Switzerland), 2021, 11, 912.	2.0	1
7	Rhombohedral and turbostratic boron nitride: X-ray diffraction and photoluminescence signatures. Applied Physics Letters, 2021, 119, .	3.3	9
8	Reactive sputtering of CSx thin solid films using CS2 as precursor. Vacuum, 2020, 182, 109775.	3.5	13
9	Chemical vapor deposition of sp2-boron nitride on Si(111) substrates from triethylboron and ammonia: Effect of surface treatments. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	1
10	Plasma CVD of Bâ€“Câ€“N thin films using triethylboron in argonâ€“nitrogen plasma. Journal of Materials Chemistry C, 2020, 8, 4112-4123.	5.5	12
11	The Effect of N, C, Cr, and Nb Content on Silicon Nitride Coatings for Joint Applications. Materials, 2020, 13, 1896.	2.9	10
12	Surface-Inhibiting Effect in Chemical Vapor Deposition of Boronâ€“Carbon Thin Films from Trimethylboron. Chemistry of Materials, 2019, 31, 5408-5412.	6.7	14
13	Thermodynamic stability of hexagonal and rhombohedral boron nitride under chemical vapor deposition conditions from van der Waals corrected first principles calculations. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	7
14	Reactive magnetron sputtering of tungsten target in krypton/trimethylboron atmosphere. Thin Solid Films, 2019, 688, 137384.	1.8	6
15	A simple model for non-saturated reactive sputtering processes. Thin Solid Films, 2019, 688, 137413.	1.8	10
16	The Effect of Coating Density on Functional Properties of SiNx Coated Implants. Materials, 2019, 12, 3370.	2.9	8
17	Atom probe tomography field evaporation characteristics and compositional corrections of ZrB2. Materials Characterization, 2019, 156, 109871.	4.4	10
18	Compositional dependence of epitaxial Tin+1SiCn MAX-phase thin films grown from a Ti3SiC2 compound target. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	8

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19	Towards Functional Silicon Nitride Coatings for Joint Replacements. Coatings, 2019, 9, 73.	2.6	14
20	Thermal chemical vapor deposition of epitaxial rhombohedral boron nitride from trimethylboron and ammonia. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	11
21	Strategy for simultaneously increasing both hardness and toughness in ZrB2-rich Zr1âˆ’xTaxBy thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	42
22	Electronic structure of Î²-Ta films from X-ray photoelectron spectroscopy and first-principles calculations. Applied Surface Science, 2019, 470, 607-612.	6.1	20
23	Silicon carbonitride thin films deposited by reactive high power impulse magnetron sputtering. Surface and Coatings Technology, 2018, 335, 248-256.	4.8	14
24	Review Article: Challenge in determining the crystal structure of epitaxial 0001 oriented sp2-BN films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	32
25	Chemical bonding in epitaxial ZrB2 studied by X-ray spectroscopy. Thin Solid Films, 2018, 649, 89-96.	1.8	20
26	Cubic boron phosphide epitaxy on zirconium diboride. Journal of Crystal Growth, 2018, 483, 115-120.	1.5	9
27	SiNx coatings deposited by reactive high power impulse magnetron sputtering: Process parameters influencing the residual coating stress. Journal of Applied Physics, 2017, 121, .	2.5	20
28	Synthesis and properties of CS_{<i>x</i>}F_{<i>y</i>}thin films deposited by reactive magnetron sputtering in an Ar/SF₆discharge. Journal of Physics Condensed Matter, 2017, 29, 195701.	1.8	9
29	Bonding Structures of ZrH_{<i>x</i>} Thin Films by X-ray Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 25750-25758.	3.1	16
30	Electronic properties and bonding in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Zr</mml:mi><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:mrow></mml:math> thin films investigated by valence-band x-ray photoelectron spectroscopy. Physical Review B, 2017, 96, .	3.2	9
31	Gas Phase Chemistry of Trimethylboron in Thermal Chemical Vapor Deposition. Journal of Physical Chemistry C, 2017, 121, 26465-26471.	3.1	16
32	Magnetron Sputter Epitaxy of High-Quality GaN Nanorods on Functional and Cost-Effective Templates/Substrates. Energies, 2017, 10, 1322.	3.1	18
33	Influence of Substrate Heating and Nitrogen Flow on the Composition, Morphological and Mechanical Properties of SiNx Coatings Aimed for Joint Replacements. Materials, 2017, 10, 173.	2.9	15
34	Stoichiometric silicon oxynitride thin films reactively sputtered in Ar/N2O plasmas by HiPIMS. Journal Physics D: Applied Physics, 2016, 49, 135309.	2.8	2
35	Early stages of growth and crystal structure evolution of boron nitride thin films. Japanese Journal of Applied Physics, 2016, 55, 05FD06.	1.5	8
36	Theoretical and experimental study of metastable solid solutions and phase stability within the immiscible Ag-Mo binary system. Journal of Applied Physics, 2016, 119, .	2.5	14

#	ARTICLE	IF	CITATIONS
37	Hard and elastic epitaxial ZrB2 thin films on Al2O3(0001) substrates deposited by magnetron sputtering from a ZrB2 compound target. Acta Materialia, 2016, 111, 166-172.	7.9	47
38	Theoretical Prediction and Synthesis of CS_{<i>x</i>}F_{<i>y</i>} Thin Films. Journal of Physical Chemistry C, 2016, 120, 9527-9534.	3.1	6
39	ZrB2 thin films deposited on GaN(0001) by magnetron sputtering from a ZrB2 target. Journal of Crystal Growth, 2016, 453, 71-76.	1.5	9
40	High-temperature nanoindentation of epitaxial ZrB2 thin films. Scripta Materialia, 2016, 124, 117-120.	5.2	25
41	SiN_{<i>x</i>} Coatings Deposited by Reactive High Power Impulse Magnetron Sputtering: Process Parameters Influencing the Nitrogen Content. ACS Applied Materials & Interfaces, 2016, 8, 20385-20395.	8.0	28
42	Initial stages of growth and the influence of temperature during chemical vapor deposition of sp2-BN films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	17
43	A theoretical investigation of mixing thermodynamics, age-hardening potential and electronic structure of ternary M11â€“xM2xB2 alloys with AlB2 type structure. Scientific Reports, 2015, 5, 9888.	3.3	44
44	Polytype Pure sp²-BN Thin Films As Dictated by the Substrate Crystal Structure. Chemistry of Materials, 2015, 27, 1640-1645.	6.7	26
45	Silicon oxynitride films deposited by reactive high power impulse magnetron sputtering using nitrous oxide as a single-source precursor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	18
46	Stoichiometric, epitaxial ZrB2 thin films with low oxygen-content deposited by magnetron sputtering from a compound target: Effects of deposition temperature and sputtering power. Journal of Crystal Growth, 2015, 430, 55-62.	1.5	33
47	Reactive sputtering of Î´-ZrH2 thin films by high power impulse magnetron sputtering and direct current magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	7
48	Magnetron sputtering of epitaxial Zr<scp>B</scp>₂ thin films on 4<scp>H</scp>â€‹<scp>S</scp>i<scp>C</scp>(0001) and Si(111). Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 636-640.	1.8	22
49	Direct current magnetron sputtered ZrB2 thin films on 4H-SiC(0001) and Si(100). Thin Solid Films, 2014, 550, 285-290.	1.8	35
50	Î²-Ta and Î±-Cr thin films deposited by high power impulse magnetron sputtering and direct current magnetron sputtering in hydrogen containing plasmas. Physica B: Condensed Matter, 2014, 439, 3-8.	2.7	10
51	Boron nitride: A new photonic material. Physica B: Condensed Matter, 2014, 439, 29-34.	2.7	31
52	Chemical vapour deposition of epitaxial rhombohedral BN thin films on SiC substrates. CrystEngComm, 2014, 16, 5430-5436.	2.6	32
53	On the effect of silicon in CVD of sp2hybridized boron nitride thin films. CrystEngComm, 2013, 15, 455-458.	2.6	23
54	Structure and properties of phosphorus-carbide thin solid films. Thin Solid Films, 2013, 548, 247-254.	1.8	17

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55	Growth of Ti-C nanocomposite films by reactive high power impulse magnetron sputtering under industrial conditions. Surface and Coatings Technology, 2012, 206, 2396-2402.	4.8	58
56	ZrB2 thin films grown by high power impulse magnetron sputtering from a compound target. Thin Solid Films, 2012, 526, 163-167.	1.8	58
57	Growth of High Quality Epitaxial Rhombohedral Boron Nitride. Crystal Growth and Design, 2012, 12, 3215-3220.	3.0	60
58	Ni and Ti diffusion barrier layers between Tiâ€“Siâ€“C and Tiâ€“Siâ€“Câ€“Ag nanocomposite coatings and Cu-based substrates. Surface and Coatings Technology, 2012, 206, 2558-2565.	4.8	7
59	On the effect of water and oxygen in chemical vapor deposition of boron nitride. Thin Solid Films, 2012, 520, 5889-5893.	1.8	12
60	Contact Resistance of Ti-Si-C-Ag and Ti-Si-C-Ag-Pd Nanocomposite Coatings. Journal of Electronic Materials, 2012, 41, 560-567.	2.2	2
61	Epitaxial CVD growth of sp²â€hybridized boron nitride using aluminum nitride as buffer layer. Physica Status Solidi - Rapid Research Letters, 2011, 5, 397-399.	2.4	44
62	Conductive nanocomposite ceramics as tribological and electrical contact materials. EPJ Applied Physics, 2010, 49, 22902.	0.7	15
63	High-rate deposition of amorphous and nanocomposite Tiâ€“Siâ€“C multifunctional coatings. Surface and Coatings Technology, 2010, 205, 299-305.	4.8	42
64	Microstructure of high velocity oxy-fuel sprayed Ti2AlC coatings. Journal of Materials Science, 2010, 45, 2760-2769.	3.7	40
65	The M+1AX phases: Materials science and thin-film processing. Thin Solid Films, 2010, 518, 1851-1878.	1.8	934
66	Sputter deposition from a Ti2AlC target: Process characterization and conditions for growth of Ti2AlC. Thin Solid Films, 2010, 518, 1621-1626.	1.8	77
67	Microstructure evolution of Tiâ€“Siâ€“Câ€“Ag nanocomposite coatings deposited by DC magnetron sputtering. Acta Materialia, 2010, 58, 6592-6599.	7.9	30
68	Phase transformation in Îº- and Î³-Al2O3 coatings on cutting tool inserts. Surface and Coatings Technology, 2009, 203, 1682-1688.	4.8	43
69	In Situ Control of the Oxide Layer on Thermally Evaporated Titanium and Lysozyme Adsorption by Means of Electrochemical Quartz Crystal Microbalance with Dissipation. ACS Applied Materials & Interfaces, 2009, 1, 301-310.	8.0	7
70	Phase identification in Î³- and Îº-alumina coatings by cathodoluminescence. Scripta Materialia, 2009, 61, 379-382.	5.2	3
71	Nanocomposite Al2O3â€“ZrO2 thin films grown by reactive dual radio-frequency magnetron sputtering. Thin Solid Films, 2008, 516, 4977-4982.	1.8	47
72	Direct current magnetron sputtering deposition of nanocomposite alumina â€” zirconia thin films. Thin Solid Films, 2008, 516, 8352-8358.	1.8	23

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73	Structural, electrical and mechanical characterization of magnetron-sputtered Vâ€“Geâ€“C thin films. Acta Materialia, 2008, 56, 2563-2569.	7.9	55
74	Weak electronic anisotropy in the layered nanolaminate Ti 2 GeC. Solid State Communications, 2008, 146, 498-501.	1.9	33
75	Ti2AlC coatings deposited by High Velocity Oxy-Fuel spraying. Surface and Coatings Technology, 2008, 202, 5976-5981.	4.8	84
76	Synthesis of phosphorusâ€carbide thin films by magnetron sputtering. Physica Status Solidi - Rapid Research Letters, 2008, 2, 191-193.	2.4	40
77	Micro and macroscale tribological behavior of epitaxial Ti3SiC2 thin films. Wear, 2008, 264, 914-919.	3.1	34
78	Experiments and modeling of dual reactive magnetron sputtering using two reactive gases. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 565-570.	2.1	19
79	Anisotropy in the electronic structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>V</mml:mtext><mml:mn>2</mml:mn></mml:msub><mml:mtext>GeC</mm by soft x-ray emission spectroscopy and first-principles theory. Physical Review B, 2008, 78, .	3.2	28
80	Intrusion-type deformation in epitaxial Ti3SiC2â^•TiC0.67 nanolaminates. Applied Physics Letters, 2007, 91, .	3.3	13
81	Magnetron sputtering of Ti3SiC2 thin films from a compound target. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 1381-1388.	2.1	58
82	Electrical resistivity of Ti<i>_n</i>₊₁AC<i>_n</i> (A = Si, Ge, Sn, <i>n) Tj ETQq0 0 0 rgBT /Overlock	2.6	22
83	Microstructure and electrical properties of Tiâ€“Siâ€“Câ€“Ag nanocomposite thin films. Surface and Coatings Technology, 2007, 201, 6465-6469.	4.8	23
84	Thermal stability of Ti3SiC2 thin films. Acta Materialia, 2007, 55, 1479-1488.	7.9	198
85	Ta4AlC3: Phase determination, polymorphism and deformation. Acta Materialia, 2007, 55, 4723-4729.	7.9	75
86	Homoepitaxial growth of Tiâ€“Siâ€“C MAX-phase thin films on bulk Ti3SiC2 substrates. Journal of Crystal Growth, 2007, 304, 264-269.	1.5	40
87	Epitaxial TiC/SiC multilayers. Physica Status Solidi - Rapid Research Letters, 2007, 1, 113-115.	2.4	19
88	First-principles calculations on the structural evolution of solid fullerene-like CPx. Chemical Physics Letters, 2006, 426, 374-379.	2.6	46
89	Deposition and characterization of ternary thin films within the Tiâ€“Alâ€“C system by DC magnetron sputtering. Journal of Crystal Growth, 2006, 291, 290-300.	1.5	212
90	High-power impulse magnetron sputtering of Tiâ€“Siâ€“C thin films from a Ti3SiC2 compound target. Thin Solid Films, 2006, 515, 1731-1736.	1.8	96

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91	Fullerene-like CPx: A first-principles study of the relative stability of precursors and defect energetics during synthetic growth. Thin Solid Films, 2006, 515, 1028-1032.	1.8	40
92	Growth and Property Characterization of Epitaxial MAX-Phase Thin Films from the Ti_{n+1}(Si, Ge, Sn)C_n Systems. Advances in Science and Technology, 2006, 45, 2648.	0.2	22
93	Photoemission studies ofTi3SiC2and nanocrystalline-TiC/amorphous-SiC nanocomposite thin films. Physical Review B, 2006, 74, .	3.2	37
94	Cryogenic deposition of carbon nitride thin solid films by reactive magnetron sputtering; suppression of the chemical desorption processes. Thin Solid Films, 2005, 478, 34-41.	1.8	16
95	Growth and characterization of MAX-phase thin films. Surface and Coatings Technology, 2005, 193, 6-10.	4.8	176
96	Structural, electrical, and mechanical properties of nc-TiCâˆ•a-SiC nanocomposite thin films. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 2486.	1.6	69
97	Epitaxial Ti2GeC, Ti3GeC2, and Ti4GeC3 MAX-phase thin films grown by magnetron sputtering. Journal of Materials Research, 2005, 20, 779-782.	2.6	125
98	Electronic structure investigation ofTi3AlC2,Ti3SiC2, andTi3GeC2by soft x-ray emission spectroscopy. Physical Review B, 2005, 72, .	3.2	59
99	Growth of Ti3SiC2 thin films by elemental target magnetron sputtering. Journal of Applied Physics, 2004, 96, 4817-4826.	2.5	158
100	Comment on ?Pulsed Laser Deposition and Properties of M n+1AX x Phase Formulated Ti3SiC2 Thin Films?. Tribology Letters, 2004, 17, 977-978.	2.6	11
101	Arrhenius-type temperature dependence of the chemical desorption processes active during deposition of fullerene-like carbon nitride thin films. Surface Science, 2004, 569, L289-L295.	1.9	5
102	Mn+1AXnphases in theTiâˆ'Siâˆ'Csystem studied by thin-film synthesis andab initiocalculations. Physical Review B, 2004, 70, .	3.2	212
103	Atomic Layer Deposition of Ta2O5 Using the TaI5 and O2 Precursor Combination. Chemical Vapor Deposition, 2003, 9, 245-248.	1.3	18
104	Theory of the effects of substitutions on the phase stabilities of Ti1âˆ'xAlxN. Journal of Applied Physics, 2003, 93, 4505-4511.	2.5	75
105	In situmonitoring of size distributions and characterization of nanoparticles during W ablation in N2 atmosphere. Journal of Applied Physics, 2003, 94, 2011-2017.	2.5	12
106	Deposition and characterisation of NbxC60 films. Thin Solid Films, 2002, 405, 42-49.	1.8	17
107	Low temperature epitaxial growth of metal carbides using fullerenes. Surface and Coatings Technology, 2001, 142-144, 817-822.	4.8	19
108	Growth, structure, and mechanical properties of transition metal carbide superlattices. Journal of Materials Research, 2001, 16, 1301-1310.	2.6	14

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109	Deposition of epitaxial transition metal carbide films and superlattices by simultaneous direct current metal magnetron sputtering and C₆₀ evaporation. Journal of Materials Research, 2001, 16, 633-643.	2.6	13
110	Bonding mechanism in the transition-metal fullerides studied by symmetry-selective resonant x-ray inelastic scattering. Physical Review B, 2001, 63, .	3.2	6
111	Strain relaxation of low-temperature deposited epitaxial titanium-carbide films. Journal of Crystal Growth, 2000, 219, 237-244.	1.5	7
112	Low resistivity ohmic titanium carbide contacts to n- and p-type 4H-silicon carbide. Solid-State Electronics, 2000, 44, 1179-1186.	1.4	48
113	Tribofilm formation on cemented carbides in dry sliding conformal contact. Wear, 2000, 239, 219-228.	3.1	80
114	Electrical characterization of TiC ohmic contacts to aluminum ion implanted 4Hâ€"silicon carbide. Applied Physics Letters, 2000, 77, 1478-1480.	3.3	32
115	Deposition of Transition Metal Carbides and Superlattices Using C[sub 60] as Carbon Source. Journal of the Electrochemical Society, 2000, 147, 3361.	2.9	24
116	Deposition of transition metal carbide superlattices using C60 as a carbon source. Applied Physics Letters, 1998, 73, 2754-2756.	3.3	7
117	The influence of the deposition angle on the composition of reactively sputtered thin films. Surface and Coatings Technology, 1997, 94-95, 242-246.	4.8	8
118	Chemical vapour deposition of tungsten carbides on tantalum and nickel substrates. Thin Solid Films, 1996, 272, 116-123.	1.8	22
119	Synthesis and characterization of Ti-Si-C compounds for electrical contact applications. , 0, , .		1
120	Structural and Mechanical Properties of CN_Xand CP_XThin Solid Films. Key Engineering Materials, 0, 488-489, 581-584.	0.4	2