Jindrich Musil

List of Publications by Citations

289 papers	9,923 citations	49 h-index	89 g-index
299 ext. papers	10,601 ext. citations	3.4 avg, IF	6.52 L-index

#	Paper	IF	Citations
289	Hard and superhard nanocomposite coatings. *Surface and Coatings Technology*, **2000**, 125, 322-330	4.4	863
288	Relationships between hardness, Young's modulus and elastic recovery in hard nanocomposite coatings. *Surface and Coatings Technology*, **2002**, 154, 304-313	4.4	484
287	Hard nanocomposite coatings: Thermal stability, oxidation resistance and toughness. *Surface and Coatings Technology*, **2012**, 207, 50-65	4.4	454
286	Reactive magnetron sputtering of thin films: present status and trends. *Thin Solid Films*, **2005**, 475, 208-218	2.2	276
285	Toughness of hard nanostructured ceramic thin films. *Surface and Coatings Technology*, **2007**, 201, 5148-5152	4.4	258
284	Superhard nanocomposite $Ti_{1-x}Al_xN$ films prepared by magnetron sputtering. *Thin Solid Films*, **2000**, 365, 104-109	2.2	228
283	Magnetron sputtering of hard nanocomposite coatings and their properties. *Surface and Coatings Technology*, **2001**, 142-144, 557-566	4.4	183
282	ZrN/Cu nanocomposite film—a novel superhard material. *Surface and Coatings Technology*, **1999**, 120-121, 179-183	4.4	178
281	A comparative study on reactive and non-reactive unbalanced magnetron sputter deposition of TiN coatings. *Thin Solid Films*, **2002**, 415, 151-159	2.2	168
280	Microstructure and properties of nanocomposite Ti–B–N and Ti–B–C coatings. *Surface and Coatings Technology*, **1999**, 120-121, 405-411	4.4	158
279	Low-energy (~100 eV) ion irradiation during growth of TiN deposited by reactive magnetron sputtering: Effects of ion flux on film microstructure. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1991**, 9, 434-438	2.9	152
278	Flexible hard nanocomposite coatings. *RSC Advances*, **2015**, 5, 60482-60495	3.7	130
277	Structure and properties of hard and superhard Zr–Cu–N nanocomposite coatings. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2000**, 289, 189-197	5.3	123
276	Structure–property relationships in single- and dual-phase nanocrystalline hard coatings. *Surface and Coatings Technology*, **2003**, 174-175, 725-731	4.4	120
275	Hard and superhard Zr–Ni–N nanocomposite films. *Surface and Coatings Technology*, **2001**, 139, 101-109	4.4	109
274	Thermal stability of PVD hard coatings. *Vacuum*, **2003**, 71, 279-284	3.7	105
273	Tribological and mechanical properties of nanocrystalline-TiC/a-C nanocomposite thin films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2010**, 28, 244-249	2.9	99

272	Magnetron sputtering of films with controlled texture and grain size. *Materials Chemistry and Physics*, **1998**, 54, 116-122	4.4	99
271	Pulsed dc Magnetron Discharges and their Utilization in Plasma Surface Engineering. *Contributions To Plasma Physics*, **2004**, 44, 426-436	1.4	98
270	Thermal stability of alumina thin films containing □Al2O3 phase prepared by reactive magnetron sputtering. *Applied Surface Science*, **2010**, 257, 1058-1062	6.7	96
269	Reactive sputtering of TiN films at large substrate to target distances. *Vacuum*, **1990**, 40, 435-444	3.7	94
268	Low-pressure magnetron sputtering. *Vacuum*, **1998**, 50, 363-372	3.7	92
267	Low-temperature sputtering of crystalline TiO2 films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2006**, 24, 521-528	2.9	91
266	Low-stress superhard Ti?B films prepared by magnetron sputtering. *Surface and Coatings Technology*, **2003**, 174-175, 744-753	4.4	85
265	Structure of TiN coatings deposited at relatively high rates and low temperatures by magnetron sputtering. *Thin Solid Films*, **1988**, 156, 53-64	2.2	83
264	Hard nanocomposite Zr□Y□N coatings, correlation between hardness and structure. *Surface and Coatings Technology*, **2000**, 127, 99-106	4.4	80
263	Ion-assisted sputtering of TiN films. *Surface and Coatings Technology*, **1990**, 43-44, 259-269	4.4	78
262	New results in d.c. reactive magnetron deposition of TiNx films. *Thin Solid Films*, **1988**, 167, 107-120	2.2	77
261	High-power pulsed sputtering using a magnetron with enhanced plasma confinement. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2007**, 25, 42-47	2.9	71
260	Magnetron sputtered Cr?Ni?N and Ti?Mo?N films: comparison of mechanical properties. *Surface and Coatings Technology*, **2001**, 142-144, 146-151	4.4	71
259	Nanocrystalline and nanocomposite CrCu and CrCu□N films prepared by magnetron sputtering. *Surface and Coatings Technology*, **1999**, 115, 32-37	4.4	69
258	Composite TiN□Ni thin films deposited by reactive magnetron sputter ion-plating. *Surface and Coatings Technology*, **1998**, 110, 168-172	4.4	65
257	Role of energy in low-temperature high-rate formation of hydrophilic TiO2 thin films using pulsed magnetron sputtering. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2007**, 25, 666-674	2.9	65
256	Reactive deposition of tin films using an unbalanced magnetron. *Surface and Coatings Technology*, **1989**, 39-40, 487-497	4.4	62
255	Hard amorphous nanocomposite coatings with oxidation resistance above 1000□C. *Advances in Applied Ceramics*, **2008**, 107, 148-154	2.3	61

254	Reactive magnetron sputtering of TiOx films. *Surface and Coatings Technology*, **2005**, 193, 107-111	4.4	60
253	Pulsed dc magnetron discharge for high-rate sputtering of thin films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2001**, 19, 420-424	2.9	60
252	Sputtering systems with magnetically enhanced ionization for ion plating of TiN films. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1990**, 8, 1318-1324	2.9	60
251	Hysteresis effect in reactive sputtering: a problem of system stability. *Journal Physics D: Applied Physics*, **1986**, 19, L187-L190	3	59
250	Arc evaporation of hard coatings: Process and film properties. *Surface and Coatings Technology*, **1990**, 43-44, 299-311	4.4	56
249	Unbalanced magnetrons and new sputtering systems with enhanced plasma ionization. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1991**, 9, 1171-1177	2.9	56
248	Ion flux characteristics in high-power pulsed magnetron sputtering discharges. *Europhysics Letters*, **2007**, 77, 45002	1.6	55
247	Composition, structure, microhardness and residual stress of W–Ti–N films deposited by reactive magnetron sputtering. *Thin Solid Films*, **2002**, 408, 136-147	2.2	54
246	Dependence of microstructure of TiN coatings on their thickness. *Thin Solid Films*, **1988**, 158, 225-232	2.2	52
245	Hydrophobicity of Thin Films of Compounds of Low-Electronegativity Metals. *Journal of the American Ceramic Society*, **2014**, 97, 2713-2717	3.8	51
244	Nanostructure of photocatalytic TiO2 films sputtered at temperatures below 200°C. *Applied Surface Science*, **2008**, 254, 3793-3800	6.7	51
243	Structure and mechanical properties of magnetron sputtered Zr–Ti–Cu–N films. *Surface and Coatings Technology*, **2003**, 166, 243-253	4.4	51
242	Structure and properties of magnetron sputtered Zr–Si–N films with a high (≥25 at.%) Si content. *Thin Solid Films*, **2005**, 478, 238-247	2.2	51
241	Cathodic arc evaporation in thin film technology. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1992**, 10, 1740-1748	2.9	49
240	Recent advances in magnetron sputtering technology. *Surface and Coatings Technology*, **1998**, 100-101, 280-286	4.4	48
239	Properties of magnetron sputtered Al–Si–N thin films with a low and high Si content. *Surface and Coatings Technology*, **2008**, 202, 3485-3493	4.4	48
238	Properties of reactively sputtered W–Si–N films. *Surface and Coatings Technology*, **2006**, 200, 3886-3895	4.4	47
237	Magnetron sputtering of alloy and alloy-based films. *Thin Solid Films*, **1999**, 343-344, 47-50	2.2	47

236	Microwave plasma: its characteristics and applications in thin film technology. *Vacuum*, **1986**, 36, 161-169	3.7	47
235	Reactive deposition of hard coatings. *Surface and Coatings Technology*, **1989**, 39-40, 301-314	4.4	46
234	Structural analysis of tin films by Seemann-Bohlin X-ray diffraction. *Thin Solid Films*, **1990**, 193-194, 401-408	2.2	46
233	Structure and mechanical properties of DC magnetron sputtered TiC/Cu films. *Vacuum*, **2006**, 81, 531-538	3.7	45
232	Structure-hardness relations in sputtered Ti-Al-V-N films. *Thin Solid Films*, **2003**, 444, 189-198	2.2	45
231	Formation of nanocrystalline NiCr-N films by reactive dc magnetron sputtering. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1998**, 16, 3301-3304	2.9	45
230	TiNx coatings prepared by d.c. reactive magnetron sputtering. *Thin Solid Films*, **1986**, 136, 229-239	2.2	43
229	Influence of the pumping speed on the hysteresis effect in the reactive sputtering of thin films. *Vacuum*, **1987**, 37, 729-738	3.7	43
228	Transparent Zr-Al-O oxide coatings with enhanced resistance to cracking. *Surface and Coatings Technology*, **2012**, 206, 2105-2109	4.4	42
227	Relation of deposition conditions of Ti-N films prepared by d.c. magnetron sputtering to their microstructure and macrostress. *Surface and Coatings Technology*, **1993**, 60, 484-488	4.4	42
226	Magnetron sputtering of TiOxNy films. *Vacuum*, **2006**, 81, 285-290	3.7	41
225	Low pressure magnetron sputtering and selfsputtering discharges. *Vacuum*, **1996**, 47, 307-311	3.7	41
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223	X-ray analysis of heat-treated titanium nitride films. *Thin Solid Films*, **1989**, 170, 201-210	2.2	40
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221	A perspective of magnetron sputtering in surface engineering. *Surface and Coatings Technology*, **1999**, 112, 162-169	4.4	39
220	High-rate magnetron sputtering. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1996**, 14, 2187-2191	2.9	39
219	Comparison of hydrophilic properties of TiO2 thin films prepared by sol-gel method and reactive magnetron sputtering system. *Thin Solid Films*, **2011**, 519, 6944-6950	2.2	38

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215	X-ray analysis of strain in titanium nitride layers. *Thin Solid Films*, **1987**, 149, 49-60	2.2	38
214	Studies on Magnetron Sputtering Assisted by Inductively Coupled RF Plasma for Enhanced Metal Ionization. *Japanese Journal of Applied Physics*, **1999**, 38, 4291-4295	1.4	37
213	Discharge in dual magnetron sputtering system. *IEEE Transactions on Plasma Science*, **2005**, 33, 338-339	1.3	36
212	Relationship between mechanical properties and coefficient of friction of sputtered a-C/Cu composite thin films. *Diamond and Related Materials*, **2008**, 17, 1905-1911	3.5	35
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208	Thermal stability of magnetron sputtered Zr–Si–N films. *Surface and Coatings Technology*, **2006**, 201, 3368-3376	4.4	34
207	Properties of nanocrystalline Al–Cu–O films reactively sputtered by DC pulse dual magnetron. *Applied Surface Science*, **2011**, 258, 1762-1767	6.7	32
206	Physical properties and high-temperature oxidation resistance of sputtered Si3N4/MoNx nanocomposite coatings. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2005**, 23, 1568		32
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204	Physical and mechanical properties of sputtered Ta–Si–N films with a high (?40 at %) content of Si. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2004**, 22, 646	2.9	31
203	Measurement of hardness of superhard films by microindentation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2003**, 340, 281-285	5.3	31
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200	Plasma spray deposition of graded metal-ceramic coatings. *Surface and Coatings Technology*, **1992**, 52, 211-220	4.4	29
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198	Absorption of electromagnetic waves in a radially inhomogeneous plasma at high magnetic fields. *Plasma Physics*, **1975**, 17, 1147-1153		29
197	The effect of addition of Al in ZrO2 thin film on its resistance to cracking. *Surface and Coatings Technology*, **2012**, 207, 355-360	4.4	28
196	Enhanced hardness in sputtered Zr–Ni–N films. *Surface and Coatings Technology*, **2006**, 200, 6293-6297	4.4	28
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194	High-rate reactive deposition of transparent SiO2 films containing low amount of Zr from molten magnetron target. *Thin Solid Films*, **2010**, 519, 775-777	2.2	27
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192	Modeling of inhomogeneous film deposition and target erosion in reactive sputtering. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1990**, 8, 1560-1565	2.9	27
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190	A study on the synthesis and microstructure of WC/TiN superlattice coating. *Surface and Coatings Technology*, **2000**, 131, 372-377	4.4	26
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186	Evolution of film temperature during magnetron sputtering. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2006**, 24, 1083-1090	2.9	24
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181	Protective over-layer coating preventing cracking of thin films deposited on flexible substrates. *Surface and Coatings Technology*, **2014**, 240, 275-280	4.4	22
180	Contamination of Magnetron Sputtered Metallic Films by Oxygen From Residual Atmosphere in Deposition Chamber. *Plasma Processes and Polymers*, **2015**, 12, 416-421	3.4	22
179	A comparison of internal plasma parameters in a conventional planar magnetron and a magnetron with additional plasma confinement. *Plasma Sources Science and Technology*, **1997**, 6, 46-52	3.5	22
178	High-rate pulsed reactive magnetron sputtering of oxide nanocomposite coatings. *Vacuum*, **2013**, 87, 96-102	3.7	21
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172	Antibacterial Cr–Cu–O films prepared by reactive magnetron sputtering. *Applied Surface Science*, **2013**, 276, 660-666	6.7	20
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157	The depth profile analysis of W-Si-N coatings after thermal annealing. *Surface and Coatings Technology*, **2002**, 161, 111-119	4.4	17
156	Penetration of a strong electromagnetic wave in an inhomogeneous plasma generated by ECR using a magnetic beach. *Plasma Physics*, **1971**, 13, 471-476		17
155	Magnetron sputtering of alloy-based films and its specifity. *European Physical Journal D*, **1998**, 48, 1209-1224		16
154	Formation of crystalline Al□Ti□O thin films and their properties. *Surface and Coatings Technology*, **2008**, 202, 6064-6069	4.4	16
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151	Investigation of the Negative Ions in Ar/O2 Plasma of Magnetron Sputtering Discharge with Al:Zn Target by Ion Mass Spectrometry. *Plasma Processes and Polymers*, **2011**, 8, 459-464	3.4	15
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131	Effect of Al Addition on Structure and Properties of Sputtered TiC Films. *Plasma Processes and Polymers*, **2007**, 4, S6-S10	3.4	13
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126	□(Me1, Me2) and MeNx films deposited by magnetron sputtering: Novel heterostructural alloy and compound films. *Surface and Coatings Technology*, **2018**, 337, 75-81	4.4	12
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