

Lars Hultman

List of Publications by Citations

Source: <https://exaly.com/author-pdf/3754068/lars-hultman-publications-by-citations.pdf>

Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

838
papers

45,978
citations

89
h-index

185
g-index

866
ext. papers

53,130
ext. citations

3.9
avg, IF

7.89
L-index

#	Paper	IF	Citations
838	Two-dimensional nanocrystals produced by exfoliation of Ti ₃ AlC ₂ . <i>Advanced Materials</i> , 2011 , 23, 4248-534	16.7	4846
837	Two-dimensional transition metal carbides. <i>ACS Nano</i> , 2012 , 6, 1322-31	16.7	2382
836	Microstructural evolution during film growth. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003 , 21, S117-S128	2.9	1301
835	New two-dimensional niobium and vanadium carbides as promising materials for Li-ion batteries. <i>Journal of the American Chemical Society</i> , 2013 , 135, 15966-9	16.4	1168
834	Two-Dimensional, Ordered, Double Transition Metals Carbides (MXenes). <i>ACS Nano</i> , 2015 , 9, 9507-16	16.7	923
833	Transparent Conductive Two-Dimensional Titanium Carbide Epitaxial Thin Films. <i>Chemistry of Materials</i> , 2014 , 26, 2374-2381	9.6	778
832	The Mn + 1AX _n phases: Materials science and thin-film processing. <i>Thin Solid Films</i> , 2010 , 518, 1851-1878	2.2	759
831	Microstructural design of hard coatings. <i>Progress in Materials Science</i> , 2006 , 51, 1032-1114	42.2	682
830	X-ray photoelectron spectroscopy: Towards reliable binding energy referencing. <i>Progress in Materials Science</i> , 2020 , 107, 100591	42.2	597
829	Thermal stability of nitride thin films. <i>Vacuum</i> , 2000 , 57, 1-30	3.7	501
828	Self-organized nanostructures in the TiAlN system. <i>Applied Physics Letters</i> , 2003 , 83, 2049-2051	3.4	477
827	Role of nitrogen in the formation of hard and elastic CN _x thin films by reactive magnetron sputtering. <i>Physical Review B</i> , 1999 , 59, 5162-5169	3.3	413
826	Mechanical properties and machining performance of TiAlN-coated cutting tools. <i>Surface and Coatings Technology</i> , 2005 , 191, 384-392	4.4	412
825	A general Lewis acidic etching route for preparing MXenes with enhanced electrochemical performance in non-aqueous electrolyte. <i>Nature Materials</i> , 2020 , 19, 894-899	27	368
824	Element Replacement Approach by Reaction with Lewis Acidic Molten Salts to Synthesize Nanolaminated MAX Phases and MXenes. <i>Journal of the American Chemical Society</i> , 2019 , 141, 4730-4737	16.4	355
823	C 1s Peak of Adventitious Carbon Aligns to the Vacuum Level: Dire Consequences for Material's Bonding Assignment by Photoelectron Spectroscopy. <i>ChemPhysChem</i> , 2017 , 18, 1507-1512	3.2	349
822	Two-dimensional MoC MXene with divacancy ordering prepared from parent 3D laminate with in-plane chemical ordering. <i>Nature Communications</i> , 2017 , 8, 14949	17.4	334

821	Reliable determination of chemical state in x-ray photoelectron spectroscopy based on sample-work-function referencing to adventitious carbon: Resolving the myth of apparent constant binding energy of the C 1s peak. <i>Applied Surface Science</i> , 2018 , 451, 99-103	6.7	332
820	Growth, structure, and microhardness of epitaxial TiN/NbN superlattices. <i>Journal of Materials Research</i> , 1992 , 7, 901-911	2.5	332
819	Development of preferred orientation in polycrystalline TiN layers grown by ultrahigh vacuum reactive magnetron sputtering. <i>Applied Physics Letters</i> , 1995 , 67, 2928-2930	3.4	328
818	Microstructure modification of TiN by ion bombardment during reactive sputter deposition. <i>Thin Solid Films</i> , 1989 , 169, 299-314	2.2	281
817	Thermal stability of arc evaporated high aluminum-content Ti _{1-x} Al _x N thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 1815-1823	2.9	278
816	Epitaxially grown graphene based gas sensors for ultra sensitive NO ₂ detection. <i>Sensors and Actuators B: Chemical</i> , 2011 , 155, 451-455	8.5	261
815	Influence of high power densities on the composition of pulsed magnetron plasmas. <i>Vacuum</i> , 2002 , 65, 147-154	3.7	246
814	High power pulsed magnetron sputtered Cr _{Nx} films. <i>Surface and Coatings Technology</i> , 2003 , 163-164, 267-272	4.4	228
813	Nanoindentation studies of single-crystal (001)-, (011)-, and (111)-oriented TiN layers on MgO. <i>Journal of Applied Physics</i> , 1996 , 80, 6725-6733	2.5	216
812	Origin of the anomalous piezoelectric response in wurtzite Sc(x)Al(1-x)N alloys. <i>Physical Review Letters</i> , 2010 , 104, 137601	7.4	214
811	Structural and mechanical properties of carbon nitride CN _x (0.2<x<0.35) films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996 , 14, 56-62	2.9	211
810	High-flux low-energy (20 eV) N ₂ ⁺ ion irradiation during TiN deposition by reactive magnetron sputtering: Effects on microstructure and preferred orientation. <i>Journal of Applied Physics</i> , 1995 , 78, 5395-5403	2.5	209
809	Thermal stability of AlCrN hard coatings. <i>Scripta Materialia</i> , 2006 , 54, 1847-1851	5.6	201
808	Crystallization of amorphous silicon during thin-film gold reaction. <i>Journal of Applied Physics</i> , 1987 , 62, 3647-3655	2.5	196
807	Growth of poly- and single-crystal ScN on MgO(001): Role of low-energy N ₂ ⁺ irradiation in determining texture, microstructure evolution, and mechanical properties. <i>Journal of Applied Physics</i> , 1998 , 84, 6034-6041	2.5	195
806	Compromising Science by Ignorant Instrument Calibration-Need to Revisit Half a Century of Published XPS Data. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 5002-5006	16.4	188
805	Mn _{1-x} Al _x N phases in the TiSiAl system studied by thin-film synthesis and ab initio calculations. <i>Physical Review B</i> , 2004 , 70,	3.3	188
804	Deposition and characterization of ternary thin films within the TiAlN system by DC magnetron sputtering. <i>Journal of Crystal Growth</i> , 2006 , 291, 290-300	1.6	187

803	Polycrystalline TiN films deposited by reactive bias magnetron sputtering: Effects of ion bombardment on resputtering rates, film composition, and microstructure. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1992 , 10, 265-272	2.9	187
802	Mixing and decomposition thermodynamics of $\text{Ti}_{1-x}\text{Al}_x\text{N}$ from first-principles calculations. <i>Physical Review B</i> , 2007 , 75,	3.3	185
801	Comparison of microstructure and mechanical properties of chromium nitride-based coatings deposited by high power impulse magnetron sputtering and by the combined steered cathodic arc/unbalanced magnetron technique. <i>Thin Solid Films</i> , 2004 , 457, 270-277	2.2	183
800	Average energy deposited per atom: A universal parameter for describing ion-assisted film growth?. <i>Applied Physics Letters</i> , 1993 , 63, 36-38	3.4	181
799	Long Electron-Hole Diffusion Length in High-Quality Lead-Free Double Perovskite Films. <i>Advanced Materials</i> , 2018 , 30, e1706246	24	175
798	Synthesis of metastable epitaxial zinc-blende-structure AlN by solid-state reaction. <i>Applied Physics Letters</i> , 1992 , 60, 2491-2493	3.4	175
797	Crystal growth and microstructure of polycrystalline $\text{Ti}_{1-x}\text{Al}_x\text{N}$ alloy films deposited by ultra-high-vacuum dual-target magnetron sputtering. <i>Thin Solid Films</i> , 1993 , 235, 62-70	2.2	175
796	Cross-linked nano-onions of carbon nitride in the solid phase: existence of a novel C(48)N(12) aza-fullerene. <i>Physical Review Letters</i> , 2001 , 87, 225503	7.4	167
795	Thermal stability of Ti_3SiC_2 thin films. <i>Acta Materialia</i> , 2007 , 55, 1479-1488	8.4	161
794	Growth and characterization of MAX-phase thin films. <i>Surface and Coatings Technology</i> , 2005 , 193, 6-10	4.4	152
793	Low-energy (~100 eV) ion irradiation during growth of TiN deposited by reactive magnetron sputtering: Effects of ion flux on film microstructure. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1991 , 9, 434-438	2.9	152
792	Experimental and theoretical characterization of ordered MAX phases $\text{Mo}_2\text{TiAlC}_2$ and $\text{Mo}_2\text{Ti}_2\text{AlC}_3$. <i>Journal of Applied Physics</i> , 2015 , 118, 094304	2.5	149
791	Enhanced hardness in lattice-matched single-crystal $\text{TiN}/\text{V}_0.6\text{Nb}_0.4\text{N}$ superlattices. <i>Applied Physics Letters</i> , 1990 , 57, 2654-2656	3.4	149
790	Growth of Ti_3SiC_2 thin films by elemental target magnetron sputtering. <i>Journal of Applied Physics</i> , 2004 , 96, 4817-4826	2.5	148
789	W-Based Atomic Laminates and Their 2D Derivative W C MXene with Vacancy Ordering. <i>Advanced Materials</i> , 2018 , 30, e1706409	24	145
788	Effects of high-flux low-energy (20-100 eV) ion irradiation during deposition on the microstructure and preferred orientation of $\text{Ti}_{0.5}\text{Al}_{0.5}\text{N}$ alloys grown by ultra-high-vacuum reactive magnetron sputtering. <i>Journal of Applied Physics</i> , 1993 , 73, 8580-8589	2.5	145
787	Magnetron sputtered epitaxial single-phase Ti_3SiC_2 thin films. <i>Applied Physics Letters</i> , 2002 , 81, 835-837	3.4	142
786	Influence of residual stresses on the mechanical properties of $\text{TiC}_x\text{N}_{1-x}$ ($x=0, 0.15, 0.45$) thin films deposited by arc evaporation. <i>Thin Solid Films</i> , 2000 , 371, 167-177	2.2	140

785	Ion induced stress generation in arc-evaporated TiN films. <i>Journal of Applied Physics</i> , 1995 , 78, 832-837	2.5	137
784	Nanostructure formation during deposition of TiN _{0.5} BiN _x nanomultilayer films by reactive dual magnetron sputtering. <i>Journal of Applied Physics</i> , 2005 , 97, 114327	2.5	136
783	Microstructures of TiN films grown by various physical vapour deposition techniques. <i>Surface and Coatings Technology</i> , 1991 , 48, 51-67	4.4	135
782	Defect structure and phase transitions in epitaxial metastable cubic Ti _{0.5} Al _{0.5} N alloys grown on MgO(001) by ultra-high-vacuum magnetron sputter deposition. <i>Journal of Applied Physics</i> , 1991 , 69, 6437-6450	2.5	133
781	Growth, microstructure, and mechanical properties of arc evaporated TiC _x N _{1-x} (0 ≤ x ≤ 1) films. <i>Surface and Coatings Technology</i> , 2000 , 126, 1-14	4.4	129
780	Reactive magnetron sputter deposition of CN _x films on Si(001) substrates: film growth, microstructure and mechanical properties. <i>Thin Solid Films</i> , 1994 , 246, 103-109	2.2	129
779	On the origin of a third spectral component of C1s XPS-spectra for nc-TiC/a-C nanocomposite thin films. <i>Surface and Coatings Technology</i> , 2008 , 202, 3563-3570	4.4	127
778	Fullerene-like Carbon Nitride: A Resilient Coating Material. <i>MRS Bulletin</i> , 2003 , 28, 194-202	3.2	126
777	Interface structure in superhard TiN-SiN nanolaminates and nanocomposites: Film growth experiments and ab initio calculations. <i>Physical Review B</i> , 2007 , 75,	3.3	125
776	Electronic mechanism for toughness enhancement in Ti _x M _{1-x} N (M=Mo and W). <i>Physical Review B</i> , 2010 , 81,	3.3	124
775	Carbon nitride nanotubulite \square densely-packed and well-aligned tubular nanostructures. <i>Chemical Physics Letters</i> , 1999 , 300, 695-700	2.5	124
774	Supertoughening in B1 transition metal nitride alloys by increased valence electron concentration. <i>Acta Materialia</i> , 2011 , 59, 2121-2134	8.4	123
773	Growth of epitaxial (001) superlattice films. <i>Vacuum</i> , 1997 , 48, 483-489	3.7	116
772	Theoretical stability and materials synthesis of a chemically ordered MAX phase, Mo ₂ ScAlC ₂ , and its two-dimensional derivate Mo ₂ ScC ₂ MXene. <i>Acta Materialia</i> , 2017 , 125, 476-480	8.4	114
771	Epitaxial Ti ₂ GeC, Ti ₃ GeC ₂ , and Ti ₄ GeC ₃ MAX-phase thin films grown by magnetron sputtering. <i>Journal of Materials Research</i> , 2005 , 20, 779-782	2.5	114
770	Growth of epitaxial TiN films deposited on MgO(100) by reactive magnetron sputtering: The role of low-energy ion irradiation during deposition. <i>Journal of Crystal Growth</i> , 1988 , 92, 639-656	1.6	109
769	Stacking fault energies in austenitic stainless steels. <i>Acta Materialia</i> , 2016 , 111, 39-46	8.4	108
768	Synthesis and Characterization of an Alumina Forming Nanolaminated Boride: MoAlB. <i>Scientific Reports</i> , 2016 , 6, 26475	4.9	106

767	A review of metal-ion-flux-controlled growth of metastable TiAlN by HIPIMS/DCMS co-sputtering. <i>Surface and Coatings Technology</i> , 2014 , 257, 15-25	4.4	106
766	B4C thin films for neutron detection. <i>Journal of Applied Physics</i> , 2012 , 111, 104908	2.5	106
765	Time and energy resolved ion mass spectroscopy studies of the ion flux during high power pulsed magnetron sputtering of Cr in Ar and Ar/N ₂ atmospheres. <i>Vacuum</i> , 2010 , 84, 1159-1170	3.7	106
764	The same chemical state of carbon gives rise to two peaks in X-ray photoelectron spectroscopy. <i>Scientific Reports</i> , 2021 , 11, 11195	4.9	105
763	Mo ₂ TiAlC ₂ : A new ordered layered ternary carbide. <i>Scripta Materialia</i> , 2015 , 101, 5-7	5.6	104
762	Prediction and synthesis of a family of atomic laminate phases with Kagomé-like and in-plane chemical ordering. <i>Science Advances</i> , 2017 , 3, e1700642	14.3	104
761	Increased electromechanical coupling in w-B ₄ CxAl _{1-x} N. <i>Applied Physics Letters</i> , 2010 , 97, 112902	3.4	104
760	Influence of Si on the microstructure of arc evaporated (Ti,Si)N thin films; evidence for cubic solid solutions and their thermal stability. <i>Surface and Coatings Technology</i> , 2005 , 200, 1535-1542	4.4	103
759	Low-energy ion irradiation during film growth for reducing defect densities in epitaxial TiN(100) films deposited by reactive-magnetron sputtering. <i>Journal of Applied Physics</i> , 1987 , 61, 552-555	2.5	101
758	Enhanced mechanical hardness in epitaxial nonisostuctural Mo/NbN and W/NbN superlattices. <i>Journal of Applied Physics</i> , 1998 , 84, 776-785	2.5	100
757	Formation of polyhedral N ₂ bubbles during reactive sputter deposition of epitaxial TiN(100) films. <i>Journal of Applied Physics</i> , 1989 , 66, 536-544	2.5	100
756	Synthesis of TiAuC, TiAuC and TiIrC by noble metal substitution reaction in TiSiC for high-temperature-stable Ohmic contacts to SiC. <i>Nature Materials</i> , 2017 , 16, 814-818	27	99
755	Role of Tin+ and Aln+ ion irradiation (n=1, 2) during Ti _{1-x} Al _x N alloy film growth in a hybrid HIPIMS/magnetron mode. <i>Surface and Coatings Technology</i> , 2012 , 206, 4202-4211	4.4	98
754	Si intercalation/deintercalation of graphene on 6H-SiC(0001). <i>Physical Review B</i> , 2012 , 85,	3.3	98
753	Mo ₂ GaC: a new ternary nanolaminated carbide. <i>Chemical Communications</i> , 2015 , 51, 6560-3	5.8	96
752	Interpretation of X-ray photoelectron spectra of carbon-nitride thin films: New insights from in situ XPS. <i>Carbon</i> , 2016 , 108, 242-252	10.4	94
751	A Nanolaminated Magnetic Phase: Mn ₂ GaC. <i>Materials Research Letters</i> , 2014 , 2, 89-93	7.4	94
750	Effect of chemical sputtering on the growth and structural evolution of magnetron sputtered CN _x thin films. <i>Thin Solid Films</i> , 2001 , 382, 146-152	2.2	91

749	Wurtzite structure Sc _{1-x} Al _x N solid solution films grown by reactive magnetron sputter epitaxy: Structural characterization and first-principles calculations. <i>Journal of Applied Physics</i> , 2010 , 107, 123515 ²⁻⁵	2.5	89
748	High-power impulse magnetron sputtering of TiB ₂ thin films from a Ti ₃ SiC ₂ compound target. <i>Thin Solid Films</i> , 2006 , 515, 1731-1736	2.2	89
747	Surface morphology effects on the light-controlled wettability of ZnO nanostructures. <i>Applied Surface Science</i> , 2012 , 258, 8146-8152	6.7	88
746	Toughness enhancement in hard ceramic thin films by alloy design. <i>APL Materials</i> , 2013 , 1, 042104	5.7	87
745	Mechanical and tribological properties of CN _x films deposited by reactive magnetron sputtering. <i>Wear</i> , 2001 , 248, 55-64	3.5	87
744	Synthesis, structural characterization and photocatalytic application of ZnO@ZnS core-shell nanoparticles. <i>RSC Advances</i> , 2014 , 4, 36940-36950	3.7	86
743	Synthesis of the new MAX phase Zr ₂ AlC. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 1847-1853	6	85
742	New Solid Solution MAX Phases: (Ti _{0.5} , V _{0.5}) ₃ AlC ₂ , (Nb _{0.5} , V _{0.5}) ₂ AlC, (Nb _{0.5} , V _{0.5}) ₄ AlC ₃ and (Nb _{0.8} , Zr _{0.2}) ₂ AlC. <i>Materials Research Letters</i> , 2014 , 2, 233-240	7.4	85
741	Growth of fullerene-like carbon nitride thin solid films by reactive magnetron sputtering; role of low-energy ion irradiation in determining microstructure and mechanical properties. <i>Journal of Applied Physics</i> , 2003 , 93, 3002-3015	2.5	83
740	Microstructure, mechanical properties, and wetting behavior of Si ₃ N ₄ thin films grown by reactive magnetron sputtering. <i>Surface and Coatings Technology</i> , 2001 , 141, 145-155	4.4	83
739	Plasma characterization during laser ablation of graphite in nitrogen for the growth of fullerene-like CN _x films. <i>Journal of Applied Physics</i> , 2002 , 92, 724-735	2.5	83
738	Strain evolution during spinodal decomposition of TiAlN thin films. <i>Thin Solid Films</i> , 2012 , 520, 5542-5549	2.2	81
737	Structural, mechanical and electrical-contact properties of nanocrystalline-NbC/amorphous-C coatings deposited by magnetron sputtering. <i>Surface and Coatings Technology</i> , 2011 , 206, 354-359	4.4	81
736	Structure and mechanical properties of arc evaporated TiAl _{0.5} N thin films. <i>Surface and Coatings Technology</i> , 2007 , 201, 6392-6403	4.4	80
735	Correlated high resolution transmission electron microscopy and X-ray photoelectron spectroscopy studies of structured CN _x (0). <i>Carbon</i> , 2004 , 42, 2729-2734	10.4	80
734	Epitaxial NaCl structure Ta _{1-x} N _x (001): Electronic transport properties, elastic modulus, and hardness versus N/Ta ratio. <i>Journal of Applied Physics</i> , 2001 , 90, 2879-2885	2.5	80
733	Metal versus rare-gas ion irradiation during Ti _{1-x} Al _x N film growth by hybrid high power pulsed magnetron/dc magnetron co-sputtering using synchronized pulsed substrate bias. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2012 , 30, 061504	2.9	79
732	Synthesis of the novel Zr ₃ AlC ₂ MAX phase. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 943-947	6	77

731	Synthesis and ab initio calculations of nanolaminated (Cr,Mn) ₂ AlC compounds. <i>Physical Review B</i> , 2013 , 87,	3.3	77
730	Elastic properties and electrostructural correlations in ternary scandium-based cubic inverse perovskites: A first-principles study. <i>Physical Review B</i> , 2009 , 79,	3.3	77
729	Structure and mechanical properties of epitaxial TiN/V _{0.3} Nb _{0.7} N(100) superlattices. <i>Journal of Materials Research</i> , 1994 , 9, 1456-1467	2.5	77
728	Microstructural investigation of droplets in arc-evaporated TiN films. <i>Surface and Coatings Technology</i> , 1994 , 63, 123-128	4.4	76
727	Crystallization characteristics and chemical bonding properties of nickel carbide thin film nanocomposites. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 415501	1.8	75
726	Predicted stability of a new aza[60]fullerene molecule, C ₄₈ N ₁₂ . <i>Chemical Physics Letters</i> , 2001 , 340, 227-231	2.3	75
725	Core-level spectra and binding energies of transition metal nitrides by non-destructive x-ray photoelectron spectroscopy through capping layers. <i>Applied Surface Science</i> , 2017 , 396, 347-358	6.7	74
724	Structural, mechanical and tribological behavior of fullerene-like and amorphous carbon nitride coatings. <i>Diamond and Related Materials</i> , 2004 , 13, 1882-1888	3.5	74
723	Nanoindentation hardness, abrasive wear, and microstructure of TiN/NbN polycrystalline nanostructured multilayer films grown by reactive magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998 , 16, 3104-3113	2.9	73
722	Characterization of misfit dislocations in epitaxial (001)-oriented TiN, NbN, VN, and (Ti,Nb) N film heterostructures by transmission electron microscopy. <i>Journal of Crystal Growth</i> , 1994 , 135, 309-317	1.6	73
721	Ti ₂ AlC coatings deposited by High Velocity Oxy-Fuel spraying. <i>Surface and Coatings Technology</i> , 2008 , 202, 5976-5981	4.4	72
720	Thermal stability, microstructure and mechanical properties of Ti _{1-x} Zr _x N thin films. <i>Thin Solid Films</i> , 2008 , 516, 6421-6431	2.2	71
719	Mechanical and thermal stability of TiN/NbN superlattice thin films. <i>Surface and Coatings Technology</i> , 2000 , 133-134, 227-233	4.4	71
718	CuO/ZnO Nanocorals synthesis via hydrothermal technique: growth mechanism and their application as Humidity Sensor. <i>Journal of Materials Chemistry</i> , 2012 , 22, 11583		70
717	Microstructure and dielectric properties of piezoelectric magnetron sputtered w-ScxAl _{1-x} N thin films. <i>Journal of Applied Physics</i> , 2012 , 111, 093527	2.5	70
716	Microstructure control of CrN _x films during high power impulse magnetron sputtering. <i>Surface and Coatings Technology</i> , 2010 , 205, 118-130	4.4	70
715	Transmission electron microscopy studies of microstructural evolution, defect structure, and phase transitions in polycrystalline and epitaxial Ti _{1-x} Al _x N and TiN films grown by reactive magnetron sputter deposition. <i>Thin Solid Films</i> , 1991 , 205, 153-164	2.2	70
714	Thermal decomposition products in arc evaporated TiAlN/TiN multilayers. <i>Applied Physics Letters</i> , 2008 , 93, 143110	3.4	69

713	Toughness enhancement in TiAlN-based quaternary alloys. <i>Thin Solid Films</i> , 2012 , 520, 4080-4088	2.2	68
712	Anomalously high thermoelectric power factor in epitaxial ScN thin films. <i>Applied Physics Letters</i> , 2011 , 99, 232113	3.4	68
711	Electrochemical deposition of Co nanowire arrays; quantitative consideration of concentration profiles. <i>Electrochimica Acta</i> , 2001 , 47, 865-874	6.7	68
710	Influence of plasma parameters on the growth and properties of magnetron sputtered CN _x thin films. <i>Journal of Applied Physics</i> , 2000 , 88, 524-532	2.5	68
709	Electrochemical synthesis of Ag/Co multilayered nanowires in porous polycarbonate membranes. <i>Thin Solid Films</i> , 2002 , 402, 262-271	2.2	67
708	Venting temperature determines surface chemistry of magnetron sputtered TiN films. <i>Applied Physics Letters</i> , 2016 , 108, 041603	3.4	67
707	Sputter deposition from a Ti ₂ AlC target: Process characterization and conditions for growth of Ti ₂ AlC. <i>Thin Solid Films</i> , 2010 , 518, 1621-1626	2.2	66
706	Compromising Science by Ignorant Instrument Calibration—Need to Revisit Half a Century of Published XPS Data. <i>Angewandte Chemie</i> , 2020 , 132, 5034-5038	3.6	65
705	Cr _x Films Prepared by DC Magnetron Sputtering and High-Power Pulsed Magnetron Sputtering: A Comparative Study. <i>IEEE Transactions on Plasma Science</i> , 2010 , 38, 3046-3056	1.3	65
704	Ta ₄ AlC ₃ : Phase determination, polymorphism and deformation. <i>Acta Materialia</i> , 2007 , 55, 4723-4729	8.4	65
703	Phase Stability and Elasticity of TiAlN. <i>Materials</i> , 2011 , 4, 1599-1618	3.5	64
702	Layer formation by resputtering in TiSiC hard coatings during large scale cathodic arc deposition. <i>Surface and Coatings Technology</i> , 2011 , 205, 3923-3930	4.4	64
701	Growth and structure of fullerene-like CN _x thin films produced by pulsed laser ablation of graphite in nitrogen. <i>Journal of Applied Physics</i> , 2002 , 92, 4980-4988	2.5	64
700	Epitaxial stabilization of cubic-SiN _x in TiN/SiN _x multilayers. <i>Applied Physics Letters</i> , 2006 , 88, 191902	3.4	63
699	Single-crystal Ti ₂ AlN thin films. <i>Applied Physics Letters</i> , 2005 , 86, 111913	3.4	63
698	Structural, electrical, and mechanical properties of nc-TiC/SiC nanocomposite thin films. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005 , 23, 2486		63
697	On the effect of hydrogen incorporation in strontium titanate layers grown by high vacuum magnetron sputtering. <i>Applied Physics Letters</i> , 1999 , 75, 3476-3478	3.4	63
696	Preparation of cubic boron nitride films by use of electrically conductive boron carbide targets. <i>Thin Solid Films</i> , 1995 , 257, 40-45	2.2	63

695	Al-doped and Sb-doped polycrystalline silicon obtained by means of metal-induced crystallization. <i>Journal of Applied Physics</i> , 1987 , 62, 3726-3732	2.5	62
694	Growth of epitaxial AlN(0001) on Si(111) by reactive magnetron sputter deposition. <i>Journal of Applied Physics</i> , 1995 , 78, 5721-5726	2.5	61
693	Deposition and microstructure of PVD TiN/NbN multilayered coatings by combined reactive electron beam evaporation and DC sputtering. <i>Surface and Coatings Technology</i> , 1996 , 86-87, 351-356	4.4	61
692	Structural defects in electrically degraded 4H-SiC p+/n ⁻ /n ⁺ diodes. <i>Applied Physics Letters</i> , 2002 , 80, 4852-4854	3.4	60
691	On the Topotactic Transformation of Ti ₂ AlC into a Ti ₂ AlN Cubic Phase by Heating in Molten Lithium Fluoride in Air. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 4556-4561	3.8	59
690	Strain-free, single-phase metastable Ti _{0.38} Al _{0.62} N alloys with high hardness: metal-ion energy vs. momentum effects during film growth by hybrid high-power pulsed/dc magnetron cosputtering. <i>Thin Solid Films</i> , 2014 , 556, 87-98	2.2	58
689	Atomic structure and lattice defects in nanolaminated ternary transition metal borides. <i>Materials Research Letters</i> , 2017 , 5, 235-241	7.4	58
688	Vacancy-induced toughening in hard single-crystal V _{0.5} Mo _{0.5} N _x /MgO(0 0 1) thin films. <i>Acta Materialia</i> , 2014 , 77, 394-400	8.4	58
687	Discovery of the ternary nanolaminated compound Nb ₂ GeC by a systematic theoretical-experimental approach. <i>Physical Review Letters</i> , 2012 , 109, 035502	7.4	58
686	Electronic structure and chemical bonding of nanocrystalline-TiC/amorphous-C nanocomposites. <i>Physical Review B</i> , 2009 , 80,	3.3	58
685	The influence of thermal annealing on residual stresses and mechanical properties of arc-evaporated TiC N _{1-x} =0.15-0.45 thin films. <i>Acta Materialia</i> , 2002 , 50, 5103-5114	8.4	58
684	Magnetron sputtered WC films with C ₆₀ as carbon source. <i>Thin Solid Films</i> , 2003 , 444, 29-37	2.2	58
683	First-principles calculations on the role of CN precursors for the formation of fullerene-like carbon nitride. <i>Chemical Physics Letters</i> , 2005 , 401, 288-295	2.5	58
682	Carbon nitride films on orthopedic substrates. <i>Diamond and Related Materials</i> , 2000 , 9, 1984-1991	3.5	58
681	Self-consistent modelling of X-ray photoelectron spectra from air-exposed polycrystalline TiN thin films. <i>Applied Surface Science</i> , 2016 , 387, 294-300	6.7	58
680	Spinodal decomposition of Ti _{0.33} Al _{0.67} N thin films studied by atom probe tomography. <i>Thin Solid Films</i> , 2012 , 520, 4362-4368	2.2	57
679	Selection of metal ion irradiation for controlling Ti _{1-x} Al _x N alloy growth via hybrid HIPIMS/magnetron co-sputtering. <i>Vacuum</i> , 2012 , 86, 1036-1040	3.7	57
678	Dynamic and structural stability of cubic vanadium nitride. <i>Physical Review B</i> , 2015 , 91,	3.3	57

677	Structural and mechanical properties of CrAlN thin films grown by cathodic arc deposition. <i>Acta Materialia</i> , 2012 , 60, 6494-6507	8.4	57
676	Pressure enhancement of the isostructural cubic decomposition in Ti _{1-x} Al _x N. <i>Applied Physics Letters</i> , 2009 , 95, 181906	3.4	57
675	Ar and excess N incorporation in epitaxial TiN films grown by reactive bias sputtering in mixed Ar/N ₂ and pure N ₂ discharges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1989 , 7, 1187-1193	2.9	57
674	Synthesis and characterization of arc deposited magnetic (Cr,Mn) ₂ AlC MAX phase films. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014 , 8, 420-423	2.5	56
673	Ohmic contact properties of magnetron sputtered Ti ₃ SiC ₂ on n- and p-type 4H-silicon carbide. <i>Applied Physics Letters</i> , 2011 , 98, 042108	3.4	56
672	Bonding mechanism in the nitrides Ti ₂ AlN and TiN: An experimental and theoretical investigation. <i>Physical Review B</i> , 2007 , 76,	3.3	56
671	Electrical and optical properties of CN _x (0.25) films deposited by reactive magnetron sputtering. <i>Journal of Applied Physics</i> , 2001 , 89, 1184-1190	2.5	56
670	Paradigm shift in thin-film growth by magnetron sputtering: From gas-ion to metal-ion irradiation of the growing film. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 060801	2.9	55
669	Structure and bonding in amorphous iron carbide thin films. <i>Journal of Physics Condensed Matter</i> , 2015 , 27, 045002	1.8	55
668	Structure and thermal stability of arc evaporated (Ti _{0.33} Al _{0.67}) _{1-x} Si _x N thin films. <i>Thin Solid Films</i> , 2008 , 517, 714-721	2.2	55
667	Microstructural evolution during tempering of arc-evaporated CrN coatings. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2000 , 18, 121-130	2.9	55
666	Atomically Layered and Ordered Rare-Earth i-MAX Phases: A New Class of Magnetic Quaternary Compounds. <i>Chemistry of Materials</i> , 2019 , 31, 2476-2485	9.6	53
665	Structural and chemical determination of the new nanolaminated carbide Mo ₂ Ga ₂ C from first principles and materials analysis. <i>Acta Materialia</i> , 2015 , 99, 157-164	8.4	53
664	Face-centered cubic (Al _{1-x} Cr _x) ₂ O ₃ . <i>Thin Solid Films</i> , 2011 , 519, 2426-2429	2.2	53
663	Characterization of the Induced Plastic Zone in a Single Crystal TiN(001) Film by Nanoindentation and Transmission Electron Microscopy. <i>Journal of Materials Research</i> , 1997 , 12, 2134-2142	2.5	53
662	Template Synthesis of Au/Co Multilayered Nanowires by Electrochemical Deposition. <i>Advanced Functional Materials</i> , 2002 , 12, 766-772	15.6	53
661	Electronic structure of GaN and Ga investigated by soft x-ray spectroscopy and first-principles methods. <i>Physical Review B</i> , 2010 , 81,	3.3	52
660	Effects of strain and composition on the lattice parameters and applicability of Vegard's rule in Al-rich Al _{1-x} In _x N films grown on sapphire. <i>Journal of Applied Physics</i> , 2008 , 103, 103513	2.5	52

659	Electronic structure investigation of Ti ₃ AlC ₂ , Ti ₃ SiC ₂ , and Ti ₃ GeC ₂ by soft x-ray emission spectroscopy. <i>Physical Review B</i> , 2005 , 72,	3.3	52
658	Influence of an external axial magnetic field on the plasma characteristics and deposition conditions during direct current planar magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1994 , 12, 314-320	2.9	52
657	Growth, structural characterization and properties of hard and wear-protective layered materials. <i>Thin Solid Films</i> , 1990 , 193-194, 818-831	2.2	51
656	Stability of 10B4C thin films under neutron radiation. <i>Radiation Physics and Chemistry</i> , 2015 , 113, 14-19	2.5	50
655	Microstructure evolution during the isostructural decomposition of TiAlN _x combined in-situ small angle x-ray scattering and phase field study. <i>Journal of Applied Physics</i> , 2013 , 113, 213518	2.5	50
654	Effect of oxygen exposure on the electrical conductivity and gas sensitivity of nanostructured ZnO films. <i>Thin Solid Films</i> , 2009 , 517, 2073-2078	2.2	50
653	Dielectric properties of Ti ₂ AlC and Ti ₂ AlN MAX phases: The conductivity anisotropy. <i>Journal of Applied Physics</i> , 2008 , 104, 023531	2.5	50
652	Beyond ϵ -C ₃ N ₄ Bullerene-like carbon nitride: A promising coating material. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007 , 25, 633-644	2.9	50
651	First-principles calculations on the curvature evolution and cross-linkage in carbon nitride. <i>Chemical Physics Letters</i> , 2005 , 410, 228-234	2.5	50
650	Halogenated TiC MXenes with Electrochemically Active Terminals for High-Performance Zinc Ion Batteries. <i>ACS Nano</i> , 2021 , 15, 1077-1085	16.7	50
649	Origin of Chemically Ordered Atomic Laminates (i-MAX): Expanding the Elemental Space by a Theoretical/Experimental Approach. <i>ACS Nano</i> , 2018 , 12, 7761-7770	16.7	49
648	Ti _{n+1} C _n MXenes with fully saturated and thermally stable Cl terminations. <i>Nanoscale Advances</i> , 2019 , 1, 3680-3685	5.1	49
647	The location and effects of Si in (Ti _{1-x} Si _x) _n y thin films. <i>Journal of Materials Research</i> , 2009 , 24, 2483-2498.	2.5	49
646	Magnetron sputtering of Ti ₃ SiC ₂ thin films from a compound target. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007 , 25, 1381	2.9	49
645	Annealing studies of nanocomposite Ti ₃ SiC ₂ thin films with respect to phase stability and tribological performance. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 429, 90-95	5.3	49
644	Growth of 3CSiC on on-axis Si(100) substrates by chemical vapor deposition. <i>Journal of Crystal Growth</i> , 1995 , 154, 303-314	1.6	48
643	Effects of phase stability, lattice ordering, and electron density on plastic deformation in cubic TiWN pseudobinary transition-metal nitride alloys. <i>Acta Materialia</i> , 2016 , 103, 823-835	8.4	47
642	Structural, electrical and mechanical characterization of magnetron-sputtered VGe ₂ thin films. <i>Acta Materialia</i> , 2008 , 56, 2563-2569	8.4	47

641	Diagnostics of a N ₂ /Ar direct current magnetron discharge for reactive sputter deposition of fullerene-like carbon nitride thin films. <i>Journal of Applied Physics</i> , 2003 , 94, 7059-7066	2.5	47
640	Residual stresses and fracture properties of magnetron sputtered Ti films on Si microelements. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1993 , 11, 543-553	2.9	47
639	Interfacial reactions in single-crystal-TiN (100)/Al/polycrystalline-TiN multilayer thin films. <i>Thin Solid Films</i> , 1992 , 215, 152-161	2.2	47
638	Theoretical and Experimental Exploration of a Novel In-Plane Chemically Ordered (Cr _{2/3} M _{1/3}) ₂ AlC i-MAX Phase with M = Sc and Y. <i>Crystal Growth and Design</i> , 2017 , 17, 5704-5711	3.5	47
637	Cold-spray deposition of Ti ₂ AlC coatings. <i>Vacuum</i> , 2013 , 94, 69-73	3.7	46
636	ZrB ₂ thin films grown by high power impulse magnetron sputtering from a compound target. <i>Thin Solid Films</i> , 2012 , 526, 163-167	2.2	46
635	Surface-energy triggered phase formation and epitaxy in nanometer-thick Ni _{1-x} Pt _x silicide films. <i>Applied Physics Letters</i> , 2010 , 96, 031911	3.4	46
634	Epitaxial Ti ₂ AlN(0001) thin film deposition by dual-target reactive magnetron sputtering. <i>Acta Materialia</i> , 2007 , 55, 4401-4407	8.4	46
633	Thermal stability of carbon nitride thin films. <i>Journal of Materials Research</i> , 2001 , 16, 3188-3201	2.5	46
632	Growth, structure, and mechanical properties of CN _x H _y films deposited by dc magnetron sputtering in N ₂ /Ar/H ₂ discharges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2000 , 18, 2349	2.9	46
631	Nitrogen vacancy, self-interstitial diffusion, and Frenkel-pair formation/dissociation in B1 TiN studied by ab initio and classical molecular dynamics with optimized potentials. <i>Physical Review B</i> , 2015 , 91,	3.3	44
630	Ab initio and classical molecular dynamics simulations of N ₂ desorption from TiN(001) surfaces. <i>Surface Science</i> , 2014 , 624, 25-31	1.8	44
629	Mitigating the geometrical limitations of conventional sputtering by controlling the ion-to-neutral ratio during high power pulsed magnetron sputtering. <i>Thin Solid Films</i> , 2011 , 519, 6354-6361	2.2	44
628	Growth and characterization of TiN/SiN(001) superlattice films. <i>Journal of Materials Research</i> , 2007 , 22, 3255-3264	2.5	44
627	Ion-irradiation-induced suppression of three-dimensional island formation during InAs growth on Si(100). <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990 , 8, 1587-1592	2.9	44
626	Control of Ti _{1-x} Si _x N nanostructure via tunable metal-ion momentum transfer during HIPIMS/DCMS co-deposition. <i>Surface and Coatings Technology</i> , 2015 , 280, 174-184	4.4	43
625	Elastic constants, Poisson ratios, and the elastic anisotropy of VN(001), (011), and (111) epitaxial layers grown by reactive magnetron sputter deposition. <i>Journal of Applied Physics</i> , 2014 , 115, 214908	2.5	43
624	Cubic Sc _{1-x} Al _x N solid solution thin films deposited by reactive magnetron sputter epitaxy onto ScN(111). <i>Journal of Applied Physics</i> , 2009 , 105, 113517	2.5	43

623	Interpretation of electron diffraction patterns from amorphous and fullerene-like carbon allotropes. <i>Ultramicroscopy</i> , 2010 , 110, 815-9	3.1	43
622	Magnetron sputter epitaxy of wurtzite Al _{1-x} In _x N(0.1). <i>Journal of Applied Physics</i> , 2005 , 97, 083503	2.5	43
621	Interdiffusion studies of single crystal TiN/NbN superlattice thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1999 , 17, 2920-2927	2.9	43
620	Structure of a new bulk Ti ₅ Al ₂ C ₃ MAX phase produced by the topotactic transformation of Ti ₂ AlC. <i>Journal of the European Ceramic Society</i> , 2012 , 32, 3485-3491	6	42
619	Compensation of native donor doping in ScN: Carrier concentration control and p-type ScN. <i>Applied Physics Letters</i> , 2017 , 110, 252104	3.4	42
618	Nanoscale piezoelectric response of ZnO nanowires measured using a nanoindentation technique. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 11113-8	3.6	42
617	Electronic-grade GaN(0001)/Al ₂ O ₃ (0001) grown by reactive DC-magnetron sputter epitaxy using a liquid Ga target. <i>Applied Physics Letters</i> , 2011 , 98, 141915	3.4	42
616	Nanocomposite Al ₂ O ₃ /rO ₂ thin films grown by reactive dual radio-frequency magnetron sputtering. <i>Thin Solid Films</i> , 2008 , 516, 4977-4982	2.2	42
615	General trend of the mechanical properties of the ternary carbides M ₃ SiC ₂ (M=transition metal). <i>Physical Review B</i> , 2006 , 74,	3.3	42
614	On the nature of ion implantation induced dislocation loops in 4H-silicon carbide. <i>Journal of Applied Physics</i> , 2002 , 92, 2501-2505	2.5	42
613	Design, plasma studies, and ion assisted thin film growth in an unbalanced dual target magnetron sputtering system with a solenoid coil. <i>Vacuum</i> , 2000 , 56, 107-113	3.7	42
612	Solubility limit and precipitate formation in Al-doped 4H-SiC epitaxial material. <i>Applied Physics Letters</i> , 2001 , 79, 2016-2018	3.4	42
611	Multielemental single-atom-thick layers in nanolaminated V(Sn,) C (= Fe, Co, Ni, Mn) for tailoring magnetic properties. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 820-825	11.5	42
610	Ti ₃ SiC ₂ -formation during Ti ₃ Bi multilayer deposition by magnetron sputtering at 650 °C. <i>Vacuum</i> , 2013 , 93, 56-59	3.7	41
609	Phase stability and initial low-temperature oxidation mechanism of Ti ₂ AlC thin films. <i>Journal of the European Ceramic Society</i> , 2013 , 33, 375-382	6	41
608	Structure and mechanical properties of TiAlN _{1-x} W _x thin films. <i>Surface and Coatings Technology</i> , 2011 , 205, 4821-4827	4.4	41
607	First-principles study of dislocations in hcp metals through the investigation of the (112̄1) twin boundary. <i>Physical Review B</i> , 2011 , 84,	3.3	41
606	Dynamics of Ti, N, and TiN _x (x=1B) admolecule transport on TiN(001) surfaces. <i>Physical Review B</i> , 2012 , 86,	3.3	41

605	Spinodal decomposition of cubic Ti _{1-x} Al _x N: Comparison between experiments and modeling. <i>International Journal of Materials Research</i> , 2007 , 98, 1054-1059	0.5	41
604	Transition from amorphous boron carbide to hexagonal boron carbon nitride thin films induced by nitrogen ion assistance. <i>Journal of Applied Physics</i> , 2002 , 92, 5177-5182	2.5	41
603	Reference binding energies of transition metal carbides by core-level x-ray photoelectron spectroscopy free from Ar ⁺ etching artefacts. <i>Applied Surface Science</i> , 2018 , 436, 102-110	6.7	41
602	Peak amplitude of target current determines deposition rate loss during high power pulsed magnetron sputtering. <i>Vacuum</i> , 2016 , 124, 1-4	3.7	40
601	Effect of WN content on toughness enhancement in V _{1-x} W _x N/MgO(001) thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 030603	2.9	40
600	Phase stability tuning in the Nb _x Zr _{1-x} N thin-film system for large stacking fault density and enhanced mechanical strength. <i>Applied Physics Letters</i> , 2005 , 86, 131922	3.4	40
599	Deformation structures under indentations in TiN/NbN single-crystal multilayers deposited by magnetron sputtering at different bombarding ion energies. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2002 , 82, 1983-1992		40
598	Towards reliable X-ray photoelectron spectroscopy: Sputter-damage effects in transition metal borides, carbides, nitrides, and oxides. <i>Applied Surface Science</i> , 2021 , 542, 148599	6.7	40
597	Dislocation-pipe diffusion in nitride superlattices observed in direct atomic resolution. <i>Scientific Reports</i> , 2017 , 7, 46092	4.9	39
596	Physical properties of epitaxial ZrN/MgO(001) layers grown by reactive magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013 , 31, 061516	2.9	39
595	First-principles study of configurational disorder in B ₄ C using a superatom-special quasirandom structure method. <i>Physical Review B</i> , 2014 , 90,	3.3	39
594	Volume matching condition to establish the enhanced piezoelectricity in ternary (Sc,Y) _{0.5} (Al,Ga,In) _{0.5} N alloys. <i>Physical Review B</i> , 2013 , 87,	3.3	39
593	Phase transformation in Ti and Al ₂ O ₃ coatings on cutting tool inserts. <i>Surface and Coatings Technology</i> , 2009 , 203, 1682-1688	4.4	39
592	Reactive magnetron sputtering of CN _x thin films at different substrate bias. <i>Thin Solid Films</i> , 1997 , 308-309, 223-227	2.2	39
591	Lattice parameters, deviations from Vegard's rule, and E ₂ phonons in InAlN. <i>Applied Physics Letters</i> , 2008 , 93, 261908	3.4	39
590	First-principles calculations on the structural evolution of solid fullerene-like CP _x . <i>Chemical Physics Letters</i> , 2006 , 426, 374-379	2.5	39
589	Superhard NbB ₂ thin films deposited by dc magnetron sputtering. <i>Surface and Coatings Technology</i> , 2014 , 257, 295-300	4.4	38
588	First-principles study of the effect of nitrogen vacancies on the decomposition pattern in cubic Ti _{1-x} Al _x N _{1-y} . <i>Applied Physics Letters</i> , 2008 , 92, 071903	3.4	38

587	Correlation between bonding structure and microstructure in fullerene-like carbon nitride thin films. <i>Physical Review B</i> , 2005 , 71,	3-3	38
586	Growth of high-quality 3C-SiC epitaxial films on off-axis Si(001) substrates at 850 °C by reactive magnetron sputtering. <i>Applied Physics Letters</i> , 1994 , 65, 725-727	3-4	38
585	Formation of aluminum silicide between two layers of amorphous silicon. <i>Applied Physics Letters</i> , 1987 , 50, 933-934	3-4	38
584	X-ray photoelectron spectroscopy studies of Ti _{1-x} Al _x N (0 ≤ x ≤ 0.83) high-temperature oxidation: The crucial role of Al concentration. <i>Surface and Coatings Technology</i> , 2019 , 374, 923-934	4-4	37
583	Ti adatom diffusion on TiN(001): Ab initio and classical molecular dynamics simulations. <i>Surface Science</i> , 2014 , 627, 34-41	1-8	37
582	Dependence of resonance energy transfer on exciton dimensionality. <i>Physical Review Letters</i> , 2011 , 107, 236805	7-4	37
581	Electronic structure and chemical bonding in Ti ₄ SiC ₃ investigated by soft x-ray emission spectroscopy and first-principles theory. <i>Physical Review B</i> , 2006 , 74,	3-3	37
580	Unified cluster expansion method applied to the configurational thermodynamics of cubic Ti _{1-x} Al _x N. <i>Physical Review B</i> , 2011 , 83,	3-3	36
579	High-rate deposition of amorphous and nanocomposite TiSiC multifunctional coatings. <i>Surface and Coatings Technology</i> , 2010 , 205, 299-305	4-4	36
578	Hardness evolution of AlCrN coatings under thermal load. <i>Journal of Materials Research</i> , 2008 , 23, 2880-2885	2-5	36
577	Fullerene-like BCN thin films: a computational and experimental study. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2004 , 113, 242-247	3-1	36
576	Interfacial reactions in epitaxial Al/Ti _{1-x} Al _x N (0 ≤ x ≤ 0.2) model diffusion-barrier structures. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1993 , 11, 11-17	2-9	36
575	Carbon Fluoride, CF _x : Structural Diversity as Predicted by First Principles. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 6514-6521	3-8	35
574	TiAuC and TiAuC formed by solid state reaction of gold with TiAlC and TiAlC. <i>Chemical Communications</i> , 2017 , 53, 9554-9557	5-8	35
573	Novel strategy for low-temperature, high-rate growth of dense, hard, and stress-free refractory ceramic thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 041515	2-9	35
572	Synthesis of a new nanocrystalline titanium aluminum fluoride phase by reaction of Ti ₂ AlC with hydrofluoric acid. <i>RSC Advances</i> , 2011 , 1, 1493	3-7	35
571	Synthesis of phosphorus-carbide thin films by magnetron sputtering. <i>Physica Status Solidi - Rapid Research Letters</i> , 2008 , 2, 191-193	2-5	35
570	Photoemission studies of Ti ₃ SiC ₂ and nanocrystalline-TiC/amorphous-SiC nanocomposite thin films. <i>Physical Review B</i> , 2006 , 74,	3-3	35

569	Structural features of thick c-boron nitride coatings deposited via a graded B ₂ C interlayer. <i>Surface and Coatings Technology</i> , 2001 , 142-144, 881-888	4.4	35
568	Growth of fullerene-like carbon nitride thin solid films consisting of cross-linked nano-onions. <i>Applied Physics Letters</i> , 2001 , 79, 2639-2641	3.4	35
567	Formation of polyhedral voids at surface cusps during growth of epitaxial TiN/NbN superlattice and alloy films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1992 , 10, 1618-1624	2.9	35
566	Initial growth of TiN on different phases of high speed steel. <i>Thin Solid Films</i> , 1985 , 124, 163-170	2.2	35
565	Hard and elastic epitaxial ZrB ₂ thin films on Al ₂ O ₃ (0001) substrates deposited by magnetron sputtering from a ZrB ₂ compound target. <i>Acta Materialia</i> , 2016 , 111, 166-172	8.4	35
564	Low-temperature growth of boron carbide coatings by direct current magnetron sputtering and high-power impulse magnetron sputtering. <i>Journal of Materials Science</i> , 2016 , 51, 10418-10428	4.3	34
563	Mechanical and tribological behavior of silicon nitride and silicon carbon nitride coatings for total joint replacements. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013 , 25, 41-7	4.1	34
562	On the differing sensitivity to chemical gating of single and double layer epitaxial graphene explored using scanning Kelvin probe microscopy. <i>ACS Nano</i> , 2013 , 7, 4647-56	16.7	34
561	CFx thin solid films deposited by high power impulse magnetron sputtering: Synthesis and characterization. <i>Surface and Coatings Technology</i> , 2011 , 206, 646-653	4.4	34
560	Intercalation of P atoms in Fullerene-like CPx. <i>Chemical Physics Letters</i> , 2011 , 501, 400-403	2.5	34
559	Fullerene-like CSx: A first-principles study of synthetic growth. <i>Chemical Physics Letters</i> , 2011 , 506, 86-91	2.5	34
558	Dangling bond energetics in carbon nitride and phosphorus carbide thin films with fullerene-like and amorphous structure. <i>Chemical Physics Letters</i> , 2009 , 482, 110-113	2.5	34
557	Effect of silicon and oxygen doping on donor bound excitons in bulk GaN. <i>Physical Review B</i> , 2011 , 84,	3.3	34
556	Homoepitaxial growth of Ti ₃ SiC ₂ MAX-phase thin films on bulk Ti ₃ SiC ₂ substrates. <i>Journal of Crystal Growth</i> , 2007 , 304, 264-269	1.6	34
555	Structure and properties of pulsed-laser deposited carbon nitride thin films. <i>Thin Solid Films</i> , 2006 , 497, 1-6	2.2	34
554	Fullerene-like CPx: A first-principles study of the relative stability of precursors and defect energetics during synthetic growth. <i>Thin Solid Films</i> , 2006 , 515, 1028-1032	2.2	34
553	Improving the high-temperature oxidation resistance of TiB ₂ thin films by alloying with Al. <i>Acta Materialia</i> , 2020 , 196, 677-689	8.4	34
552	Ion mass spectrometry investigations of the discharge during reactive high power pulsed and direct current magnetron sputtering of carbon in Ar and Ar/N ₂ . <i>Journal of Applied Physics</i> , 2012 , 112, 013305	2.5	33

551	Aligned AlN nanowires by self-organized vapor-solid growth. <i>Nanotechnology</i> , 2009 , 20, 495304	3.4	33
550	Microstructure of high velocity oxy-fuel sprayed Ti ₂ AlC coatings. <i>Journal of Materials Science</i> , 2010 , 45, 2760-2769	4.3	33
549	Water adsorption on fullerene-like carbon nitride overcoats. <i>Thin Solid Films</i> , 2008 , 517, 1106-1110	2.2	33
548	Topotaxial growth of Ti ₂ AlN by solid state reaction in AlN(0001) multilayer thin films. <i>Applied Physics Letters</i> , 2007 , 90, 174106	3.4	33
547	AlGaInN metal-organic-chemical-vapor-deposition gas-phase chemistry in hydrogen and nitrogen diluents: First-principles calculations. <i>Chemical Physics Letters</i> , 2006 , 431, 346-351	2.5	33
546	Microstructure of BN:C films deposited on Si substrates by reactive sputtering from a B ₄ C target. <i>Thin Solid Films</i> , 1996 , 287, 193-201	2.2	33
545	A GaN/SiC hybrid material for high-frequency and power electronics. <i>Applied Physics Letters</i> , 2018 , 113, 041605	3.4	32
544	Phase transformations in face centered cubic (Al _{0.32} Cr _{0.68}) ₂ O ₃ thin films. <i>Surface and Coatings Technology</i> , 2012 , 206, 3216-3222	4.4	32
543	B_4C Multi-Grid as an Alternative to He^3 for Large Area Neutron Detectors. <i>IEEE Transactions on Nuclear Science</i> , 2013 , 60, 871-878	1.7	32
542	A theoretical investigation of mixing thermodynamics, age-hardening potential, and electronic structure of ternary M(1) _{1-x} M(2) _x B ₂ alloys with AB ₂ type structure. <i>Scientific Reports</i> , 2015 , 5, 9888	4.9	32
541	Electronic origin of structure and mechanical properties in Y and Nb alloyed TiAlN thin films. <i>International Journal of Materials Research</i> , 2011 , 102, 735-742	0.5	32
540	Age hardening in arc-evaporated ZrAlN thin films. <i>Scripta Materialia</i> , 2010 , 62, 739-741	5.6	32
539	Micro and macroscale tribological behavior of epitaxial Ti ₃ SiC ₂ thin films. <i>Wear</i> , 2008 , 264, 914-919	3.5	32
538	Temporal development of the plasma composition of a pulsed aluminum plasma stream in the presence of oxygen. <i>Applied Physics Letters</i> , 1999 , 75, 612-614	3.4	32
537	Epitaxial growth of ZrN on Si(100). <i>Applied Physics Letters</i> , 1988 , 53, 400-402	3.4	32
536	A review of the intrinsic ductility and toughness of hard transition-metal nitride alloy thin films. <i>Thin Solid Films</i> , 2019 , 688, 137479	2.2	31
535	Single-Atom-Thick Active Layers Realized in Nanolaminated Ti(AlCu)C and Its Artificial Enzyme Behavior. <i>ACS Nano</i> , 2019 , 13, 9198-9205	16.7	31
534	On the relevance of kinking to reversible hysteresis in MAX phases. <i>Acta Materialia</i> , 2014 , 69, 149-161	8.4	31

533	Direct current magnetron sputtered ZrB ₂ thin films on 4H-SiC(0001) and Si(100). <i>Thin Solid Films</i> , 2014 , 550, 285-290	2.2	31
532	Structural Patterns Arising during Synthetic Growth of Fullerene-Like Sulfocarbide. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 21124-21131	3.8	31
531	Luminescence related to high density of Mg-induced stacking faults in homoepitaxially grown GaN. <i>Physical Review B</i> , 2011 , 84,	3.3	31
530	Atomic scale interface engineering by modulated ion-assisted deposition applied to soft x-ray multilayer optics. <i>Applied Optics</i> , 2008 , 47, 4196-204	0.2	31
529	Weak electronic anisotropy in the layered nanolaminate Ti ₂ GeC. <i>Solid State Communications</i> , 2008 , 146, 498-501	1.6	31
528	Microstructure and nonbasal-plane growth of epitaxial Ti ₂ AlN thin films. <i>Journal of Applied Physics</i> , 2006 , 99, 034902	2.5	31
527	Silicon-metal clusters: Nano-templates for cluster assembled materials. <i>Thin Solid Films</i> , 2006 , 515, 1192-1196	1.9	31
526	Deposition and mechanical properties of polycrystalline Y ₂ O ₃ /ZrO ₂ superlattices. <i>Journal of Materials Research</i> , 1999 , 14, 3614-3622	2.5	31
525	Low-temperature deposition of cubic BN:C films by unbalanced direct current magnetron sputtering of a B ₄ C target. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996 , 14, 3100-3107	2.9	31
524	Phase formation of nanolaminated MoAuC and Mo(AuGa)C by a substitutional reaction within Au-capped MoGaC and MoGaC thin films. <i>Nanoscale</i> , 2017 , 9, 17681-17687	7.7	30
523	Controlling the B/Ti ratio of TiB _x thin films grown by high-power impulse magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018 , 36, 030604	2.9	30
522	Ab Initio Molecular Dynamics Simulations of Nitrogen/VN(001) Surface Reactions: Vacancy-Catalyzed N ₂ Dissociative Chemisorption, N Adatom Migration, and N ₂ Desorption. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 12503-12516	3.8	30
521	Reactive sputtering of NbC _x -based nanocomposite coatings: An up-scaling study. <i>Surface and Coatings Technology</i> , 2014 , 253, 100-108	4.4	30
520	Electron/phonon coupling in group-IV transition-metal and rare-earth nitrides. <i>Journal of Applied Physics</i> , 2013 , 114, 193708	2.5	30
519	Large piezoelectric response of quaternary wurtzite nitride alloys and its physical origin from first principles. <i>Physical Review B</i> , 2015 , 92,	3.3	30
518	Configurational disorder effects on adatom mobilities on Ti _{1-x} Al _x N(001) surfaces from first principles. <i>Physical Review B</i> , 2012 , 85,	3.3	30
517	Neutron diffraction measurements and first-principles study of thermal motion of atoms in select Mn _{1-x} Al _x N and binary MX transition-metal carbide phases. <i>Physical Review B</i> , 2012 , 86,	3.3	30
516	Electronic structure and chemical bonding of amorphous chromium carbide thin films. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 225004	1.8	30

515	Oxidation of Ti ₂ AlC bulk and spray deposited coatings. <i>Corrosion Science</i> , 2010 , 52, 3955-3961	6.8	30
514	Nucleation and growth of Ti ₂ AlN thin films deposited by reactive magnetron sputtering onto MgO(111). <i>Journal of Applied Physics</i> , 2007 , 102, 074916	2.5	30
513	Interface structure of hydride vapor phase epitaxial GaN grown with high-temperature reactively sputtered AlN buffer. <i>Applied Physics Letters</i> , 2000 , 76, 1860-1862	3.4	30
512	Ar incorporation in epitaxial TiN films deposited by reactive magnetron sputtering in mixed Ar/N ₂ discharges. <i>Applied Physics Letters</i> , 1988 , 53, 1175-1177	3.4	30
511	Controlling the boron-to-titanium ratio in magnetron-sputter-deposited TiB _x thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017 , 35, 050601	2.9	29
510	Characterization of magnetron sputtered CrB and CrBC thin films for electrical contact applications. <i>Surface and Coatings Technology</i> , 2015 , 266, 167-176	4.4	29
509	Strategy for tuning the average charge state of metal ions incident at the growing film during HIPIMS deposition. <i>Vacuum</i> , 2015 , 116, 36-41	3.7	29
508	Effect of Al substitution on Ti, Al, and N adatom dynamics on TiN(001), (011), and (111) surfaces. <i>Surface Science</i> , 2014 , 630, 28-40	1.8	29
507	YxAl _{1-x} N thin films. <i>Journal Physics D: Applied Physics</i> , 2012 , 45, 422001	3	29
506	10B multi-grid proportional gas counters for large area thermal neutron detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2013 , 720, 116-121	1.2	29
505	CFx: A first-principles study of structural patterns arising during synthetic growth. <i>Chemical Physics Letters</i> , 2011 , 516, 62-67	2.5	29
504	Electronic-structure origin of the anisotropic thermopower of nanolaminated Ti ₃ SiC ₂ determined by polarized x-ray spectroscopy and Seebeck measurements. <i>Physical Review B</i> , 2012 , 85,	3.3	29
503	Porosity Depth Profiling of Thin Porous Silicon Layers by use of Variable-Angle Spectroscopic Ellipsometry: A Porosity Graded-Layer Model. <i>Applied Optics</i> , 1998 , 37, 4130-6	1.7	29
502	Characterization of highly boron-doped Si, Si _{1-x} Gex and Ge layers by high-resolution transmission electron microscopy. <i>Journal of Crystal Growth</i> , 1995 , 157, 80-84	1.6	29
501	CoSi ₂ /Si _{1-x} Gex/Si(001) heterostructures formed through different reaction routes: Silicidation-induced strain relaxation, defect formation, and interlayer diffusion. <i>Journal of Applied Physics</i> , 1995 , 78, 7063-7069	2.5	29
500	Characterization of highly Sb-doped Si using high-resolution x-ray diffraction and transmission electron microscopy. <i>Journal of Applied Physics</i> , 1994 , 76, 763-767	2.5	29
499	delta -function-shaped Sb-doping profiles in Si(001) obtained using a low-energy accelerated-ion source during molecular-beam epitaxy. <i>Physical Review B</i> , 1992 , 46, 7551-7558	3.3	29
498	Growth and structural characterization of single-crystal (001) oriented Mo ₂ V superlattices. <i>Vacuum</i> , 1990 , 41, 1231-1233	3.7	29

497	Nitrogen-doped bcc-Cr films: Combining ceramic hardness with metallic toughness and conductivity. <i>Scripta Materialia</i> , 2016 , 122, 40-44	5.6	29
496	Unprecedented Al supersaturation in single-phase rock salt structure VALN films by Al+ subplantation. <i>Journal of Applied Physics</i> , 2017 , 121, 171907	2.5	28
495	Elastic properties and plastic deformation of TiC- and VC-based pseudobinary alloys. <i>Acta Materialia</i> , 2018 , 144, 376-385	8.4	28
494	Effects of atomic ordering on the elastic properties of TiN- and VN-based ternary alloys. <i>Thin Solid Films</i> , 2014 , 571, 145-153	2.2	28
493	Ti and N adatom descent pathways to the terrace from atop two-dimensional TiN/TiN(001) islands. <i>Thin Solid Films</i> , 2014 , 558, 37-46	2.2	28
492	Cu diffusion in single-crystal and polycrystalline TiN barrier layers: A high-resolution experimental study supported by first-principles calculations. <i>Journal of Applied Physics</i> , 2015 , 118, 085307	2.5	28
491	First-order Raman scattering of the MAX phases Ta ₄ AlC ₃ , Nb ₄ AlC ₃ , Ti ₄ AlN ₃ , and Ta ₂ AlC. <i>Journal of Raman Spectroscopy</i> , 2012 , 43, 954-958	2.3	28
490	Annealing of Thermally Sprayed Ti ₂ AlC Coatings. <i>International Journal of Applied Ceramic Technology</i> , 2011 , 8, 74-84	2	28
489	Protein adsorption on thin films of carbon and carbon nitride monitored with in situ ellipsometry. <i>Acta Biomaterialia</i> , 2011 , 7, 1369-78	10.8	28
488	Thermal stability and mechanical properties of arc evaporated ZrN/ZrAlN multilayers. <i>Thin Solid Films</i> , 2010 , 519, 694-699	2.2	28
487	Microstructure evolution and age hardening in (Ti,Si)(C,N) thin films deposited by cathodic arc evaporation. <i>Thin Solid Films</i> , 2010 , 519, 1397-1403	2.2	28
486	Mechanical and tribological properties of CN _x films deposited by reactive pulsed laser ablation. <i>Diamond and Related Materials</i> , 2002 , 11, 98-104	3.5	28
485	Microstructure of amorphous C:H and metal-containing C:H films deposited on steel substrates. <i>Thin Solid Films</i> , 1993 , 232, 169-179	2.2	28
484	Phonon and electron contributions to the thermal conductivity of VN _x epitaxial layers. <i>Physical Review Materials</i> , 2017 , 1,	3.2	28
483	Improved adhesion of carbon nitride coatings on steel substrates using metal HiPIMS pretreatments. <i>Surface and Coatings Technology</i> , 2016 , 302, 454-462	4.4	28
482	Synthesis of MAX phases Nb ₂ CuC and Ti ₂ (Al _{0.1} Cu _{0.9})N by A-site replacement reaction in molten salts. <i>Materials Research Letters</i> , 2019 , 7, 510-516	7.4	27
481	N and Ti adatom dynamics on stoichiometric polar TiN(111) surfaces. <i>Surface Science</i> , 2016 , 649, 72-79	1.8	27
480	Structure and composition of silicon nitride and silicon carbon nitride coatings for joint replacements. <i>Surface and Coatings Technology</i> , 2013 , 235, 827-834	4.4	27

479	Strong electron correlations stabilize paramagnetic cubic Cr _{1-x} Al _x N solid solutions. <i>Applied Physics Letters</i> , 2013 , 102, 031910	3.4	27
478	Nanolabyrinthine ZrAlN thin films by self-organization of interwoven single-crystal cubic and hexagonal phases. <i>APL Materials</i> , 2013 , 1, 022105	5.7	27
477	The Reactivity of Ti ₂ AlC and Ti ₃ SiC ₂ with SiC Fibers and Powders up to Temperatures of 1550°C. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 1737-1743	3.8	27
476	Effects of volume mismatch and electronic structure on the decomposition of ScAlN and TiAlN solid solutions. <i>Physical Review B</i> , 2010 , 81,	3.3	27
475	Interfacial void formation during vapor phase growth of 3C-SiC on Si(0 0 1) and Si(1 1 1) substrates. Characterization by transmission electron microscopy. <i>Journal of Crystal Growth</i> , 1997 , 182, 379-388	1.6	27
474	Metastable behavior of the UV luminescence in Mg-doped GaN layers grown on quasibulk GaN templates. <i>Applied Physics Letters</i> , 2007 , 91, 221901	3.4	27
473	The effect of carbon and germanium on phase transformation of nickel on Si _{1-x} Ge _x Cy epitaxial layers. <i>Journal of Applied Physics</i> , 2004 , 95, 2397-2402	2.5	27
472	Electrical properties of carbon nitride thin films: Role of morphology and hydrogen content. <i>Journal of Electronic Materials</i> , 2002 , 31, L11-L15	1.9	27
471	Characterization of the metal-insulator interface of field-effect chemical sensors. <i>Journal of Applied Physics</i> , 2003 , 93, 9760-9768	2.5	27
470	Microstructural and infrared optical properties of electrochemically etched highly doped 4H-SiC. <i>Journal of Applied Physics</i> , 2000 , 87, 8497-8503	2.5	27
469	Strategy for simultaneously increasing both hardness and toughness in ZrB ₂ -rich Zr _{1-x} TaxBy thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 031506	2.9	26
468	Phase stability of Cr _{n+1} Ga _n MAX phases from first principles and Cr ₂ GaC thin-film synthesis using magnetron sputtering from elemental targets. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013 , 7, 971-974	2.5	26
467	Size dependent carrier recombination in ZnO nanocrystals. <i>Applied Physics Letters</i> , 2010 , 97, 131909	3.4	26
466	Investigation of Thermal Stability and Degradation Mechanisms in Ni-Based Ohmic Contacts to n-Type SiC for High-Temperature Gas Sensors. <i>Journal of Electronic Materials</i> , 2009 , 38, 569-573	1.9	26
465	Industrial-scale deposition of highly adherent CN _x films on steel substrates. <i>Surface and Coatings Technology</i> , 2010 , 204, 3349-3357	4.4	26
464	Radio frequency dual magnetron sputtering deposition and characterization of nanocomposite Al ₂ O ₃ -TiO ₂ thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2006 , 24, 309-316	2.9	26
463	Enhanced quality of epitaxial AlN thin films on 6H-SiC by ultra-high-vacuum ion-assisted reactive dc magnetron sputter deposition. <i>Applied Physics Letters</i> , 2000 , 76, 170-172	3.4	26
462	On picoscale models of physically vapor-deposited films of titanium nitride. <i>Surface and Coatings Technology</i> , 1991 , 49, 181-187	4.4	26

461	Effects of incident N atom kinetic energy on TiN/TiN(001) film growth dynamics: A molecular dynamics investigation. <i>Journal of Applied Physics</i> , 2017 , 121, 025302	2.5	25
460	Self-Healing in Carbon Nitride Evidenced As Material Inflation and Superlubric Behavior. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 16238-16243	9.5	25
459	Magnetic properties of Cr ₂ AlB ₂ , Cr ₃ AlB ₄ , and CrB powders. <i>Journal of Alloys and Compounds</i> , 2018 , 767, 474-482	5.7	25
458	Structural and mechanical properties of corundum and cubic (Al _x Cr _{1-x}) ₂ +yO ₃ coatings grown by reactive cathodic arc evaporation in as-deposited and annealed states. <i>Acta Materialia</i> , 2013 , 61, 4811-4822	8.4	25
457	Age hardening in (Ti _{1-x} Al _x)B ₂ + δ thin films. <i>Scripta Materialia</i> , 2017 , 127, 122-126	5.6	25
456	Single-monolayer SiN _x embedded in TiN: A first-principles study. <i>Physical Review B</i> , 2010 , 81,	3.3	25
455	Heteroepitaxial ZnO nano hexagons on p-type SiC. <i>Journal of Crystal Growth</i> , 2010 , 312, 327-332	1.6	25
454	Microstructure evolution of TiSiC _{0.4} Ag nanocomposite coatings deposited by DC magnetron sputtering. <i>Acta Materialia</i> , 2010 , 58, 6592-6599	8.4	25
453	Metastability of fcc-related Si-N phases. <i>Physical Review B</i> , 2008 , 78,	3.3	25
452	Anisotropy in the electronic structure of V ₂ GeC investigated by soft x-ray emission spectroscopy and first-principles theory. <i>Physical Review B</i> , 2008 , 78,	3.3	25
451	Acoustic streaming enhanced electrodeposition of nickel. <i>Chemical Physics Letters</i> , 2003 , 368, 732-737	2.5	25
450	How hard is fullerene-like CN _x ? Some observations from the nanoindentation response of a magnetron-sputtered coating. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2002 , 82, 2133-2147		25
449	Composition and structure of epitaxial SiC films grown by reactive magnetron sputtering on Si(100) substrates. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1992 , 11, 61-66	3.1	25
448	First measurements with new high-resolution gadolinium-GEM neutron detectors. <i>Journal of Instrumentation</i> , 2016 , 11, P05011-P05011	1	25
447	Al capping layers for nondestructive x-ray photoelectron spectroscopy analyses of transition-metal nitride thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 05E101	2.9	24
446	Electronic structure and chemical bonding anisotropy investigation of wurtzite AlN. <i>Physical Review B</i> , 2009 , 80,	3.3	24
445	Electronic structure investigation of the cubic inverse perovskite Sc ₃ AlN. <i>Physical Review B</i> , 2008 , 78,	3.3	24
444	Incorporation of nitrogen in CrB ₂ multilayers giving improved soft x-ray reflectivity. <i>Applied Physics Letters</i> , 2008 , 92, 091913	3.4	24

- 443 Sc₃AlN \square A New Perovskite. *European Journal of Inorganic Chemistry*, **2008**, 2008, 1193-1195 2.3 24
- 442 Deposition of single-crystal Ti₂AlN thin films by reactive magnetron sputtering from a 2Ti:Al compound target. *Journal of Applied Physics*, **2007**, 102, 074918 2.5 24
- 441 MgTi₂Si₂ spinel formation by interfacial solid-state reaction at the TiN/MgO interface. *Journal of Materials Research*, **1989**, 4, 1266-1271 2.5 24
- 440 Device applications of epitaxial graphene on silicon carbide. *Vacuum*, **2016**, 128, 186-197 3.7 24
- 439 Growth, nanostructure, and optical properties of epitaxial VN_x/MgO(001) (0.80 \leq x \leq 1.00) layers deposited by reactive magnetron sputtering. *Journal of Materials Chemistry C*, **2016**, 4, 7924-7938 7.1 24
- 438 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 1.6 23
- 437 Self-organized anisotropic (Zr_{1-x}Bi_x)N nanocomposites grown by reactive sputter deposition. *Acta Materialia*, **2015**, 82, 179-189 8.4 23
- 436 Effect of substrate temperature on properties of diamond-like films deposited by combined DC impulse vacuum-arc method. *Surface and Coatings Technology*, **2013**, 236, 444-449 4.4 23
- 435 Filtered pulsed cathodic arc deposition of fullerene-like carbon and carbon nitride films. *Journal of Applied Physics*, **2014**, 115, 144312 2.5 23
- 434 InGaN quantum dot formation mechanism on hexagonal GaN/InGaN/GaN pyramids. *Nanotechnology*, **2012**, 23, 305708 3.4 23
- 433 Adhesion improvement of carbon-based coatings through a high ionization deposition technique. *Journal of Physics: Conference Series*, **2012**, 370, 012009 0.3 23
- 432 Effect of strain on low-loss electron energy loss spectra of group-III nitrides. *Physical Review B*, **2011**, 84, 3.3 23
- 431 Deviations from Vegard's rule in Al_{1-x}In_xN (0001) alloy thin films grown by magnetron sputter epitaxy. *Journal of Applied Physics*, **2007**, 101, 043519 2.5 23
- 430 Large-scale molecular dynamics simulations of TiN/TiN(001) epitaxial film growth. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2016**, 34, 041509 2.9 23
- 429 Multi-Grid detector for neutron spectroscopy: results obtained on time-of-flight spectrometer CNCS. *Journal of Instrumentation*, **2017**, 12, P04030-P04030 1 22
- 428 Low-temperature growth of dense and hard Ti_{0.41}Al_{0.51}Ta_{0.08}N films via hybrid HIPIMS/DC magnetron co-sputtering with synchronized metal-ion irradiation. *Journal of Applied Physics*, **2017**, 121, 171902 2.5 22
- 427 Synthesis of atomically layered and chemically ordered rare-earth (RE) i-MAX phases; (Mo₂/3RE₁/3)₂GaC with RE = Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu. *Materials Research Letters*, **2019**, 7, 446-452 7.4 22
- 426 Gas phase chemical vapor deposition chemistry of triethylboron probed by boron-carbon thin film deposition and quantum chemical calculations. *Journal of Materials Chemistry C*, **2015**, 3, 10898-10906 7.1 22

425	The μ PC method: improving the position resolution of neutron detectors based on MPGDs. <i>Journal of Instrumentation</i> , 2015 , 10, P04004-P04004	1	22
424	TiB ₂ nanocomposite coatings deposited by magnetron sputtering. <i>Applied Surface Science</i> , 2012 , 258, 9907-9912	6.7	22
423	Elastic constants, composition, and piezoelectric polarization in In _x Al _{1-x} N: From ab initio calculations to experimental implications for the applicability of Vegard's rule. <i>Physical Review B</i> , 2012 , 86,	3.3	22
422	Influence of gate metal film growth parameters on the properties of gas sensitive field-effect devices. <i>Thin Solid Films</i> , 2002 , 409, 233-242	2.2	22
421	Synthesis and mechanical properties of boron suboxide thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 335-337	2.9	22
420	Mg ₂ Ti spinel formation at the TiN/MgO interface by solid state reaction: Confirmation by high-resolution electron microscopy. <i>Journal of Materials Research</i> , 1991 , 6, 1744-1749	2.5	22
419	Boridene: Two-dimensional MoB with ordered metal vacancies obtained by chemical exfoliation. <i>Science</i> , 2021 , 373, 801-805	33.3	22
418	Adaptive hard and tough mechanical response in single-crystal B1 VN _x ceramics via control of anion vacancies. <i>Acta Materialia</i> , 2020 , 192, 78-88	8.4	21
417	SiN _x Coatings Deposited by Reactive High Power Impulse Magnetron Sputtering: Process Parameters Influencing the Nitrogen Content. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 20385-95	9.5	21
416	Synthesis of (VSc)AlC i-MAX phase and VC MXene scrolls. <i>Nanoscale</i> , 2019 , 11, 14720-14726	7.7	21
415	Configurational order-disorder induced metal-nonmetal transition in B13C2 studied with first-principles superatom-special quasirandom structure method. <i>Physical Review B</i> , 2015 , 92,	3.3	21
414	Optical properties of C-doped bulk GaN wafers grown by halide vapor phase epitaxy. <i>Journal of Applied Physics</i> , 2014 , 116, 223503	2.5	21
413	10B multi-grid proportional gas counters for large area thermal neutron detectors. <i>Neutron News</i> , 2012 , 23, 20-25	0.4	21
412	Study of planar defect filtering in InP grown on Si by epitaxial lateral overgrowth. <i>Optical Materials Express</i> , 2013 , 3, 1960	2.6	21
411	Epitaxial growth and electrical-transport properties of Ti ₇ Si ₂ C ₅ thin films synthesized by reactive sputter-deposition. <i>Scripta Materialia</i> , 2011 , 65, 811-814	5.6	21
410	Epitaxy of Ultrathin NiSi ₂ Films with Predetermined Thickness. <i>Electrochemical and Solid-State Letters</i> , 2011 , 14, H268		21
409	Influence of chemical composition and deposition conditions on microstructure evolution during annealing of arc evaporated ZrAlN thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2012 , 30, 031504	2.9	21
408	Influence of different atmospheres on the thermal decomposition of Al-Cr-N coatings. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 155316	3	21

407	Microstructure and electrical properties of TiSiC _x Ag nanocomposite thin films. <i>Surface and Coatings Technology</i> , 2007 , 201, 6465-6469	4.4	21
406	High-temperature stability of epitaxial, non-isostructural Mo/NbN superlattices. <i>Journal of Materials Research</i> , 2000 , 15, 554-559	2.5	21
405	Grazing incidence x-ray diffraction studies of the initial growth of Pd on MgO(001). <i>Applied Physics Letters</i> , 1996 , 68, 2636-2638	3.4	21
404	Dual-unbalanced magnetron deposition of TiN films. <i>Surface and Coatings Technology</i> , 1992 , 50, 255-262	4.4	21
403	Magnetic properties and structural characterization of layered (Cr _{0.5} Mn _{0.5}) ₂ AuC synthesized by thermally induced substitutional reaction in (Cr _{0.5} Mn _{0.5}) ₂ GaC. <i>APL Materials</i> , 2018 , 6, 026104	5.7	20
402	Initial growth of Pd on MgO(001). <i>Journal of Crystal Growth</i> , 1998 , 186, 189-202	1.6	20
401	Growth and physical properties of epitaxial metastable Hf _{1-x} Al _x N alloys deposited on MgO(001) by ultrahigh vacuum reactive magnetron sputtering. <i>Surface and Coatings Technology</i> , 2007 , 202, 809-814	4.4	20
400	Direct current magnetron sputtering deposition of nanocomposite alumina/zirconia thin films. <i>Thin Solid Films</i> , 2008 , 516, 8352-8358	2.2	20
399	Electrical resistivity of Ti _n +1Ac _n (A = Si, Ge, Sn, n = 1-8) thin films. <i>Journal of Materials Research</i> , 2007 , 22, 2279-2287	2.5	20
398	Imaging of fullerene-like structures in CN _x thin films by electron microscopy; sample preparation artefacts due to ion-beam milling. <i>Ultramicroscopy</i> , 2003 , 94, 163-73	3.1	20
397	Structural and mechanical properties of diamond-like carbon films deposited by direct current magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2003 , 21, 851-859	2.9	20
396	Doping of Silicon Carbide by Ion Implantation. <i>Materials Science Forum</i> , 2001 , 353-356, 549-554	0.4	20
395	Growth of CN _x /BN:C multilayer films by magnetron sputtering. <i>Thin Solid Films</i> , 2000 , 360, 17-23	2.2	20
394	Effects of surface vibrations on interlayer mass transport: Ab initio molecular dynamics investigation of Ti adatom descent pathways and rates from TiN/TiN(001) islands. <i>Physical Review B</i> , 2018 , 97,	3.3	19
393	Si incorporation in Ti _{1-x} Si _x N films grown on TiN(001) and (001)-faceted TiN(111) columns. <i>Surface and Coatings Technology</i> , 2014 , 257, 121-128	4.4	19
392	Development of a novel macrostructured cathode for large-area neutron detectors based on the ¹⁰ B-containing solid converter. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2013 , 727, 109-125	1.2	19
391	Thermally induced substitutional reaction of Fe into Mo ₂ GaC thin films. <i>Materials Research Letters</i> , 2017 , 5, 533-539	7.4	19
390	Room-temperature heteroepitaxy of single-phase Al _{1-x} In _x N films with full composition range on isostructural wurtzite templates. <i>Thin Solid Films</i> , 2012 , 524, 113-120	2.2	19

389	Real-time control of AlN incorporation in epitaxial Hf _{1-x} Al _x N using high-flux, low-energy (10 ²⁰ eV) ion bombardment during reactive magnetron sputter deposition from a Hf _{0.7} Al _{0.3} alloy target. <i>Acta Materialia</i> , 2011 , 59, 421-428	8.4	19
388	Growth and Structure of ZnO Nanorods on a Sub-Micrometer Glass Pipette and Their Application as Intracellular Potentiometric Selective Ion Sensors. <i>Materials</i> , 2010 , 3, 4657-4667	3.5	19
387	Nano-wire formation by self-assembly of silicon-metal cage-like molecules. <i>Chemical Physics Letters</i> , 2008 , 458, 170-174	2.5	19
386	Nanoindentation response of high performance fullerene-like CN _x . <i>Thin Solid Films</i> , 2006 , 494, 63-68	2.2	19
385	Temporal development of the composition of Zr and Cr cathodic arc plasma streams in a N ₂ environment. <i>Journal of Applied Physics</i> , 2003 , 94, 1414-1419	2.5	19
384	Low temperature epitaxial growth of metal carbides using fullerenes. <i>Surface and Coatings Technology</i> , 2001 , 142-144, 817-822	4.4	19
383	Phase formation and microstructure of Nb _{1-x} Al _x N alloy films grown on MgO (001) by reactive sputtering: a new ternary phase. <i>Vacuum</i> , 1995 , 46, 1401-1406	3.7	19
382	Ion irradiation effects during growth of Mo/V(001) superlattices by dual-target magnetron sputtering. <i>Journal of Crystal Growth</i> , 1992 , 121, 399-412	1.6	19
381	Growth of epitaxial TiN thin films on Si(100) by reactive magnetron sputtering. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1991 , 9, 221		19
380	In-situ observation of self-cleansing phenomena during ultra-high vacuum anneal of transition metal nitride thin films: Prospects for non-destructive photoelectron spectroscopy. <i>Applied Physics Letters</i> , 2016 , 109, 211602	3.4	19
379	Microstructural evolution and thermal stability of HfN/ScN, ZrN/ScN, and Hf _{0.5} Zr _{0.5} N/ScN metal/semiconductor superlattices. <i>Journal of Materials Science</i> , 2016 , 51, 8250-8258	4.3	18
378	A comparative study of direct current magnetron sputtering and high power impulse magnetron sputtering processes for CN _x thin film growth with different inert gases. <i>Diamond and Related Materials</i> , 2016 , 64, 13-26	3.5	18
377	Characterization of plasma chemistry and ion energy in cathodic arc plasma from Ti-Si cathodes of different compositions. <i>Journal of Applied Physics</i> , 2013 , 113, 163304	2.5	18
376	Magnetic-field-dependent plasma composition of a pulsed arc in a high-vacuum ambient. <i>Applied Physics Letters</i> , 2000 , 76, 1531-1533	3.4	18
375	Sputter cleaning and smoothening of GaAs(001) using glancing-angle ion bombardment. <i>Applied Physics Letters</i> , 1995 , 66, 3114-3116	3.4	18
374	Strain-induced growth-mode transition of V in epitaxial Mo/V(001) superlattices. <i>Physical Review B</i> , 1996 , 53, 8114-8123	3.3	18
373	Rolling contact fatigue of bearing components coated with carbon nitride thin films. <i>Tribology International</i> , 2016 , 98, 100-107	4.9	18
372	Efficient and Tunable Electroluminescence from In Situ Synthesized Perovskite Quantum Dots. <i>Small</i> , 2019 , 15, e1804947	11	17

371	Atomic-Scale Tuning of Graphene/Cubic SiC Schottky Junction for Stable Low-Bias Photoelectrochemical Solar-to-Fuel Conversion. <i>ACS Nano</i> , 2020 , 14, 4905-4915	16.7	17
370	Enhanced TiTaN diffusion barriers, grown by a hybrid sputtering technique with no substrate heating, between Si(001) wafers and Cu overlayers. <i>Scientific Reports</i> , 2018 , 8, 5360	4.9	17
369	High-temperature nanoindentation of epitaxial ZrB ₂ thin films. <i>Scripta Materialia</i> , 2016 , 124, 117-120	5.6	17
368	Unintentional carbide formation evidenced during high-vacuum magnetron sputtering of transition metal nitride thin films. <i>Applied Surface Science</i> , 2016 , 385, 356-359	6.7	17
367	Influence of inert gases on the reactive high power pulsed magnetron sputtering process of carbon-nitride thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013 , 31, 011503	2.9	17
366	Luminescence of Acceptors in Mg-Doped GaN. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 08JJ03	1.4	17
365	Selective homoepitaxial growth and luminescent properties of ZnO nanopillars. <i>Nanotechnology</i> , 2011 , 22, 185603	3.4	17
364	Phase Evaluation in Al ₂ O ₃ Fiber-Reinforced Ti ₂ AlC During Sintering in the 1300°C–500°C Temperature Range. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 3327-3334	3.8	17
363	Characterization of worn TiB ₂ cathodes used for reactive cathodic arc evaporation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010 , 28, 347-353	2.9	17
362	Phase-stabilization and substrate effects on nucleation and growth of (Ti,V) _{n+1} GeC _n thin films. <i>Journal of Applied Physics</i> , 2011 , 110, 053516	2.5	17
361	A new silicon phosphide, Si ₁₂ P ₅ : Formation conditions, structure, and properties. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1997 , 15, 394-401	2.9	17
360	Growth and Property Characterization of Epitaxial MAX-Phase Thin Films from the Ti _{n+1} (Si, Ge, Sn) _n Systems. <i>Advances in Science and Technology</i> , 2006 , 45, 2648-2655	0.1	17
359	Kinetic pathways leading to layer-by-layer growth from hyperthermal atoms: A multibillion time step molecular dynamics study. <i>Physical Review B</i> , 2007 , 76,	3.3	17
358	Low-energy ion irradiation during film growth: Kinetic pathways leading to enhanced adatom migration rates. <i>Applied Physics Letters</i> , 2005 , 86, 211915	3.4	17
357	Effects of configurational disorder on the elastic properties of icosahedral boron-rich alloys based on B ₆ O, B ₁₃ C ₂ , and B ₄ C, and their mixing thermodynamics. <i>Journal of Chemical Physics</i> , 2016 , 144, 134503	3.9	17
356	V _{0.5} Mo _{0.5} N _x /MgO(001): Composition, nanostructure, and mechanical properties as a function of film growth temperature. <i>Acta Materialia</i> , 2017 , 126, 194-201	8.4	16
355	Rolling performance of carbon nitride-coated bearing components in different lubrication regimes. <i>Tribology International</i> , 2017 , 114, 141-151	4.9	16
354	Microstructure and materials properties of understoichiometric TiB _x thin films grown by HiPIMS. <i>Surface and Coatings Technology</i> , 2020 , 404, 126537	4.4	16

353	Metal-ion subplantation: A game changer for controlling nanostructure and phase formation during film growth by physical vapor deposition. <i>Journal of Applied Physics</i> , 2020 , 127, 180901	2.5	16
352	X-ray Photoelectron Spectroscopy Analyses of the Electronic Structure of Polycrystalline Ti _{1-x} Al _x N Thin Films with 0 ≤ x ≤ 0.96. <i>Surface Science Spectra</i> , 2014 , 21, 35-49	1.2	16
351	Magnetron sputtering of epitaxial ZrB ₂ thin films on 4H-SiC(0001) and Si(111). <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014 , 211, 636-640	1.6	16
350	Correlation between Si doping and stacking fault related luminescence in homoepitaxial m-plane GaN. <i>Applied Physics Letters</i> , 2013 , 103, 192101	3.4	16
349	Step-flow growth of nanolaminate Ti ₃ SiC ₂ epitaxial layers on 4H-SiC(0 0 0 1). <i>Scripta Materialia</i> , 2011 , 64, 1141-1144	5.6	16
348	Stability of the ternary perovskites Sc ₃ EN (E=B,Al,Ga,In) from first principles. <i>Physical Review B</i> , 2009 , 79,	3.3	16
347	Experiments and modeling of dual reactive magnetron sputtering using two reactive gases. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2008 , 26, 565-570	2.9	16
346	Dynamics of bound excitons versus thickness in freestanding GaN wafers grown by halide vapor phase epitaxy. <i>Applied Physics Letters</i> , 2007 , 90, 221904	3.4	16
345	Epitaxial TiC/SiC multilayers. <i>Physica Status Solidi - Rapid Research Letters</i> , 2007 , 1, 113-115	2.5	16
344	248nm cathodoluminescence in Al _{1-x} In _x N(0001) thin films grown on lattice-matched Ti _{1-x} Zr _x N(111) seed layers by low temperature magnetron sputter epitaxy. <i>Applied Physics Letters</i> , 2006 , 89, 181928	3.4	16
343	Dislocation loop evolution in ion implanted 4H-SiC. <i>Journal of Applied Physics</i> , 2003 , 93, 9395-9397	2.5	16
342	Synchrotron x-ray diffraction and transmission electron microscopy studies of interfacial reaction paths and kinetics during annealing of fully-002-textured Al/TiN bilayers. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 182-191	2.9	16
341	In situ scanning tunneling microscopic and spectroscopic investigation of magnetron-sputtered C and CN thin films. <i>Physical Review B</i> , 2000 , 61, 4898-4903	3.3	16
340	Damage-free cleaning of Si(001) using glancing-angle ion bombardment. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1998 , 16, 1885		16
339	Growth and characterization of 3C-SiC films on Si substrates by reactive magnetron sputtering; effects of CH ₄ partial pressure on the crystalline quality, structure and stoichiometry. <i>Thin Solid Films</i> , 1995 , 261, 317-321	2.2	16
338	Effect of substrate bias on the protective properties of TiN films grown by reactive magnetron sputtering onto Cu substrates. <i>Applied Surface Science</i> , 1989 , 40, 121-128	6.7	16
337	Liquid-target reactive magnetron sputter epitaxy of High quality GaN(0001) nanorods on Si(111). <i>Materials Science in Semiconductor Processing</i> , 2015 , 39, 702-710	4.3	15
336	Curved-lattice epitaxial growth of In _x Al _(1-x) N nanospirals with tailored chirality. <i>Nano Letters</i> , 2015 , 15, 294-300	11.5	15

335	Incorporation effects of Si in TiC x thin films. <i>Surface and Coatings Technology</i> , 2014 , 258, 392-397	4.4	15
334	Oxygen incorporation in Ti ₂ AlC thin films studied by electron energy loss spectroscopy and ab initio calculations. <i>Journal of Materials Science</i> , 2013 , 48, 3686-3691	4.3	15
333	Extended metastable Al solubility in cubic VAlN by metal-ion bombardment during pulsed magnetron sputtering: film stress vs subplantation. <i>Journal of Applied Physics</i> , 2017 , 122, 025304	2.5	15
332	First-principles study of the SiN _x /TiN(001) interface. <i>Physical Review B</i> , 2012 , 85,	3.3	15
331	Blind deconvolution of time-of-flight mass spectra from atom probe tomography. <i>Ultramicroscopy</i> , 2013 , 132, 60-4	3.1	15
330	Theoretical investigation of cubic B1-like and corundum (Cr _{1-x} Al _x) ₂ O ₃ solid solutions. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013 , 31, 030602	2.9	15
329	TiSi ₂ thin films grown by reactive arc evaporation from Ti ₃ SiC ₂ cathodes. <i>Journal of Materials Research</i> , 2011 , 26, 874-881	2.5	15
328	Morphological evolution during epitaxial lateral overgrowth of indium phosphide on silicon. <i>Journal of Crystal Growth</i> , 2011 , 332, 27-33	1.6	15
327	On Different Process Schemes for MOSFETs With a Controllable NiSi-Based Metallic Source/Drain. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 1898-1906	2.9	15
326	Two-domain formation during the epitaxial growth of GaN (0001) on c-plane Al ₂ O ₃ (0001) by high power impulse magnetron sputtering. <i>Journal of Applied Physics</i> , 2011 , 110, 123519	2.5	15
325	Water adsorption on phosphorous-carbide thin films. <i>Surface and Coatings Technology</i> , 2009 , 204, 1035-1039	1.4	15
324	Mixing thermodynamics of TM _{1-x} GdxN (TM=Ti,Zr,Hf) from first principles. <i>Applied Physics Letters</i> , 2011 , 98, 241911	3.4	15
323	Phase transformations in nanocomposite ZrAlN thin films during annealing. <i>Journal of Materials Research</i> , 2012 , 27, 1716-1724	2.5	15
322	Carbide and nanocomposite thin films in the TiB ₂ C system. <i>Thin Solid Films</i> , 2010 , 518, 5104-5109	2.2	15
321	Thermal stability and age hardening of supersaturated AlCrN hard coatings. <i>International Heat Treatment and Surface Engineering</i> , 2007 , 1, 75-79		15
320	Single crystal CrN/ScN superlattice soft X-ray mirrors: Epitaxial growth, structure, and properties. <i>Thin Solid Films</i> , 2006 , 514, 10-19	2.2	15
319	Cryogenic deposition of carbon nitride thin solid films by reactive magnetron sputtering; suppression of the chemical desorption processes. <i>Thin Solid Films</i> , 2005 , 478, 34-41	2.2	15
318	Growth and electronic properties of epitaxial TiN thin films on 3C-SiC(001) and 6H-SiC(0001) substrates by reactive magnetron sputtering. <i>Journal of Materials Research</i> , 1996 , 11, 2458-2462	2.5	15

317	Atom probe tomography study of Mg-doped GaN layers. <i>Nanotechnology</i> , 2014 , 25, 275701	3.4	15
316	Synthesis and characterization of $(\text{Ti}_{1-x}\text{Al}_x)\text{B}_2$ thin films from combinatorial magnetron sputtering. <i>Thin Solid Films</i> , 2019 , 669, 181-187	2.2	15
315	Tailoring of surface plasmon resonances in $\text{TiN}/(\text{Al}_{0.72}\text{Sc}_{0.28})\text{N}$ multilayers by dielectric layer thickness variation. <i>Journal of Materials Science</i> , 2018 , 53, 4001-4009	4.3	15
314	Nb-B-C thin films for electrical contact applications deposited by magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 041503	2.9	14
313	In-beam test of the Boron-10 Multi-Grid neutron detector at the IN6 time-of-flight spectrometer at the ILL. <i>Journal of Physics: Conference Series</i> , 2014 , 528, 012040	0.3	14
312	Reactive high power impulse magnetron sputtering of CF_x thin films in mixed Ar/CF_4 and $\text{Ar}/\text{C}_4\text{F}_8$ discharges. <i>Thin Solid Films</i> , 2013 , 542, 21-30	2.2	14
311	Characterization of amorphous and nanocomposite NbSi_2 thin films deposited by DC magnetron sputtering. <i>Thin Solid Films</i> , 2013 , 545, 272-278	2.2	14
310	Selectable phase formation in VAlN thin films by controlling Al subplantation depth. <i>Scientific Reports</i> , 2017 , 7, 17544	4.9	14
309	Nanoprobe mechanical and piezoelectric characterization of $\text{Sc}_x\text{Al}_{1-x}\text{N}(0001)$ thin films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015 , 212, 666-673	1.6	14
308	Structural and compositional evolutions of $\text{In}_x\text{Al}_{1-x}\text{N}$ core-shell nanorods grown on $\text{Si}(111)$ substrates by reactive magnetron sputter epitaxy. <i>Nanotechnology</i> , 2015 , 26, 215602	3.4	14
307	Effect of the Surface Morphology of Seed and Mask Layers on InP Grown on Si by Epitaxial Lateral Overgrowth. <i>Journal of Electronic Materials</i> , 2012 , 41, 2345-2349	1.9	14
306	Crystal phase engineered quantum wells in ZnO nanowires. <i>Nanotechnology</i> , 2013 , 24, 215202	3.4	14
305	Epitaxial $\text{V}_{0.6}\text{W}_{0.4}\text{N}/\text{MgO}(001)$: Evidence for ordering on the cation sublattice. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2013 , 31, 040602	2.9	14
304	Al_{10}B -based neutron detector with stacked MultiWire Proportional Counters and macrostructured cathodes. <i>Journal of Instrumentation</i> , 2013 , 8, P12003-P12003	1	14
303	Standard-free composition measurements of $\text{Al}_x\text{In}_{1-x}\text{N}$ by low-loss electron energy loss spectroscopy. <i>Physica Status Solidi - Rapid Research Letters</i> , 2011 , 5, 50-52	2.5	14
302	The influence of substrate temperature and Al mobility on the microstructural evolution of magnetron sputtered ternary TiAlN thin films. <i>Journal of Applied Physics</i> , 2009 , 106, 064915	2.5	14
301	Atomic layer deposition of ferromagnetic cobalt doped titanium oxide thin films. <i>Thin Solid Films</i> , 2011 , 519, 3318-3324	2.2	14
300	On the stability of mg nanograins to coarsening after repeated melting. <i>Nano Letters</i> , 2009 , 9, 3082-6	11.5	14

299	Epitaxial growth of AlCrN thin films on MgO(111). <i>Thin Solid Films</i> , 2008 , 517, 598-602	2.2	14
298	Epitaxial growth and orientation of AlN thin films on Si(001) substrates deposited by reactive magnetron sputtering. <i>Journal of Applied Physics</i> , 2006 , 100, 123514	2.5	14
297	Growth, structure, and mechanical properties of transition metal carbide superlattices. <i>Journal of Materials Research</i> , 2001 , 16, 1301-1310	2.5	14
296	Nickel distribution in crystalline and amorphous silicon during solid phase epitaxy of amorphous silicon. <i>Journal of Applied Physics</i> , 1998 , 84, 6644-6649	2.5	14
295	SiNx coatings deposited by reactive high power impulse magnetron sputtering: Process parameters influencing the residual coating stress. <i>Journal of Applied Physics</i> , 2017 , 121, 171904	2.5	13
294	Direct observation of spinodal decomposition phenomena in InAlN alloys during in-situ STEM heating. <i>Scientific Reports</i> , 2017 , 7, 44390	4.9	13
293	Stabilization of wurtzite Sc _{0.4} Al _{0.6} N in pseudomorphic epitaxial Sc _x Al _{1-x} N/In _y Al _{1-y} N superlattices. <i>Acta Materialia</i> , 2015 , 94, 101-110	8.4	13
292	Copper diffusion into single-crystalline TiN studied by transmission electron microscopy and atom probe tomography. <i>Thin Solid Films</i> , 2015 , 574, 103-109	2.2	13
291	Chemical bonding in epitaxial ZrB ₂ studied by X-ray spectroscopy. <i>Thin Solid Films</i> , 2018 , 649, 89-96	2.2	13
290	Evolution in boron-based GEM detectors for diffraction measurements: from planar to 3D converters. <i>Measurement Science and Technology</i> , 2016 , 27, 115902	2	13
289	Growth of hard amorphous TiAlSiN thin films by cathodic arc evaporation. <i>Surface and Coatings Technology</i> , 2013 , 235, 376-382	4.4	13
288	Influence of TiBi cathode grain size on the cathodic arc process and resulting TiBiN coatings. <i>Surface and Coatings Technology</i> , 2013 , 235, 637-647	4.4	13
287	Decoration of ZnO Nanorods with Coral Reefs like NiO Nanostructures by the Hydrothermal Growth Method and Their Luminescence Study. <i>Materials</i> , 2014 , 7, 430-440	3.5	13
286	Microstructural and Chemical Analysis of AgI Coatings Used as a Solid Lubricant in Electrical Sliding Contacts. <i>Tribology Letters</i> , 2012 , 46, 187-193	2.8	13
285	Synthesis of carbon nitride thin films by low-energy ion beam assisted evaporation: on the mechanisms for fullerene-like microstructure formation. <i>Thin Solid Films</i> , 2005 , 483, 89-94	2.2	13
284	Growth of highly curved Al _{1-x} In _x N nanocrystals. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005 , 202, R76-R78	1.6	13
283	Control over the Phase Formation in Metastable Transition Metal Nitride Thin Films by Tuning the Al+ Subplantation Depth. <i>Coatings</i> , 2019 , 9, 17	2.9	13
282	Transmorphic epitaxial growth of AlN nucleation layers on SiC substrates for high-breakdown thin GaN transistors. <i>Applied Physics Letters</i> , 2019 , 115, 221601	3.4	13

281	High-power impulse magnetron sputter deposition of TiB _x thin films: Effects of pressure and growth temperature. <i>Vacuum</i> , 2019 , 169, 108884	3.7	12
280	The dynamics of TiN _x (x = 1B) admolecule interlayer and intralayer transport on TiN/TiN(001) islands. <i>Thin Solid Films</i> , 2015 , 589, 133-144	2.2	12
279	Silicon oxynitride films deposited by reactive high power impulse magnetron sputtering using nitrous oxide as a single-source precursor. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 05E121	2.9	12
278	Control of crystallinity in sputtered Cr ₂ Ni ₃ films. <i>Acta Materialia</i> , 2013 , 61, 6352-6361	8.4	12
277	Structure and properties of phosphorus-carbide thin solid films. <i>Thin Solid Films</i> , 2013 , 548, 247-254	2.2	12
276	Effects of Al on epitaxial graphene grown on 6H-SiC(0001). <i>Materials Research Express</i> , 2014 , 1, 015606	1.7	12
275	Spectroscopic ellipsometry study on the dielectric function of bulk Ti ₂ AlN, Ti ₂ AlC, Nb ₂ AlC, (Ti _{0.5} ,Nb _{0.5}) ₂ AlC, and Ti ₃ GeC ₂ MAX-phases. <i>Journal of Applied Physics</i> , 2011 , 109, 013530	2.5	12
274	Spontaneous Formation of AlInN Core-shell Nanorod Arrays by Ultrahigh-Vacuum Magnetron Sputter Epitaxy. <i>Applied Physics Express</i> , 2011 , 4, 115002	2.4	12
273	Effects of ion-assisted growth on the layer definition in Cr/Sc multilayers. <i>Thin Solid Films</i> , 2008 , 516, 982-990	2.2	12
272	Intrusion-type deformation in epitaxial Ti ₃ SiC ₂ /TiC _{0.67} nanolaminates. <i>Applied Physics Letters</i> , 2007 , 91, 123124	3.4	12
271	Influence of the normalized ion flux on the constitution of alumina films deposited by plasma-assisted chemical vapor deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007 , 25, 831-836	2.9	12
270	Water adsorption on lubricated fullerene-like CN _x films. <i>Thin Solid Films</i> , 2006 , 515, 979-983	2.2	12
269	Charge state and time resolved plasma composition of a pulsed zirconium arc in a nitrogen environment. <i>Journal of Applied Physics</i> , 2004 , 96, 4793-4799	2.5	12
268	Deposition of epitaxial transition metal carbide films and superlattices by simultaneous direct current metal magnetron sputtering and C ₆₀ evaporation. <i>Journal of Materials Research</i> , 2001 , 16, 633-643	2.5	12
267	Misfit defect formation in thick GaN layers grown on sapphire by hydride vapor phase epitaxy. <i>Applied Physics Letters</i> , 2002 , 80, 1550-1552	3.4	12
266	Texture Evolution in Si/SiC Layered Structures Deposited on Si(001) by Chemical Vapor Deposition. <i>Journal of Materials Research</i> , 1998 , 13, 2632-2642	2.5	12
265	The water-forming reaction on thin, SiO ₂ supported, palladium films. <i>Vacuum</i> , 1990 , 41, 137-138	3.7	12
264	Effect of nucleation mechanism on planar defects in InAs on Si (100). <i>Applied Physics Letters</i> , 1990 , 57, 2931-2933	3.4	12

263	Electronic structure of TiAl films from X-ray photoelectron spectroscopy and first-principles calculations. <i>Applied Surface Science</i> , 2019 , 470, 607-612	6.7	12
262	Low-temperature growth of low friction wear-resistant amorphous carbon nitride thin films by mid-frequency, high power impulse, and direct current magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 05E112	2.9	11
261	Ab initio calculations and experimental study of piezoelectric YIn_2 thin films deposited using reactive magnetron sputter epitaxy. <i>Acta Materialia</i> , 2016 , 105, 199-206	8.4	11
260	Comment on $\text{Ti}_5\text{Al}_2\text{C}_3$: A New Ternary Carbide Belonging to MAX Phases in the TiAl System. <i>Journal of the American Ceramic Society</i> , 2012 , 95, 3352-3354	3.8	11
259	Magnetron Sputter Epitaxy of High-Quality GaN Nanorods on Functional and Cost-Effective Templates/Substrates. <i>Energies</i> , 2017 , 10, 1322	3.1	11
258	On Epitaxy of Ultrathin $\text{Ni}_{1-x}\text{Pt}_x$ Silicide Films on $\text{Si}(001)$. <i>Electrochemical and Solid-State Letters</i> , 2010 , 13, H360		11
257	Reflectivity and structural evolution of Cr/Sc and nitrogen containing Cr/Sc multilayers during thermal annealing. <i>Journal of Applied Physics</i> , 2008 , 104, 063516	2.5	11
256	Ostwald ripening of interstitial-type dislocation loops in 4H-silicon carbide. <i>Journal of Applied Physics</i> , 2006 , 100, 053521	2.5	11
255	Anisotropies in magnetron sputtered carbon nitride thin films. <i>Applied Physics Letters</i> , 2001 , 78, 2703-2705	2.4	11
254	Damage Evolution in Al-implanted 4H SiC. <i>Materials Science Forum</i> , 2000 , 338-342, 869-872	0.4	11
253	Structural characterization of oxide layers thermally grown on 3C-SiC films. <i>Journal of Electronic Materials</i> , 1995 , 24, 1345-1348	1.9	11
252	Effects of glancing-angle ion bombardment on GaAs(001). <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995 , 13, 2260		11
251	Review of transition-metal diboride thin films. <i>Vacuum</i> , 2021 , 196, 110567	3.7	11
250	Amorphous FeCrNi/a-C:H coatings with self-organized nanotubular structure. <i>Scripta Materialia</i> , 2017 , 136, 24-28	5.6	10
249	Bonding Structures of ZrH_x Thin Films by X-ray Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 25750-25758	3.8	10
248	Review of GaN Thin Film and Nanorod Growth Using Magnetron Sputter Epitaxy. <i>Applied Sciences (Switzerland)</i> , 2020 , 10, 3050	2.6	10
247	Micro-tribological performance of fullerene-like carbon and carbon-nitride surfaces. <i>Tribology International</i> , 2018 , 128, 104-112	4.9	10
246	Thermal stability of $\text{Al}_{1-x}\text{In}_x\text{N}$ (0001) throughout the compositional range as investigated during in situ thermal annealing in a scanning transmission electron microscope. <i>Acta Materialia</i> , 2013 , 61, 4683-4688	8.4	10

245	Arc deposition of TiSiCN thin films from binary and ternary cathodes [Comparing sources of C. <i>Surface and Coatings Technology</i> , 2012 , 213, 145-154	4.4	10
244	Growth, Structural and Optical Characterization of ZnO Nanotubes on Disposable-Flexible Paper Substrates by Low-Temperature Chemical Method. <i>Journal of Nanotechnology</i> , 2012 , 2012, 1-6	3.5	10
243	Sputter-cleaned Epitaxial VxMo(1-x)Ny/MgO(001) Thin Films Analyzed by X-ray Photoelectron Spectroscopy: 1. Single-crystal V0.48Mo0.52N0.64. <i>Surface Science Spectra</i> , 2013 , 20, 68-73	1.2	10
242	Ti2Al(O,N) formation by solid-state reaction between substoichiometric TiN thin films and Al2O3 (0001) substrates. <i>Thin Solid Films</i> , 2011 , 519, 2421-2425	2.2	10
241	Microstructure evolution of Ti3SiC2 compound cathodes during reactive cathodic arc evaporation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011 , 29, 031601	2.9	10
240	Optical and structural studies of homoepitaxially grown m-plane GaN. <i>Applied Physics Letters</i> , 2012 , 100, 172108	3.4	10
239	Phase formation sequences in the silicon-phosphorus system: Determined by in-situ synchrotron and conventional X-ray diffraction measurements and predicted by a theoretical model. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1997 , 75, 363-376		10
238	Comment on Pulsed Laser Deposition and Properties of Mn+1AXx Phase Formulated Ti3SiC2 Thin Films [Tribology Letters, 2004 , 17, 977-978	2.8	10
237	Sublimation epitaxy of AlN on SiC: growth morphology and structural features. <i>Journal of Crystal Growth</i> , 2004 , 273, 161-166	1.6	10
236	Transmission Electron Microscopy Investigation of Defects in B-Implanted 6H-SiC. <i>Materials Science Forum</i> , 1998 , 264-268, 413-416	0.4	10
235	HREM and nanoindentation studies of BN : C films deposited by reactive sputtering from a B4C target. <i>Vacuum</i> , 1999 , 53, 451-457	3.7	10
234	High-Temperature Neutron Diffraction, Raman Spectroscopy, and First-Principles Calculations of Ti3SnC2 and Ti2SnC. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 2233-2242	3.8	10
233	Fullerene-like Carbon Nitride: A New Carbon-based Tribological Coating 2008 , 620-653		10
232	Structural evolution in reactive RF magnetron sputtered (Cr,Zr)2O3 coatings during annealing. <i>Acta Materialia</i> , 2017 , 131, 543-552	8.4	9
231	Comparative study of macro- and microtribological properties of carbon nitride thin films deposited by HiPIMS. <i>Wear</i> , 2017 , 370-371, 1-8	3.5	9
230	Selective-area growth of single-crystal wurtzite GaN nanorods on SiO/Si(001) substrates by reactive magnetron sputter epitaxy exhibiting single-mode lasing. <i>Scientific Reports</i> , 2017 , 7, 12701	4.9	9
229	Silicon carbonitride thin films deposited by reactive high power impulse magnetron sputtering. <i>Surface and Coatings Technology</i> , 2018 , 335, 248-256	4.4	9
228	Self-organized nanostructuring in Zr0.69Al0.31N thin films studied by atom probe tomography. <i>Thin Solid Films</i> , 2016 , 615, 233-238	2.2	9

- 227 Holmium and titanium oxide nanolaminates by atomic layer deposition. *Thin Solid Films*, **2014**, 565, 165-171 9
- 226 Photoluminescence study of basal plane stacking faults in ZnO nanowires. *Physica B: Condensed Matter*, **2014**, 439, 50-53 2.8 9
- 225 Effects of A-elements (ASi, Ge or Sn) on the structure and electrical contact properties of TiAlAg nanocomposites. *Thin Solid Films*, **2012**, 520, 5128-5136 2.2 9
- 224 Growth of GeSnSiC layers for photonic applications. *Surface and Coatings Technology*, **2013**, 230, 106-110 4.4 9
- 223 Growth and properties of amorphous TiBSiN thin films deposited by hybrid HIPIMS/DC-magnetron co-sputtering from TiB₂ and Si targets. *Surface and Coatings Technology*, **2014**, 259, 442-447 4.4 9
- 222 Growth and characterization of epitaxial Ti₃GeC₂ thin films on 4H-SiC(0001). *Journal of Crystal Growth*, **2012**, 343, 133-137 1.6 9
- 221 Self-organization during growth of ZrN/SiN_x multilayers by epitaxial lateral overgrowth. *Journal of Applied Physics*, **2013**, 114, 224302 2.5 9
- 220 Sputter-cleaned Epitaxial V_xMo(1-x)Ny/MgO(001) Thin Films Analyzed by X-ray Photoelectron Spectroscopy: 2. Single-crystal V_{0.47}Mo_{0.53}N_{0.92}. *Surface Science Spectra*, **2013**, 20, 74-79 1.2 9
- 219 Kinetics of Ga droplet decay on thin carbon films. *Applied Physics Letters*, **2013**, 102, 161601 3.4 9
- 218 High-temperature stability of Ta₄AlC₃. *Materials Research Bulletin*, **2011**, 46, 1088-1091 5.1 9
- 217 Freestanding AlN single crystals enabled by self-organization of 2H-SiC pyramids on 4H-SiC substrates. *Applied Physics Letters*, **2009**, 94, 082109 3.4 9
- 216 Single-crystal growth of NaCl-structure AlCrN thin films on MgO(001) by magnetron sputter epitaxy. *Scripta Materialia*, **2007**, 57, 1089-1092 5.6 9
- 215 Selective Epitaxy of Si_[sub 1-x]Ge_[sub x] Layers for Complementary Metal Oxide Semiconductor Applications. *Journal of the Electrochemical Society*, **2003**, 150, G253 3.9 9
- 214 Structural, electrical, and optical properties of diamondlike carbon films deposited by dc magnetron sputtering. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2003**, 21, L23-L27 2.9 9
- 213 Role of carbon in boron suboxide thin films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2003**, 21, 1355-1358 2.9 9
- 212 Monitoring the structural and chemical properties of CN_x thin films during in situ annealing in a TEM. *EPJ Applied Physics*, **2001**, 13, 97-105 1.1 9
- 211 Template-synthesized BN:C nanoboxes. *Applied Physics Letters*, **2000**, 76, 825-827 3.4 9
- 210 Transmission Electron Microscopy of Metastable Materials. *Key Engineering Materials*, **1995**, 103, 181-194 4.4 9

209	Growth, Structure and Properties of Hard Nitride Based Coatings and Multilayers 1995 , 453-474		9
208	Growth of Ge/Si Amorphous Superlattices by Dual-Target DC Magnetron Sputtering. <i>Materials Research Society Symposia Proceedings</i> , 1992 , 258, 571		9
207	Theoretical Prediction and Experimental Verification of the Chemically Ordered Atomic-Laminate i-MAX Phases (Cr ₂ /3Sc ₁ /3) ₂ GaC and (Mn ₂ /3Sc ₁ /3) ₂ GaC. <i>Crystal Growth and Design</i> , 2020 , 20, 55-61	3.5	9
206	Self-organized columnar Zr _{0.7} Ta _{0.3} B _{1.5} core/shell-nanostructure thin films. <i>Surface and Coatings Technology</i> , 2020 , 401, 126237	4.4	9
205	TiN diffusion barrier failure by the formation of Cu ₃ Si investigated by electron microscopy and atom probe tomography. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016 , 34, 022202	1.3	9
204	Age hardening in superhard ZrB ₂ -rich Zr _{1-x} TaxBy thin films. <i>Scripta Materialia</i> , 2021 , 191, 120-125	5.6	9
203	Where is the unpaired transition metal in substoichiometric diboride line compounds?. <i>Acta Materialia</i> , 2021 , 204, 116510	8.4	9
202	Morphology effects on exchange anisotropy in Co ₃ O ₄ nanocomposite films. <i>Thin Solid Films</i> , 2015 , 576, 11-18	2.2	8
201	High Si content TiSiN films with superior oxidation resistance. <i>Surface and Coatings Technology</i> , 2020 , 398, 126087	4.4	8
200	Growth of dense, hard yet low-stress Ti _{0.40} Al _{0.27} W _{0.33} N nanocomposite films with rotating substrate and no external substrate heating. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020 , 38, 023006	2.9	8
199	Stress evolution during growth of GaN (0001)/Al ₂ O ₃ (0001) by reactive dc magnetron sputter epitaxy. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 145301	3	8
198	Thermal stability and mechanical properties of amorphous coatings in the Ti-B-Si-Al-N system grown by cathodic arc evaporation from TiB ₂ , Ti ₃₃ Al ₆₇ , and Ti ₈₅ Si ₁₅ cathodes. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 061508	2.9	8
197	Ta and Cr thin films deposited by high power impulse magnetron sputtering and direct current magnetron sputtering in hydrogen containing plasmas. <i>Physica B: Condensed Matter</i> , 2014 , 439, 3-8	2.8	8
196	Formation of approximant and quasicrystalline Al ₇₀ Cu ₃₀ thin films. <i>Thin Solid Films</i> , 2012 , 526, 74-80	2.2	8
195	Bandgap Engineering and Optical Constants of YxAl _{1-x} N Alloys. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 08JM02	1.4	8
194	Beam-induced crystallization of amorphous MeSi ₂ (Me = Nb or Zr) thin films during transmission electron microscopy. <i>MRS Communications</i> , 2013 , 3, 151-155	2.7	8
193	Thermal Stability and Dopant Segregation for Schottky Diodes With Ultrathin Epitaxial NiSi _{2-y} . <i>IEEE Electron Device Letters</i> , 2011 , 32, 1029-1031	4.4	8
192	Enhanced intra- and interlayer mass transport on Pt(111) via 580 eV Pt atom impacts on two-dimensional Pt clusters. <i>Thin Solid Films</i> , 2006 , 515, 2235-2243	2.2	8

191	Thin oxide films as surface modifiers of MIS field effect gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2002 , 85, 109-119	8.5	8
190	Adatom/vacancy interactions and interlayer mass transport in small two-dimensional Pt clusters on Pt(). <i>Surface Science</i> , 2003 , 539, L567-L573	1.8	8
189	Electrochemically deposited nickel membranes; process-microstructure-property relationships. <i>Surface and Coatings Technology</i> , 2003 , 172, 79-89	4.4	8
188	3CβSiC/Si/3CβSiC epitaxial trilayer films deposited on Si(111) substrates by reactive magnetron sputtering. <i>Journal of Materials Research</i> , 1995 , 10, 1349-1351	2.5	8
187	Growth of InGaAsSb layers in the miscibility gap: Use of very-low-energy ion irradiation to reduce alloy decomposition. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995 , 13, 978		8
186	Fabrication and characterization of MOS devices on 3CβSiC films grown by reactive magnetron sputtering on Si(111) substrates. <i>Thin Solid Films</i> , 1996 , 287, 252-257	2.2	8
185	Void-mediated coherency-strain relaxation and impediment of cubic-to-hexagonal transformation in epitaxial metastable metal/semiconductor TiN/Al _{0.72} Sc _{0.28} N multilayers. <i>Physical Review Materials</i> , 2017 , 1,	3.2	8
184	Materials synthesis, neutron powder diffraction, and first-principles calculations of (MoxSc _{1-x}) ₂ AlC iMAX phase used as parent material for MXene derivation. <i>Physical Review Materials</i> , 2019 , 3,	3.2	8
183	Exploring MXenes and their MAX phase precursors by electron microscopy. <i>Materials Today Advances</i> , 2021 , 9, 100123	7.4	8
182	Multifunctional ZrB ₂ -rich Zr _{1-x} Cr _x By thin films with enhanced mechanical, oxidation, and corrosion properties. <i>Vacuum</i> , 2021 , 185, 109990	3.7	8
181	Growth and mechanical properties of 111-oriented V _{0.5} Mo _{0.5} N _x /Al ₂ O ₃ (0001) thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018 , 36, 051512	2.9	8
180	Systematic compositional analysis of sputter-deposited boron-containing thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021 , 39, 063408	2.9	8
179	Electronic properties and bonding in ZrH _x thin films investigated by valence-band x-ray photoelectron spectroscopy. <i>Physical Review B</i> , 2017 , 96,	3.3	7
178	Atom probe tomography field evaporation characteristics and compositional corrections of ZrB ₂ . <i>Materials Characterization</i> , 2019 , 156, 109871	3.9	7
177	Formation of Ti ₂ AuN from Au-Covered Ti ₂ AlN Thin Films: A General Strategy to Thermally Induce Intercalation of Noble Metals into MAX Phases. <i>Crystal Growth and Design</i> , 2020 , 20, 4077-4081	3.5	7
176	Substantial difference in target surface chemistry between reactive dc and high power impulse magnetron sputtering. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 05LT01	3	7
175	Nucleation and core-shell formation mechanism of self-induced In _x Al _{1-x} N core-shell nanorods grown on sapphire substrates by magnetron sputter epitaxy. <i>Vacuum</i> , 2016 , 131, 39-43	3.7	7
174	In- and Out-of-Plane Ordered MAX Phases and Their MXene Derivatives 2019 , 37-52		7

173	Atomic layer deposition of ZrO ₂ for graphene-based multilayer structures: In situ and ex situ characterization of growth process. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014 , 211, 397-402	1.6	7
172	Defect reduction in heteroepitaxial InP on Si by epitaxial lateral overgrowth. <i>Materials Express</i> , 2014 , 4, 41-53	1.3	7
171	Ni and Ti diffusion barrier layers between TiSiC and TiSiC/Ag nanocomposite coatings and Cu-based substrates. <i>Surface and Coatings Technology</i> , 2012 , 206, 2558-2565	4.4	7
170	Reactive sputtering of ErH ₂ thin films by high power impulse magnetron sputtering and direct current magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 041510	2.9	7
169	Crystallization of NiSix in a Body-Centered Cubic Structure during Solid-State Reaction between an Ultrathin Ni Film and Si(001) Substrate at 150-150 °C. <i>Crystal Growth and Design</i> , 2013 , 13, 1801-1806	3.5	7
168	Spectroscopic ellipsometry characterization of amorphous carbon and amorphous, graphitic and fullerene-like carbon nitride thin films. <i>Thin Solid Films</i> , 2009 , 517, 6652-6658	2.2	7
167	RHEED studies during growth of TiN/SiNx/TiN trilayers on MgO(001). <i>Surface Science</i> , 2007 , 601, 2352-2356	3.5	7
166	Growth-induced defects in AlN/GaN superlattices with different periods. <i>Physica B: Condensed Matter</i> , 2003 , 340-342, 1129-1132	2.8	7
165	Pulsed low-energy ion-assisted growth of epitaxial aluminum nitride layer on 6H-silicon carbide by reactive magnetron sputtering. <i>Journal of Applied Physics</i> , 2002 , 91, 3551-3555	2.5	7
164	Strain relaxation of low-temperature deposited epitaxial titanium-carbide films. <i>Journal of Crystal Growth</i> , 2000 , 219, 237-244	1.6	7
163	Luminescence and microstructure of Er/O co-doped Si structures grown by MBE using Er and SiO evaporation. <i>Materials Science in Semiconductor Processing</i> , 2000 , 3, 523-528	4.3	7
162	Self-interstitial structures in body-centred-cubic W studied by molecular dynamics simulation. <i>Journal of Physics Condensed Matter</i> , 1999 , 11, 6509-6514	1.8	7
161	Strain determination and microstructural characterization of 50 keV Sn-ion-implanted Si(001). <i>Journal of Applied Physics</i> , 1995 , 77, 1411-1420	2.5	7
160	Toward energy-efficient physical vapor deposition: Routes for replacing substrate heating during magnetron sputter deposition by employing metal ion irradiation. <i>Surface and Coatings Technology</i> , 2021 , 415, 127120	4.4	7
159	Improved oxidation properties from a reduced B content in sputter-deposited TiBx thin films. <i>Surface and Coatings Technology</i> , 2021 , 420, 127353	4.4	7
158	Synthesis and properties of CS F thin films deposited by reactive magnetron sputtering in an Ar/SF discharge. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 195701	1.8	6
157	Low-temperature growth of polyethylene glycol-doped BiZn ₂ VO ₆ nanocompounds with enhanced photoelectrochemical properties. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 1112-1119	13	6
156	Reactive sputtering of CSx thin solid films using CS ₂ as precursor. <i>Vacuum</i> , 2020 , 182, 109775	3.7	6

155	Site-controlled growth of GaN nanorod arrays by magnetron sputter epitaxy. <i>Thin Solid Films</i> , 2018 , 660, 950-955	2.2	6
154	In situ transmission electron microscopy studies of the kinetics of Pt-Mo alloy diffusion in ZrB2 thin films. <i>Applied Physics Letters</i> , 2013 , 103, 121601	3.4	6
153	Sputter-cleaned Epitaxial VxMo(1-x)Ny/MgO(001) Thin Films Analyzed by X-ray Photoelectron Spectroscopy: 3. Polycrystalline V0.49Mo0.51N1.02. <i>Surface Science Spectra</i> , 2013 , 20, 80-85	1.2	6
152	Native target chemistry during reactive dc magnetron sputtering studied by ex-situ x-ray photoelectron spectroscopy. <i>Applied Physics Letters</i> , 2017 , 111, 021604	3.4	6
151	Investigation of background in large-area neutron detectors due to alpha emission from impurities in aluminium. <i>Journal of Instrumentation</i> , 2015 , 10, P10019-P10019	1	6
150	Synthesis and characterization of (0001)-textured wurtzite Al1-xBxN thin films. <i>Surface and Coatings Technology</i> , 2011 , 206, 1033-1036	4.4	6
149	Effects of O and N impurities on the nanostructural evolution during growth of Cr/Sc multilayers. <i>Journal of Materials Research</i> , 2009 , 24, 79-95	2.5	6
148	Internal stress and microstructure of SiC reinforced aluminium alloy 2014. <i>Acta Materialia</i> , 1998 , 46, 5278-52816	8.5	6
147	Metastability of the UV luminescence in Mg-doped GaN layers grown by MOVPE on quasi-bulk GaN templates. <i>Physica B: Condensed Matter</i> , 2007 , 401-402, 302-306	2.8	6
146	Epitaxial growth of tungsten carbide films using C60 as carbon precursor. <i>Journal of Crystal Growth</i> , 2003 , 259, 12-17	1.6	6
145	Experimental evidence for a dissociation mechanism in NH3 detection with MIS field-effect devices. <i>Sensors and Actuators B: Chemical</i> , 2003 , 89, 1-8	8.5	6
144	Cathodoluminescence of Defect Regions in SiC Epi-Films. <i>Materials Science Forum</i> , 1998 , 264-268, 653-656	6.4	6
143	Gas porosity formation in epitaxial TiN films deposited by reactive magnetron sputtering in mixed Ar/N2 discharges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1993 , 11, 1426-1430	2.9	6
142	Electron energy distribution function in DC magnetron axially symmetric discharges: evidence of spatial anisotropy. <i>Journal Physics D: Applied Physics</i> , 1994 , 27, 280-285	3	6
141	Deformation structures under indentations in TiN/NbN single-crystal multilayers deposited by magnetron sputtering at different bombarding ion energies		6
140	Mechanical and tribological properties of AlCuFe quasicrystal and Al(Si)CuFe approximant thin films. <i>Journal of Materials Research</i> , 2016 , 31, 232-240	2.5	6
139	Towards energy-efficient physical vapor deposition: Mapping out the effects of W+ energy and concentration on the densification of TiAlWN thin films grown with no external heating. <i>Surface and Coatings Technology</i> , 2021 , 424, 127639	4.4	6
138	Compositional dependence of epitaxial Tin+1SiCn MAX-phase thin films grown from a Ti3SiC2 compound target. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 021506	2.9	5

137	Novel hard, tough HfAlSiN multilayers, defined by alternating Si bond structure, deposited using modulated high-flux, low-energy ion irradiation of the growing film. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2015 , 33, 05E103	2.9	5
136	ZrB2 thin films deposited on GaN(0001) by magnetron sputtering from a ZrB2 target. <i>Journal of Crystal Growth</i> , 2016 , 453, 71-76	1.6	5
135	Atomically resolved microscopy of ion implantation induced dislocation loops in 4H-SiC. <i>Materials Letters</i> , 2016 , 181, 325-327	3.3	5
134	Structural and magnetic properties of (Cr1-x Mn x)5Al8 solid solution and structural relation to hexagonal nanolaminates. <i>Journal of Materials Science</i> , 2014 , 49, 7099-7104	4.3	5
133	Atomic layer deposition of high-k dielectrics on carbon nanoparticles. <i>Thin Solid Films</i> , 2013 , 538, 16-20	2.2	5
132	Reflection thermal diffuse x-ray scattering for quantitative determination of phonon dispersion relations. <i>Physical Review B</i> , 2015 , 92,	3.3	5
131	Infrared dielectric functions and optical phonons of wurtzite YxAl1-xN (0 ≤ x ≤ 0.22). <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 415102	3	5
130	Model for electron-beam-induced crystallization of amorphous MeSi ₂ (Me = Nb or Zr) thin films. <i>Journal of Materials Research</i> , 2014 , 29, 2854-2862	2.5	5
129	Microstructural characterization of the tool/chip interface enabled by focused ion beam and analytical electron microscopy. <i>Wear</i> , 2009 , 266, 1237-1240	3.5	5
128	Influence of ultrasound and cathode rotation on formation of intrinsic stress in Ni films during electrodeposition. <i>Transactions of the Institute of Metal Finishing</i> , 2011 , 89, 137-142	1.3	5
127	Time-Resolved Photoluminescence from nm-Sized Silicon Crystallites In SiO ₂ . <i>Materials Research Society Symposia Proceedings</i> , 1997 , 486, 249		5
126	Superelastic Fullerene-like Carbon Nitride Coatings Synthesised By Reactive Unbalanced Sputtering Magnetron. <i>Surface Engineering</i> , 2003 , 19, 299-303	2.6	5
125	Structural Defects in Electrically Degraded 4H-SiC PIN Diodes. <i>Materials Science Forum</i> , 2002 , 389-393, 423-426	0.4	5
124	Microstructural, Optical and Electronic Investigation of Anodized 4H-SiC. <i>Materials Science Forum</i> , 2000 , 338-342, 537-540	0.4	5
123	Dynamics of self-interstitial structures in body-centred-cubic W studied by molecular dynamics simulation. <i>Journal of Physics Condensed Matter</i> , 2000 , 12, 79-86	1.8	5
122	Reactive UHV Sputtering and Structural Characterization of Epitaxial AlN/6H-SiC(0001) Thin Films. <i>Materials Science Forum</i> , 1998 , 264-268, 1225-1228	0.4	5
121	Heterojunction diodes in 3C-SiC/Si system grown by reactive magnetron sputtering: Effects of growth temperature on diode rectification and breakdown. <i>Journal of Electronic Materials</i> , 1996 , 25, 1495-1500	1.9	5
120	Compositional information from amorphous Si-Ge multilayers using high-resolution electron microscopy imaging and direct digital recording. <i>Ultramicroscopy</i> , 1996 , 66, 221-235	3.1	5

119	Cubic-structure Al-rich TiAlSiN thin films grown by hybrid high-power impulse magnetron co-sputtering with synchronized Al ⁺ irradiation. <i>Surface and Coatings Technology</i> , 2020 , 385, 125364	4.4	5
118	Theoretical Prediction and Synthesis of CS _x F _y Thin Films. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 9527-9534	5	5
117	A Tungsten-Based Nanolaminated Ternary Carbide: (W,Ti)C. <i>Inorganic Chemistry</i> , 2019 , 58, 1100-1106	5.1	5
116	Self-structuring in ZrAlN films as a function of composition and growth temperature. <i>Scientific Reports</i> , 2018 , 8, 16327	4.9	5
115	Quasi-amorphous, nanostructural CoCrMoC/a-C:H coatings deposited by reactive magnetron sputtering. <i>Surface and Coatings Technology</i> , 2019 , 378, 124910	4.4	4
114	Optical and structural properties of sulfur-doped ELOG InP on Si. <i>Journal of Applied Physics</i> , 2015 , 117, 215303	2.5	4
113	Resolving mass spectral overlaps in atom probe tomography by isotopic substitutions - case of TiSiN. <i>Ultramicroscopy</i> , 2018 , 184, 51-60	3.1	4
112	Reactive magnetron sputtering of tungsten target in krypton/trimethylboron atmosphere. <i>Thin Solid Films</i> , 2019 , 688, 137384	2.2	4
111	High quality InP nanopyramidal frusta on Si. <i>CrystEngComm</i> , 2014 , 16, 4624-4632	3.3	4
110	Epitaxial growth of Al ₂ O ₃ on Ti ₂ AlC(0001) by reactive high-power impulse magnetron sputtering. <i>AIP Advances</i> , 2014 , 4, 017138	1.5	4
109	Strain relaxation and thermal stability of the 3C-SiC(001)/Si(001) interface: A molecular dynamics study. <i>Thin Solid Films</i> , 1997 , 294, 47-49	2.2	4
108	Boron implantation and epitaxial regrowth studies of 6H SiC. <i>Journal of Electronic Materials</i> , 1998 , 27, 833-837	1.9	4
107	Time-resolved spectroscopy of freestanding GaN layers grown by halide vapour phase epitaxy. <i>Superlattices and Microstructures</i> , 2008 , 43, 605-609	2.8	4
106	Arrhenius-type temperature dependence of the chemical desorption processes active during deposition of fullerene-like carbon nitride thin films. <i>Surface Science</i> , 2004 , 569, L289-L295	1.8	4
105	Properties of combined TiN and Pt thin films applied to gas sensing. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 667-673	2.9	4
104	How hard is fullerene-like CN _x ? Some observations from the nanoindentation response of a magnetron-sputtered coating. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2002 , 82, 2133-2147		4
103	Residual stress formation in multilayered TiN/TaN _x coatings during reactive magnetron sputter deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2000 , 18, 2884-2889	2.9	4
102	Effect of 2005 eV Ar ion bombardment of GaAs(001): In pursuit of damage-free ion-assisted growth and etching. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995 , 13, 1155-1159	2.9	4

101	Strain characterization of Ge _{1-x} Si _x and heavily B-doped Ge layers on Ge(001) by two-dimensional reciprocal space mapping. <i>Journal of Crystal Growth</i> , 1996 , 167, 495-501	1.6	4
100	Artificial superlattices without a sublattice. <i>Micron and Microscopica Acta</i> , 1991 , 22, 189-190		4
99	Formation of Defects During Ion-Assisted Growth of Thin Films from the Vapor Phase. <i>Materials Research Society Symposia Proceedings</i> , 1992 , 268, 71		4
98	Summary Abstract: The role of low-energy ion bombardment during the growth of epitaxial TiN(100) films by reactive magnetron sputtering: Defect formation and annihilation. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1987 , 5, 2162-2164	2.9	4
97	Rare-earth (RE) nanolaminates Mo ₄ RE ₄ Al ₇ C ₃ featuring ferromagnetism and mixed-valence states. <i>Physical Review Materials</i> , 2018 , 2,	3.2	4
96	X-ray photoelectron spectroscopy analysis of TiB _x (1.3 x 2.0) thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021 , 39, 023403	2.9	4
95	Dense Ti _{0.67} Hf _{0.33} B _{1.7} thin films grown by hybrid HfB ₂ -HiPIMS/TiB ₂ -DCMS co-sputtering without external heating. <i>Vacuum</i> , 2021 , 186, 110057	3.7	4
94	Corrosion Resistant TiTaN and TiTaAlN Thin Films Grown by Hybrid HiPIMS/DCMS Using Synchronized Pulsed Substrate Bias with No External Substrate Heating. <i>Coatings</i> , 2019 , 9, 841	2.9	4
93	Electrochemical Lithium Storage Performance of Molten Salt Derived VSnC MAX Phase. <i>Nano-Micro Letters</i> , 2021 , 13, 158	19.5	4
92	Thermal Stability of Advanced Nanostructured Wear-Resistant Coatings. <i>Nanostructure Science and Technology</i> , 2006 , 464-510	0.9	4
91	Synthesis, Structure, and Properties of Superhard Superlattice Coatings. <i>Nanostructure Science and Technology</i> , 2006 , 539-554	0.9	4
90	TiN film growth on misoriented TiN grains with simultaneous low-energy bombardment: Restructuring leading to epitaxy. <i>Thin Solid Films</i> , 2019 , 688, 137380	2.2	3
89	Effects of N ₂ Partial Pressure on Growth, Structure, and Optical Properties of GaN Nanorods Deposited by Liquid-Target Reactive Magnetron Sputter Epitaxy. <i>Nanomaterials</i> , 2018 , 8,	5.4	3
88	. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 2910-2915	2.9	3
87	Characterization of InGaN/GaN quantum well growth using monochromated valence electron energy loss spectroscopy. <i>Journal of Applied Physics</i> , 2014 , 115, 034302	2.5	3
86	Nanowires-assembled CuO Interpenetrated-leaf Architecture by () Twinning. <i>Materials Research Letters</i> , 2013 , 1, 32-38	7.4	3
85	Cathodoluminescence characterization of ZnO nanorods synthesized by chemical solution and of its conversion to ellipsoidal morphology. <i>Journal of Materials Research</i> , 2014 , 29, 2425-2431	2.5	3
84	Formation of basal plane fiber-textured Ti ₂ AlN films on amorphous substrates. <i>Physica Status Solidi - Rapid Research Letters</i> , 2010 , 4, 121-123	2.5	3

83	Transmission electron microscopy studies and simulation of the indentation response of superelastic fullerene-like carbon nitride thin films. <i>Journal of Applied Physics</i> , 2008 , 103, 123515	2.5	3
82	Growth and Characterization of Epitaxial Wurtzite Al _{1-x} In _x N Thin Films Deposited by UHV Reactive Dual DC Magnetron Sputtering. <i>Materials Science Forum</i> , 2003 , 433-436, 987-990	0.4	3
81	Precipitate Formation in Heavily Al-Doped 4H-SiC Layers. <i>Materials Science Forum</i> , 2001 , 353-356, 583-586	0.4	3
80	Growth Evolution of Dislocation Loops in Ion Implanted 4H-SiC. <i>Materials Science Forum</i> , 2001 , 353-356, 315-318	0.4	3
79	Low-Energy-Ion-Assisted Reactive Sputter Deposition of Epitaxial AlN Thin Films on 6H-SiC. <i>Materials Science Forum</i> , 2000 , 338-342, 1519-1522	0.4	3
78	Ion-assisted low-temperature (150 °C) epitaxial growth of TiN on Cu by reactive magnetron sputter deposition. <i>Thin Solid Films</i> , 1996 , 287, 87-92	2.2	3
77	Synthesis and characterization of CrB ₂ thin films grown by DC magnetron sputtering. <i>Scripta Materialia</i> , 2021 , 200, 113915	5.6	3
76	Orthorhombic Ta _{3-x} N _{5-y} O _y thin films grown by unbalanced magnetron sputtering: The role of oxygen on structure, composition, and optical properties. <i>Surface and Coatings Technology</i> , 2021 , 406, 126665	4.4	3
75	Out-Of-Plane Ordered Laminate Borides and Their 2D Ti-Based Derivative from Chemical Exfoliation. <i>Advanced Materials</i> , 2021 , 33, e2008361	24	3
74	Atomistic mechanisms underlying plasticity and crack growth in ceramics: a case study of AlN/TiN superlattices. <i>Acta Materialia</i> , 2022 , 229, 117809	8.4	3
73	Core-shell formation in self-induced InAlN nanorods. <i>Nanotechnology</i> , 2017 , 28, 115602	3.4	2
72	Unprecedented Thermoelectric Power Factor in SiGe Nanowires Field-Effect Transistors. <i>ECS Journal of Solid State Science and Technology</i> , 2017 , 6, Q114-Q119	2	2
71	Phase composition and transformations in magnetron-sputtered (Al,V)2O ₃ coatings. <i>Thin Solid Films</i> , 2019 , 688, 137369	2.2	2
70	Influence of Ar and N ₂ Pressure on Plasma Chemistry, Ion Energy, and Thin Film Composition During Filtered Arc Deposition From Ti ₃ SiC ₂ Cathodes. <i>IEEE Transactions on Plasma Science</i> , 2014 , 42, 3498-3507	1.3	2
69	Contact Resistance of Ti-Si-C-Ag and Ti-Si-C-Ag-Pd Nanocomposite Coatings. <i>Journal of Electronic Materials</i> , 2012 , 41, 560-567	1.9	2
68	Advanced Carbon-Based Coatings 2014 , 389-412		2
67	Structure and electrical properties of Nb-Ge-C nanocomposite coatings. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2014 , 32, 041509	2.9	2
66	A Novel Oxide Characterization Method of Nickel Base Alloy 600 Used in Nuclear Plant Reactors 2013 , 3355-3361		2

65	Structural and Mechanical Properties of CNX and CPX Thin Solid Films. <i>Key Engineering Materials</i> , 2011 , 488-489, 581-584	0.4	2
64	Phase identification in α and β alumina coatings by cathodoluminescence. <i>Scripta Materialia</i> , 2009 , 61, 379-382	5.6	2
63	In-situ stress measurement during the deposition of CN x thin films by unbalanced magnetron sputtering; formation of high levels of stress with 28 eV ion irradiation. <i>Philosophical Magazine Letters</i> , 2004 , 84, 395-403	1	2
62	Growth of high quality epitaxial Si _{1-x} Ge _x Cy layers by using chemical vapor deposition. <i>Applied Surface Science</i> , 2004 , 224, 46-50	6.7	2
61	Structure of DC sputtered Si ₃ C ₂ N thin films. <i>Thin Solid Films</i> , 2003 , 440, 41-44	2.2	2
60	Structural Defects in Ion Implanted 4H-SiC Epilayers. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 640, 1		2
59	Electrical characterization and the strain compensation effect and thermal stability of B-doped heterostructures. <i>Semiconductor Science and Technology</i> , 1996 , 11, 1396-1401	1.8	2
58	Growth, Characterization and Device Fabrication of Boron Delta-Doped Structures by Si-Molecular Beam Epitaxy. <i>Japanese Journal of Applied Physics</i> , 1994 , 33, 2279-2281	1.4	2
57	Growth, structure and properties of TiN coatings on steel substrates. <i>AIP Conference Proceedings</i> , 1986 ,	0	2
56	Dense, single-phase, hard, and stress-free TiAlWN films grown by magnetron sputtering with dramatically reduced energy consumption.. <i>Scientific Reports</i> , 2022 , 12, 2166	4.9	2
55	Where Is the Unmatched Transition Metal in Substoichiometric Diboride Line Compounds?		2
54	Growth and Property Characterization of Epitaxial MAX-Phase Thin Films from the Tin+1(Si, Ge, Sn) _n Systems. <i>Advances in Science and Technology</i> , 2648-2655	0.1	2
53	Glancing Angle Deposition and Growth Mechanism of Inclined AlN Nanostructures Using Reactive Magnetron Sputtering. <i>Coatings</i> , 2020 , 10, 768	2.9	2
52	Stoichiometric silicon oxynitride thin films reactively sputtered in Ar/N ₂ O plasmas by HiPIMS. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 135309	3	2
51	Neutron radiography as a non-destructive method for diagnosing neutron converters for advanced thermal neutron detectors. <i>Journal of Instrumentation</i> , 2016 , 11, C03033-C03033	1	2
50	Near-room temperature ferromagnetic behavior of single-atom-thick 2D iron in nanolaminated ternary MAX phases. <i>Applied Physics Reviews</i> , 2021 , 8, 031418	17.3	2
49	Undressing the myth of apparent constant binding energy of the C 1 s peak from adventitious carbon in x-ray photoelectron spectroscopy 2022 , 1, 100007		2
48	Mechanical properties of VMoNO as a function of oxygen concentration: Toward development of hard and tough refractory oxynitrides. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 061508	2.9	1

47	Effects of aluminum on epitaxial graphene grown on C-face SiC. <i>Journal of Applied Physics</i> , 2015 , 117, 195306	2.5	1
46	Influence of InAlN Nanospiral Structures on the Behavior of Reflected Light Polarization. <i>Nanomaterials</i> , 2018 , 8,	5.4	1
45	Comparative micro-photoluminescence investigation of ZnO hexagonal nanopillars and the seeding layer grown on 4H-SiC. <i>Journal of Luminescence</i> , 2012 , 132, 122-127	3.8	1
44	Structure and composition of Al(Si)CuFe approximant thin films formed by Si substrate diffusion. <i>Thin Solid Films</i> , 2014 , 550, 105-109	2.2	1
43	Statistical energy determination in neutron detector systems for neutron scattering science 2013 ,		1
42	Towards optimisation of epitaxially grown graphene based sensors for highly sensitive gas detection 2010 ,		1
41	Electrochemically based low-cost high precision processing in MOEMS packaging. <i>Electrochimica Acta</i> , 2009 , 54, 2458-2465	6.7	1
40	Atomic layer deposition of ruthenium films on strontium titanate. <i>Journal of Nanoscience and Nanotechnology</i> , 2011 , 11, 8378-82	1.3	1
39	The effect of exciton dimensionality on resonance energy transfer: advances for organic color converters in hybrid inorganic/organic LEDs 2012 ,		1
38	Hetero-epitaxial indium phosphide on silicon 2010 ,		1
37	Optimization of growth conditions for strained Si/Si _{1-x} Cy structures. <i>Thin Solid Films</i> , 1998 , 321, 15-20	2.2	1
36	Growth of strained structures by MBE. <i>Vacuum</i> , 1998 , 49, 185-188	3.7	1
35	Time-resolved photoluminescence properties of AlGaN/AlN/GaN high electron mobility transistor structures grown on 4H-SiC substrate. <i>Journal of Applied Physics</i> , 2008 , 104, 113513	2.5	1
34	Strain and compositional analyses of Al-rich Al _{1-x} In _x N films grown by MOVPE: impact on the applicability of Vegard's rule. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2008 , 5, 1859-1862		1
33	Synthesis and characterization of Ti-Si-C compounds for electrical contact applications		1
32	Addendum to Structural features of thick c-boron nitride coatings deposited via a graded B ₂ C ₂ N interlayer. <i>Surface and Coatings Technology</i> , 2002 , 153, 315	4.4	1
31	Epitaxial Growth of AlN Layers on SiC Substrates in a Hot-Wall MOCVD System. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2003 , 205-208		1
30	Materials Science of Wear-Protective Nanostructured Thin Films. <i>NATO Science Series Series II, Mathematics, Physics and Chemistry</i> , 2004 , 9-21		1

29	Growth of High Quality AlN Epitaxial Films by Hot-Wall Chemical Vapour Deposition. <i>Materials Science Forum</i> , 1998 , 264-268, 1133-1136	0.4	1
28	Er doping of Si and Si _{0.88} Ge _{0.12} using Er ₂ O ₃ and ErF ₃ evaporation during molecular beam epitaxy. A transmission electron microscopy study. <i>Journal of Crystal Growth</i> , 1999 , 196, 97-110	1.6	1
27	Characterization of interfaces between hydrogenated amorphous carbon films and steel substrates using high resolution cross-sectional transmission electron microscopy. <i>Diamond and Related Materials</i> , 1993 , 2, 562-566	3.5	1
26	Properties of MOS Structure Fabricated on 3C-SiC Grown by Reactive Magnetron Sputtering.. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 339, 157		1
25	Oxidation resistance and mechanical properties of sputter-deposited Ti _{0.9} Al _{0.1} B _{2-y} thin films. <i>Surface and Coatings Technology</i> , 2022 , 128187	4.4	1
24	Influence of Si doping and O ₂ flow on arc-deposited (Al,Cr) ₂ O ₃ coatings. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2019 , 37, 061516	2.9	1
23	Phase evolution of radio frequency magnetron sputtered Cr-rich (Cr,Zr) ₂ O ₃ coatings studied by in situ synchrotron X-ray diffraction during annealing in air or vacuum. <i>Journal of Materials Research</i> , 2019 , 34, 3735-3746	2.5	1
22	Synthesis and characterization of TiB _x (1.2 x 2.8) thin films grown by DC magnetron co-sputtering from TiB ₂ and Ti targets. <i>Surface and Coatings Technology</i> , 2022 , 433, 128110	4.4	0
21	Effect of low-energy ion assistance on the properties of sputtered ZrB ₂ films. <i>Vacuum</i> , 2021 , 195, 110688-7	3.7	0
20	Electron irradiation induced modifications of Ti(1-x)Al _x N coatings and related buffer layers on steel substrates. <i>Vacuum</i> , 2021 , 185, 110028	3.7	0
19	Improving oxidation and wear resistance of TiB ₂ films by nano-multilayering with Cr. <i>Surface and Coatings Technology</i> , 2022 , 436, 128337	4.4	0
18	Microstructure, mechanical, and corrosion properties of Zr _{1-x} Cr _x By diboride alloy thin films grown by hybrid high power impulse/DC magnetron co-sputtering. <i>Applied Surface Science</i> , 2022 , 591, 153164	6.7	0
17	High-entropy transition metal nitride thin films alloyed with Al: Microstructure, phase composition and mechanical properties. <i>Materials and Design</i> , 2022 , 110798	8.1	0
16	Novel MAX resembling Phase Mo ₂ Ga ₂ C 2016 , 1010-1011		
15	Growth and oxidization stability of cubic Zr _{1-x} Gd _x N solid solution thin films. <i>Journal of Applied Physics</i> , 2015 , 117, 195301	2.5	
14	Development of FETs and Resistive Devices Based on Epitaxially Grown Single Layer Graphene on SiC for Highly Sensitive Gas Detection. <i>Materials Science Forum</i> , 2012 , 717-720, 687-690	0.4	
13	Introduction: 1st Northern Workshop on TEM Sample Preparation of Thin Films. <i>Microscopy Research and Technique</i> , 1997 , 36, 353-353	2.8	
12	Characterisation of the Optical Response of some Anisotropic Ternary Mn+1AX _n Compounds. <i>Microscopy and Microanalysis</i> , 2008 , 14, 1360-1361	0.5	

- 11 Growth of Epitaxial (SiC)_x(AlN)_{1-x} Thin Films on 6H-SiC by Ion-Assisted Dual Magnetron Sputter Deposition. *Materials Science Forum*, **2002**, 389-393, 1481-1484 0.4
- 10 TiN THIN FILMS: DEFECT GENERATION, RESIDUAL STRESSES AND HARDNESS. *Journal of the Mechanical Behavior of Materials*, **2000**, 11, 59-62 1.9
- 9 Infrared Reflectance of Extremely Thin AlN Epi-Films Deposited on SiC Substrates. *Materials Science Forum*, **1998**, 264-268, 649-652 0.4
- 8 Rayleigh scattering and direct observation of clusters in Ge₂₅S₇₅ bulk glass by high resolution transmission electron microscopy. *Journal of Materials Science Letters*, **1996**, 15, 455-456
- 7 On picostructural models of physically vapor-deposited films of titanium nitride **1991**, 181-187
- 6 High-Selectivity Growth of GaN Nanorod Arrays by Liquid-Target Magnetron Sputter Epitaxy. *Coatings*, **2020**, 10, 719 2.9
- 5 Microstructural evolution and thermal stability of nitride-based metal/semiconductor superlattices for thermoelectric and hard-coating applications **2016**, 237-238
- 4 Advanced Carbon-Based Coatings **2016**,
- 3 Revealing Formation Mechanism of Self-Induced InAlN Core-Shell Nanorods by Aberration-Corrected TEM **2016**, 459-460
- 2 Elucidating Pathfinding Elements from the Kubi Gold Mine in Ghana. *Minerals (Basel, Switzerland)*, **2021**, 11, 912 2.4
- 1 Synthesis, Structure, and Properties of Superhard Superlattice Coatings 539-554