

Literatura do artykułów 1.-5.

1. L.A. Dobrzański, Materiały inżynierskie i projektowanie materiałowe. Podstawy nauki o materiałach i metaloznawstwo, Wydanie II zmienione i uzupełnione, WNT, Warszawa, 2006.
2. L.A. Dobrzański, A.D. Dobrzańska-Danikiewicz, Kształtowanie struktury i własności powierzchni materiałów inżynierskich, Wydawnictwo Politechniki Śląskiej, Gliwice, 2013.
3. L.A. Dobrzański, G. Matula, Podstawy metalurgii proszków i materiały spiekane, Open Access Library 8(14) (2012) 1-156.
4. L.A. Dobrzański, A.D. Dobrzańska-Danikiewicz, Obróbka powierzchni materiałów inżynierskich, Open Access Library 5 (2011) 1-480.
5. L.A. Dobrzański, Kształtowanie struktury i własności powierzchni materiałów inżynierskich i biomedycznych, International OCSCO World Press, Gliwice, 2009.
6. L.A. Dobrzański, Wprowadzenie do nauki o materiałach, Wydawnictwo Politechniki Śląskiej, Gliwice, 2007.
7. L.A. Dobrzański Podstawy kształtowania struktury i własności materiałów metalowych, Wydawnictwo Politechniki Śląskiej, Gliwice, 2007.
8. L.A. Dobrzański, Podstawy nauki o materiałach, Wydawnictwo Politechniki Śląskiej, Gliwice, 2012.
9. L.A. Dobrzański, Metaloznawstwo opisowe stopów metali nieżelaznych, Wydawnictwo Politechniki Śląskiej, Gliwice, 2008.
10. L.A. Dobrzański, Nietalowe materiały inżynierskie, Wydawnictwo Politechniki Śląskiej, Gliwice, 2008.
11. L.A. Dobrzański, Podstawy metodologii projektowania materiałowego, Wydawnictwo Politechniki Śląskiej, Gliwice, 2009.
12. L.A. Dobrzański, The outstanding achievements in the scientific activity of the Institute of Engineering Materials and Biomaterials of the Silesian University of Technology in Gliwice, Poland, w: Y.I. Shalapko and L.A. Dobrzański (ed.), Scientific basis of modern technology: experience and prospects. Monograph, Department of Principles of Engineering Mechanics of Khmelnytsky National University, Khmelnytsky, Ukraine, 2011, 545-600.
13. L.A. Dobrzański i A.D. Dobrzańska-Danikiewicz (red.), Analiza istniejącej sytuacji w zakresie rozwoju technologii oraz uwarunkowań społeczno-gospodarczych w odniesieniu do przedmiotu foresightu, Raport z realizacji zadania 2. projektu FORSURF, Gliwice, 2010.
14. K. Gołombek, Struktura i własności węglików spiekanych i cermetali narzędziowych pokrytych w procesie PVD powłokami odpornymi na ścieranie, Praca doktorska niepublikowana, Biblioteka Główna Politechniki Śląskiej, Gliwice, 2001.
15. J. Kopač, M. Soković, Technika Odrezavanja. Sodobna Rezalna Orodja, University of Ljubljana, Ljubljana, 1993.
16. L. Przybylski, Współczesne ceramiczne materiały narzędziowe. Monografia 276, Politechnika Krakowska, Kraków, 2000.
17. M. Wysięcki, Nowoczesne materiały narzędziowe, WNT, Warszawa, 1997.
18. S. Ekinović, Obrada rezanjem, BiH, Zenica, 2001.

19. G.K.L. Goh, L.C. Lim, M. Rahman, S.C. Lim, Effect of grain size on wear behaviour of alumina cutting tools, *Wear* 206 (1997) 24-32.
20. I.Y. Konyashin, PVD/CVD technology for coating cemented carbides, *Surface & Coatings Technology* 71 (1995) 277-283.
21. I.Y. Konyashin, Toughening of the Al_2O_3 -TiC ceramics by depositing thin coatings, *Surface & Coatings Technology* 79 (1996) 192-196.
22. J. Kopač, Influence of cutting material and coating on tool quality and tool life, *Journal of Materials Processing Technology* 78 (1998) 95-103.
23. J. Kopač, Steel with improved machinability and environmental protection, *Materiały 9-tej Międzynarodowej Konferencji Naukowej „Achievements in Mechanical and Materials Engineering”*, AMME'2000, Gliwice-Sopot, 2000, 301-304.
24. J. Kopač, M. Babor, Interaction of the technological history of a workpiece material and the machining parameters on the desired quality of the surface roughness of a product, *Journal of Materials Processing Technology* 92-93 (1999) 381-387.
25. J. Dmochowski, *Podstawy obróbki skrawaniem*, PWN, Warszawa, 1983.
26. W. Grzesik, Z. Zalisz, P. Niesolny, Friction and wear testing of multilayer coatings on carbide substrates for dry machining applications, *Surface & Coatings Technology* 155 (2002) 37-42.
27. D.B. Lewis, S.R. Bradbury, M. Sarwar, The effect of substrate surface preparation on the wear and failure modes of TiN coated high speed steel circular saw blades, *Wear* 197 (1996) 82-88.
28. E. Górski (red.), *Poradnik inżyniera, Obróbka skrawaniem*, tom 1, WNT, Warszawa, 1991.
29. E. Medvedovski, Wear-resistant engineering ceramics, *Wear* 9 (2001) 821-828.
30. S. Novak, M. Soković, B. Navinšek, M. Komac, B. Praček, On the wear of TiN (PVD) coated cermet cutting tools, *Vacuum* 2 (1997) 107-112.
31. S. Dolinšek, J. Kopač, Acoustic emission signals for tool wear identification, *Wear* 225-229 (1999) 295-303.
32. A. Gatto, L. Iuliano, Advanced coated ceramic tools for machining superalloys, *International Journal of Machine Tools and Manufacturing* 5 (1997) 591-605.
33. W. Grzesik, *Podstawy skrawania materiałów metalowych*, WNT, Warszawa, 1998.
34. C.Y.H. Lim, S.C. Lim, K.S. Lee, Wear of TiC-coated carbide tools in dry turning, *Wear* 225-229 (1999) 354-358.
35. S.C. Lim, C.Y.H. Lim, K.S. Lee, The effects of machining conditions on the flank wear of TiN-coated high speed steel tool inserts, *Wear* 181-183 (1995) 901-912.
36. L. Lin, G.S. Blackman, R.R. Matheson, A new approach to characterize scratch and mar resistance of automotive coatings, *Progress in Organic Coatings* 40 (2000) 85-91.
37. K.G. Budinski, Tool wear in cutting plastic — abrasion or erosion?, *Wear* 233-235 (1999) 362-371.
38. P. Hedenqvist, S. Jacobson, S. Hogmark, Tribological PVD coatings – characterisation of mechanical properties, *Surface & Coatings Technology* 97 (1997) 212-217.
39. S. Karagöz, H.F. Fishmeister, Metallographic observations on the wear process of TiN-coated cutting tools, *Surface & Coatings Technology* 81 (1996) 190-198.
40. K.L. Rutherford, P.W. Hatto, C. Davies, I.M. Hutchings, Abrasive wear resistance of TiN/NbN multi-layers: measurement and neural network modelling, *Surface & Coatings Technology* 86-87 (1996) 472-479.

41. J.L. He, C.K. Chen, M.H. Hon, Wear of Ti-Si-N coated ceramic cutting inserts, *Wear* 181-183 (1995) 189-196.
42. E. Uhlmann, U. Lachmund, M. Brücher, Wear behavior of HFCVD-diamond coated carbide and ceramic tools, *Surface & Coatings Technology* 131 (2000) 395-400.
43. P. Holubar, M. Jilek, M. Sima, Present and possible future applications of superhard nanocomposite coatings, *Surface & Coatings Technology* 133-134 (2000) 145-151.
44. B. Navinšek, P. Panjan, F. Gorenjak, Improvement of hot forging manufacturing with PVD and DUPLEX coatings, *Surface & Coatings Technology* 137 (2001) 255-264.
45. M. Soković, L. Kosec, L.A. Dobrzański, An investigation of the diffusion across a PVD-coated cermet tool/workpiece interface, *Strojnicki Vestnik – Journal of Mechanical Engineering* 48 (2002) 33-40.
46. M. Soković, K. Mijanović, Ecological aspects of the cutting fluids and its influence on quantifiable parameters of the cutting processes, *Journal of Materials Processing Technology* 109 (2001) 181-189.
47. S.R. Bradbury, T. Huyanan, Challenges facing surface engineering technologies in the cutting tool industry, *Vacuum* 56 (2000) 173-177.
48. J. Kopač, M. Soković, S. Dolinšek, Tribology of coated tools in conventional and HSC machining, *Journal of Materials Processing Technology* 118 (2001) 377-384.
49. J.P. Celis, A systems approach to the tribological testing of coated materials, *Surface & Coatings Technology* 74-75 (1995) 15-22.
50. P. Holubar, M. Jilek, M. Sima, Nanocomposite nc-TiAlSiN and nc-TiN-BN coatings: their applications on substrates made of cemented carbide and results of cutting tests, *Surface & Coatings Technology* 120-121 (1999) 184-188.
51. Ł. Kołodziejczyk, S. Fouvry, B. Wendler, P. Kapsa, Właściwości mechaniczne i tribologiczne modulowanych powłok TiC/VC na stali SW7M, *Inżynieria Materiałowa XXI/6* (2000) 324-328.
52. S. Hogmark, P. Hedenqvist, S. Jacobson, Tribological properties of thin hard coatings: demands and evaluation, *Surface & Coatings Technology* 90 (1997) 247-257.
53. S. Hogmark, S. Jacobson, M. Larsson, Design and evaluation of tribological coatings, *Wear* 246 (2000) 20-33.
54. K.D. Bouzakis, N. Michailidis, S. Hadjiyiannis, K. Efstathiou, E. Pavlidou, G. Erkens, S. Rambadt, I. Wirth, Improvement of PVD coated inserts cutting performance, through appropriate mechanical treatments of substrate and coating surface, *Surface & Coatings Technology* 146-147 (2001) 443-450.
55. K.D. Bouzakis, N. Michailidis, G. Skordaris, S. Kombogiannis, S. Hadjiyiannis, K. Efstathiou, E. Pavlidou, G. Erkens, S. Rambadt, I. Wirth, Optimisation of the cutting edge roundness and its manufacturing procedures of cemented carbide inserts, to improve their milling performance after a PVD coating deposition, *Surface & Coatings Technology* 163-164 (2003) 625-630.
56. M. Soković, Structure and properties of the TiN and TiZrN PVD-coated tool cermets, *Praca doktorska niepublikowana, Biblioteka Główna Politechniki Śląskiej, Gliwice, 1997.*
57. J. Adamczyk, *Metaloznawstwo teoretyczne – cz. I, Struktura metali i stopów, Wydawnictwo Politechniki Śląskiej, Gliwice, 1999.*
58. E. Cappelli, L. Esposito, F. Pinzari, G. Mattei, S. Orlando, Diamond nucleation and adhesion on sintered nitride ceramics, *Diamond and Related Materials* 11 (2002) 1731-1746.

59. A. Olszyna, Ceramika supertwarda, Wydawnictwo Politechniki Warszawskiej, Warszawa, 2002.
60. E.P. DeGarmo, J.T. Black, R.A. Kosher, B.E. Klamecki, Materials and Processes in Manufacturing, Ninth Edition, Wiley, 2002.
61. M. Schwartz, Encyclopedia of Materials, Parts and Finishes, Second Edition, CRC Press, Boca Raton, London, New York, Washington, 2002.
62. I. Maňkova, State of the art of development and application in ceramic cutting tools Archiwum Technologii Maszyn i Automatyzacji 19/2 (1999) 25-35.
63. Y.H. Koh, H.W. Kim, H.E. Kim, Improvement of oxidation resistance of Si_3N_4 by heat treatment in a wet H_2 atmosphere, Journal of Materials Research 17/9 (2002) 2321-2326.
64. H. Park, H. Kim, K. Niihara, Microstructural evolution and mechanical properties of Si_3N_4 with Yb_2O_3 as a sintering additive, Journal of the American Ceramic Society 80/3 (1997) 750-756.
65. H.S. Park, D. Kwon, An energy approach to quantification of adhesion strength from critical loads in scratch tests, Thin Solid Films 307/1-2 (1997) 156-162.
66. G.S. Brady, H.R. Clauser, J.A. Vaccari, Materials Handbook, Fifteenth Edition, McGraw-Hill, New York, 2002.
67. R. Abel, Beschichtete Schneidkeramik- und Cermet-Wendeschnidplatten, Maschine 46/7-8 (1992) 50-52.
68. H. Leda, Ceramika narzędziowa jako materiał alternatywny dla stali i spieków węglkowych, Mechanik 3 (1990) 85-88.
69. M. Adamiak, Struktura i własności powłok TiN i Ti(C,N) uzyskiwanych w procesie PVD na stalach szybko tnących, Praca doktorska niepublikowana, Biblioteka Główna Politechniki Śląskiej, Gliwice, 1997.
70. J. Audy, K.N. Strafford, C. Subramanian, The efficiency of uncoated and coated tool systems in the machining of low carbon steel assessed through cutting force measurements, Surface & Coatings Technology 76-77/2 (1995) 706-711.
71. S. Hampshire, Silicon nitride ceramics – review of structure, processing and properties, Journal of Achievements in Materials and Manufacturing Engineering 24/1 (2007) 43-50.
72. M. Sopicka-Lizer, Ceramika sialonowa – właściwości i perspektywy rozwoju, Inżynieria Materiałowa XX/3-4 (1999) 167-176.
73. M. Sopicka-Lizer, Ceramika sialonowa z proszku otrzymanego karbotermicznie – fizykochemiczne podstawy wytwarzania i własności, Hutnictwo 55, Wydawnictwo Politechniki Śląskiej, Gliwice, 2000.
74. M. Sopicka-Lizer, M. Tańcula, T. Włodek, K. Rodak, M. Hüller, V. Kochnev, E. Fokina, K. MacKenzie, The effect of mechanical activation on the properties of β -sialon precursors, Journal of the European Ceramic Society 28 (2008) 279-288.
75. A.D. Dobrzańska-Danikiewicz, K. Gołombek, D. Pakuła, J. Mikuła, M. Staszuk, L.W. Żukowska, Long-term development directions of PVD/CVD coatings deposited onto sintered tool materials, Archives of Materials Science and Engineering 49/2 (2011) 69-96.
76. A.D. Dobrzańska-Danikiewicz (red.), Materials surface engineering development trends, Open Access Library 6 (2011) 1-594.
77. A.D. Dobrzańska-Danikiewicz, Metodologia komputerowo zintegrowanego prognozowania rozwoju inżynierii powierzchni materiałów, Open Access Library 1(7) (2012) 1-289.
78. FORSURF, Foresight wiodących technologii kształtowania własności powierzchni materiałów inżynierskich i biomedycznych, www.forsurf.pl, 2013.

79. L.A. Dobrzański, A.D. Dobrzańska-Danikiewicz (red.), Analiza istniejącej sytuacji w zakresie rozwoju technologii oraz uwarunkowań społeczno-gospodarczych w odniesieniu do przedmiotu foresightu, Raport z realizacji zadania 2. projektu FORSURF, Gliwice, 2010.
80. A.D. Dobrzańska-Danikiewicz, Foresight methods for technology validation, road-mapping and development in the surface engineering area, Archives of Materials Science Engineering 44/2 (2010) 69-86.
81. A.D. Dobrzańska-Danikiewicz, E-foresight technologiczny dla walidacji, prognozowania rozwoju i mapowania technologii, w: Kooperacje Organizacji Publicznych T. II, W. Kieżun, A. Letkiewicz i J. Wolejszo (red.), Wydział Wydawnictw i Poligrafii Wyższej Szkoły Policji w Szczytnie, Szczytno, 2011, 507-518.
82. A. Dobrzańska-Danikiewicz, Foresight of material surface engineering as a tool building a knowledge-based economy, Materials Science Forum 706-709 (2012) 2511-2516.
83. A.D. Dobrzańska-Danikiewicz, A. Drygała, Strategic development perspectives of laser processing on polycrystalline silicon surface, Archives of Materials Science Engineering 50/1 (2011) 5-20.
84. A.D. Dobrzańska-Danikiewicz, Księga technologii krytycznych kształtowania struktury i własności powierzchni materiałów inżynierskich, Open Access Library 8(26) (2013) 1-823.
85. A.D. Dobrzańska-Danikiewicz, E-foresight of materials surface engineering, Archives of Materials Science Engineering 44/1 (2010) 43-50.
86. D. Pakuła, Struktura i własności wielowarstwowych powłok PVD i CVD odpornych na ścieranie na azotkowej ceramice narzędziowej Si_3N_4 . Praca doktorska niepublikowana, Biblioteka Główna Politechniki Śląskiej, Gliwice 2003.
87. M. Staszuk, Struktura i własności gradientowych powłok PVD i CVD na sialonach i węglkach spiekanych, Praca doktorska niepublikowana, Biblioteka Główna Politechniki Śląskiej, Gliwice 2009.
88. D. Pakuła, Forming of the surface structure and properties of tool's ceramic inserts with improved abrasion resistance, Archives of Materials Science and Engineering 62/2 (2013) 55-96.
89. D. Pakuła, M. Staszuk, L.A. Dobrzański, Investigations of the structure and properties of PVD coatings deposited onto sintered tool materials, Archives of Materials Science and Engineering 58/2 (2012) 219-226.
90. D. Pakuła, Structure and properties of multicomponent coatings deposited onto sialon tool ceramics, Archives of Materials Science and Engineering 52/1 (2011) 54-60.
91. D. Pakuła, L.A. Dobrzański, A. Křiž, M. Staszuk, Investigation of PVD coatings deposited on the Si_3N_4 and sialon tool ceramics, Archives of Materials Science and Engineering 46/1 (2010) 53-60.
92. L.A. Dobrzański, D. Pakuła, J. Mikuła, K. Gołombek, Investigation of the structure and properties of coatings deposited on ceramic tool materials, International Journal of Surface Science and Engineering 1/1 (2007) 111-124.
93. L.A. Dobrzański, D. Pakuła, Structure and properties of the wear resistant coatings obtained in the PVD and CVD processes on tool ceramics, Materials Science Forum 513 (2006) 119-133.
94. L.A. Dobrzański, D. Pakuła, A. Křiž, M. Soković, J. Kopač, Tribological properties of the PVD and CVD coatings deposited onto the nitride tool ceramics, Journal of Materials Processing Technology 175 (2006) 179-185.

95. L.A. Dobrzański, D. Pakuła, Comparison of the structure and properties of the PVD and CVD coatings deposited on nitride tool ceramics, *Journal of Materials Processing Technology* 164-165 (2005) 832-842.
96. L.A. Dobrzański, D. Pakuła, E. Hajduczek, Structure and properties of the multi-component TiAlSiN coatings obtained in the PVD process in the nitride tool ceramics, *Journal of Materials Processing Technology* 157-158 (2004) 331-340.
97. D. Pakuła, L.A. Dobrzański, K. Gołombek, M. Pancielejko, A. Křiž, Structure and properties of the Si₃N₄ nitride ceramics with hard wear resistant coatings, *Journal of Materials Processing Technology* 157-158 (2004) 388-393.
98. L.A. Dobrzański, L.W. Żukowska, J. Mikuła, K. Gołombek, D. Pakuła, M. Pancielejko, Structure and mechanical properties of gradient PVD coatings, *Journal of Materials Processing Technology* 201 (2008) 310-314.
99. M. Soković, J. Kopač, L.A. Dobrzański, J. Mikuła, K. Gołombek, D. Pakuła, Cutting characteristics of PVD and CVD – Coated ceramic tool inserts, *Tribology in Industry* 28/1-2 (2006) 3-8.
100. M. Staszuk, D. Pakuła, L.A. Dobrzański, Publikacja: Wpływ składu chemicznego i struktury powłok PVD i CVD na trwałość eksploatacyjną ostrzy skrawających wykonanych z ceramiki typu Si₃N₄ oraz sialonu, *Inżynieria Materiałowa* 6 (2013) 738-741.
101. L.A. Dobrzański, S. Skrzypek, D. Pakuła, J. Mikuła, A. Křiž, Influence of the PVD and CVD technologies on the residual macro-stresses and functional properties of the gradient and multilayer coatings on the tool ceramics, *Journal of Achievements in Materials and Manufacturing Engineering* 35/2 (2009) 162-168.
102. L.A. Dobrzański, K. Gołombek, J. Mikuła, D. Pakuła, Multilayer and gradient PVD coatings on the sintered tool materials, *Journal of Achievements in Materials and Manufacturing Engineering* 31/2 (2008) 170-190.
103. K. Gołombek, J. Mikuła, D. Pakuła, L.W. Żukowska, L.A. Dobrzański, Sintered tool materials with multicomponent PVD gradient coatings, *Journal of Achievements in Materials and Manufacturing Engineering* 31/1 (2008) 15-22.
104. W. Kwaśny, W. Sitek, D. Pakuła, L.A. Dobrzański, Application of neural networks for analysis of relationship between the service properties of CVD coatings and their multifractal parameters, *Inżynieria Materiałowa* 3-4 (2007) 660-665.
105. L.A. Dobrzański, K. Lukaszewicz, D. Pakuła, J. Mikuła, Corrosion resistance of multilayer and gradient coatings deposited by PVD and CVD techniques, *Archives of Materials Science and Engineering* 28/1 (2007) 12-18.
106. W. Kwaśny, D. Pakuła, M. Woźniak, L.A. Dobrzański, Fractal and multifractal characteristics of CVD coatings deposited onto the nitride tool ceramics, *Journal of Achievements in Materials and Manufacturing Engineering* 20 (2007) 371-374.
107. L.A. Dobrzański, K. Lukaszewicz, J. Mikuła, D. Pakuła, Structure and corrosion resistance of gradient and multilayer coatings, *Journal of Achievements in Materials and Manufacturing Engineering* 18 (2006) 75-78.
108. L.A. Dobrzański, K. Gołombek, J. Mikuła, D. Pakuła, Improvement of tool materials by deposition of gradient and multilayers coatings, *Journal of Achievements in Materials and Manufacturing Engineering* 19/2 (2006) 86-91.
109. L.A. Dobrzański, K. Gołombek, J. Mikuła, D. Pakuła, Cutting ability improvement of coated tool materials, *Journal of Achievements in Materials and Manufacturing Engineering* 17 (2006) 41-48.

110. W. Kwaśny, Predicting properties of PVD and CVD coatings based on fractal quantities describing their surface, *Journal of Achievements in Materials and Manufacturing Engineering* 37/2 (2009) 125-192.
111. K. Gołombek, Struktura i własności formowanych wtryskowo materiałów narzędziowych z powłokami nanokrystalicznymi, *Open Access Library* 1(19) (2013) 1-136.
112. K. Lukaszewicz, Forming the structure and properties of hybrid coatings on reversible rotating extrusion dies, *Journal of Achievements in Materials and Manufacturing Engineering* 55/2 (2012) 159-224.
113. A.E. Reiter, V.H. Derflinger, B. Hanselmann, T. Bachmann, B. Sartory, Investigation of the properties of Al_{1-x}Cr_xN coatings prepared by cathodic arc evaporation, *Surface & Coatings Technology* 200 (2005) 2114-2122.
114. B.A. Movchan, K.Y. Yakovchuk, Graded thermal barrier coatings, deposited by EB-PVD, *Surface & Coatings Technology* 188-189 (2004) 85-92.
115. L.A. Dobrzański, M. Staszuk, K. Gołombek, A. Śliwa, M. Pancielejko, Structure and properties PVD and CVD coatings deposited onto edges of sintered cutting tools, *Archives of Metallurgy and Materials* 55/1 (2010) 187-193.
116. L.A. Dobrzański, M. Staszuk, PVD and CVD gradient coatings on sintered carbides and sialon tool ceramics, *Journal of Achievements in Materials and Manufacturing Engineering* 43/2 (2010) 552-576.
117. M. Betiuk, T. Borowski, K. Burdyński, Synteza powłok wieloskładnikowych (Ti,Al)N, (Ti,Al)C, (Ti, Al)CN w plazmie niskociśnieniowego stałoprądowego wyładowania łukowego, *Inżynieria Materiałowa* 29/6 (2008) 674-678.
118. M. Cłapa, D. Batory, Improving adhesion and wear resistance of carbon coatings using Ti:C gradient layers, *Journal of Achievements in Materials and Manufacturing Engineering* 20 (2007) 415-418.
119. S. PalDey, S.C. Deevi, Properties of single layer and gradient (Ti,Al)N coatings, *Materials Science and Engineering A361* (2003) 1-8.
120. S. Kawno, J. Takahashi, S. Shimada, The preparation and spark plasma sintering of silicon nitride-based materials coated with nano-sized TiN, *Journal of the European Ceramic Society* 24 (2004) 309-312.
121. T. Liu, C. Dong, S. Wu, K. Tang, J. Wang, J. Jia, TiN gradient and Ti/TiN multi-layer protective coatings on Uranium, *Surface and Coating Technology* 201 (2007) 6737-6741.
122. T. Wierchoń, Structure and properties of multicomponent and composite layers produced by combined surface engineering methods, *Surface & Coatings Technology* 180-181 (2004) 458-464.
123. Y.-Y. Chang, D.-Y. Wang, C.-Y. Hung, Structural and mechanical properties of nanolayered TiAlN/CrN coatings synthesized by a cathodic arc deposition process, *Surface & Coatings Technology* 200 (2005) 1702-1708.
124. M. Pancielejko, W. Precht, A. Czyżniewski, Tribological properties of PVD titanium carbides, *Vacuum* 53/1-2 (1999) 57-60.
125. M. Pancielejko, A. Czyżniewski, V. Zavaleyev, A. Pander, K. Wojtalik, Optimization of the deposition parameters of DLC coatings with the MCVA method, *Archives of Materials Science and Engineering* 54/2 (2012) 60-67.
126. P.M. Martin, *Handbook of deposition technologies for films and coatings. Science, Applications and Technology*, 3rd Edition, Burlington, Oxford, William Andrew/Elsevier, 2010.

127. K. Holmberg, A. Matthews, Coating Tribology. Properties, Mechanisms, Techniques and Applications in Surface Engineering, 2nd Edition Elsevier, 2009.
128. S. Zhang, Handbook of nanostructured thin films and coatings, Taylor & Francis Group, 2010.
129. N. Verma, S. Cadambi, V. Jayaram, S.K. Biswas, Micromechanisms of damage nucleation during contact deformation of columnar multilayer nitride coatings, *Acta Materialia* 60 (2012) 3063-3073.
130. Y. Chan, H. Chen, P. Chao, J. Duh, J. Lee, Microstructure control in TiAlN/SiNx multilayers with appropriate thickness ratios for improvement of hardness and anti-corrosion characteristics, *Vacuum* 87 (2013) 195-199.
131. R. Ananthakumar, B. Subramanian, A. Kobayashi, M. Jayachandran, Electrochemical corrosion and materials properties of reactively sputtered TiN/TiAlN multilayer coatings, *Ceramics International* 38 (2012) 477-485.
132. Y. Birol, B. Yuksel, Performance of gas nitrided and AlTiN coated AISI H13 hot work tool steel in aluminium extrusion, *Surface & Coatings Technology* 207 (2012) 461-466.
133. S. Zhang, F. Cai, M. Li, The nanostructured phase transition and thermal stability of superhard f-TiN/h-AlSiN films, *Surface & Coatings Technology* 206 (2012) 3572-3579.
134. J.J. Moore, I.-W. Park, J. Lin, B. Mishra, K.H. Kim, Nanostructured, Multifunctional Tribological Coatings, in: *Nanocomposite Thin Films and Coatings*, S. Zhang, N. Ali (eds.), Imperial College Press, London, 2007.
135. G.G. Fuentes, E. Almandoz, R. Pierrugues, R. Martínez, R.J. Rodríguez, J. Caro, M. Vilaseca, High temperature tribological characterisation of TiAlSiN coatings produced by cathodic arc evaporation, *Surface & Coatings Technology* 205 (2010) 1368-1373.
136. H.C. Barshilla, M. Ghosh, S. Acharya, R. Ramakrishna, K.S. Rajam, Deposition and characterization of TiAlSiN nanocomposite coatings prepared by reactive pulsed direct current unbalanced magnetron sputtering, *Applied Surface Science* 256 (2010) 6420-6426.
137. K. Lukaszewicz, A. Kříž, J. Sendor, Structure and adhesion of thin coatings deposited by PVD technology on the X6CrNiMoTi17-12-2 and X40CrMoV5-1 steel substrates, *Archives of Materials Science and Engineering* 51/1 (2011) 40-47.
138. L.A. Dobrzański, M. Adamiak, Structure and properties of the TiN and Ti(C,N) coatings deposited in the PVD process on high-speed steels, *Journal of Materials Processing Technology* 133 (2003) 50-62.
139. L.A. Dobrzański, B. Dołżańska, G. Matula, Structure and properties of tool gradient materials reinforced with the WC carbides, *Journal of Achievements in Materials and Manufacturing Engineering* 28/1 (2008) 35-38.
140. L.A. Dobrzański, K. Gołombek, E. Hajduczek, Structure of the nanocrystalline coatings obtained on the CAE process on the sintered tool materials, *Journal of Materials Processing Technology* 175 (2006) 157-162.
141. L.A. Dobrzański, K. Gołombek, J. Kopač, M. Soković, Effect of depositing the hard surface coatings on properties of the selected cemented carbides and tool cermets, *Journal of Materials Processing Technology* 157-158 (2004) 304-311.
142. L.A. Dobrzański, K. Gołombek, Gradient coatings deposited by Cathodic Arc Evaporation: characteristic of structure and properties, *Journal of Achievements in Materials and Manufacturing Engineering* 14/1-2 (2006) 48-53.
143. L.A. Dobrzański, K. Gołombek, Structure and properties of the cutting tools made from cemented carbides and cermets with the TiN + mono-, gradient- or multi (Ti,Al,Si)N+TiN

- nanocrystalline coatings, *Journal of Materials Processing Technology* 164-165 (2005) 805-815.
144. T. Tański, K. Labisz, L.A. Dobrzański, M. Wiśniowski, W. Matysiak, TEM microstructure investigations of aluminium alloys used as coating substrate, *Archives of Materials Science and Engineering* 59/2 (2013) 82-92.
 145. L.A. Dobrzański, E. Jonda, K. Labisz, Comparison of the abrasion wear resistance of the laser alloyed hot work tool steels, *Archives of Materials Science and Engineering* 55/2 (2012) 85-92.
 146. B. Krupińska, Z. Rdzawski, K. Labisz, Light and electron microscope investigations of cast Zn-Al alloys, *Archives of Materials Science and Engineering* 55/1 (2012) 29-36.
 147. L.A. Dobrzański, J. Mikuła, Structure and properties of PVD and CVD coated $\text{Al}_2\text{O}_3+\text{TiC}$ mixed oxide tool ceramics for dry on high speed cutting processes, *Journal of Materials Processing Technology* 164-165 (2005) 822-831.
 148. L.A. Dobrzański, J. Mikuła, The structure and functional properties of PVD and CVD coated $\text{Al}_2\text{O}_3+\text{ZrO}_2$ oxide tool ceramics, *Journal of Materials Processing Technology* 167 (2005) 438-446.
 149. L.A. Dobrzański, M. Staszuk, J. Konieczny, W. Kwaśny, M. Pawlyta, Structure of TiBN coatings deposited onto cemented carbides and sialon tool ceramics, *Archives of Materials Science and Engineering* 38/1 (2009) 48-54.
 150. L.A. Dobrzański, M. Staszuk, J. Konieczny, J. Lelaćko, Structure of gradient coatings deposited by CAE-PVD techniques, *Journal of Achievements in Materials and Manufacturing Engineering* 24/2 (2007) 55-58.
 151. L.A. Dobrzański, M. Staszuk, M. Pawlyta, W. Kwaśny, M. Pancielejko, Characteristics of Ti(C,N) and (Ti,Zr)N gradient PVD coatings deposited onto sintered tool materials, *Journal of Achievements in Materials and Manufacturing Engineering* 31/2 (2008) 629-634.
 152. L.A. Dobrzański, L.W. Żukowska, J. Mikuła, K. Gołombek, T. Gawarecki, Hard gradient (Ti,Al,Si)N coating deposited on composite tool materials, *Archives of Materials Science and Engineering* 36/2 (2009) 69-75.
 153. G. Bao, L. Wang, Multiple cracking in functionally graded ceramic/metal coatings, The Johns Hopkins University, Baltimore, 1994.
 154. B. Bergman, T. Ekström, A. Micski, The Si-Al-O-N system at temperatures of 1700-1775°C, *Journal of the European Ceramic Society* 8 (1991) 141-151.
 155. M. Betiuk, M. Szudrowicz, Trawienie i wspomaganie jonowe w procesie PA PVD-Arc – źródło jonów AIDA, *Inżynieria Materiałowa* 5 (2005) 277-280.
 156. M.B. Bever, P.E. Duwez, Gradients in composite materials, *Materials Science and Engineering* 10 (1972) 1-8.
 157. O.V. Biest, J. Vleugels, Perspectives on the development of ceramic composites for cutting tool applications, *Key Engineering Materials* 206-213 (2002) 955-960.
 158. J. Bujak, J. Walkowicz, J. Kusiński, Influence of nitrogen pressure on the structure and properties of (Ti,Al)N coatings deposited by cathodic vacuum arc PVD process, *Surface and Coating Technology* 180-181 (2004) 150-157.
 159. T. Burakowski, K. Miernik, J. Walkowicz, Application of physical and chemical plasma-assisted technology to manufacturing wear resistant thin coatings, *Heat Treatment, Surface Engineering* 130-132 (1995).
 160. T. Burakowski, E. Roliński, T. Wierzchoń, *Inżynieria powierzchni metali*, Wydawnictwa Politechniki Warszawskiej, Warszawa, 1992.

161. T. Burakowski, T. Wierzchoń, *Inżynieria powierzchni metali*, Wydawnictwa Politechniki Warszawskiej, Warszawa, 1995.
162. T. Burakowski, *Areologia. Powstanie i rozwój*, Instytut Technologii Eksploatacji NRI, Radom, 2007.
163. T. Burakowski, *Możliwości areologii*, *Inżynieria Materiałowa* 5 (2006) 890-897.
164. A. Koizumi, Recent progress of functionally gradient materials in Japan, in: *Proceedings of the 16th Annual Conference on Composites and Advanced Ceramic Materials, Part 1 of 2: Ceramic Engineering and Science Proceedings, Volume 13, Issue 7/8* (ed. J.B. Wachtman), John Wiley & Sons, Inc., Hoboken, 1994, 333-347.
165. W. Juda, A. Sawka, A. Kwatera, *Synteza warstw Al₂O₃ z acetyloacetonianu glinu na węglkach spiekanych w obecności argonu i powietrza*, *Inżynieria Materiałowa* 5 (2005) 248-251.
166. T. Tański, K. Lukaszewicz, M. Staszuk, M. Krupiński, K. Gołombek, *Structure and properties of gradient/monolithic coatings deposited by PVD and CVD methods onto the magnesium alloys*, *Wulfenia* 20/10 (2013) 2-16.
167. S.J. Skrzypek, *Nowe możliwości pomiaru makronaprężeń własnych materiałów przy zastosowaniu dyfrakcji promieniowania X w geometrii stałego kąta padania*, Uczelniane Wydawnictwa AGH, Kraków, 2002.
168. J.A. Thornton, *The microstructure of sputter-deposited coatings*, *Journal of Vacuum Science and Technology* A4/6 (1986) 3059-3065.
169. D.-Y. Wang, C.-L. Chang, C.-H. Hsu, H.-N. Lin, *Synthesis of (Ti,Zr)N hard coatings by unbalanced magnetron sputtering*, *Surface & Coatings Technology* 130/1 (2000) 64-68.
170. N.H. Elmagrabi, F.M. Shuaeib, C.H.C. Haron, *An overview on the cutting tool factors in machinability assessment*, *Journal of Achievements in Materials and Manufacturing Engineering* 23/2 (2007) 87-90.
171. J. Honzarenko, *Wpływ nowych materiałów i technologii wytwarzania na budowę współczesnych obrabiarek skrawających*, *Inżynieria Materiałowa* 3 (2006) 601-604.
172. K. Oczkoś, *Rozwój innowacyjnych technologii ubytkowego kształtowania materiałów. Cz. I. Obróbka skrawaniem*, *Mechanik* 75/8-9 (2002) 537-550.
173. P. Cichosz, *Narzędzia skrawające*, WNT, Warszawa, 2009.
174. S.I. Cha, S.H. Hong, B.K. Kim, *Spark plasma sintering behavior of nanocrystalline WC-10Co cemented carbides powders*, *Materials Science & Engineering* A351 (2003) 31-38.
175. J.R. Groza, A. Zavaliangos, *Sintering activation by external electrical field*, *Materials Science & Engineering* A287 (2000) 171-177.
176. A. Michalski, D. Siemaszko, *Impulsowo plazmowe spiekanie nanokrystalicznych węglików WC-12Co*, *Inżynieria Materiałowa* 3 (2006) 629-631.
177. S.H. Risbud, C.-H. Shan, *Fast consolidation of ceramic powders*, *Materials Science & Engineering* A204 (1995) 146-151.
178. K. Czechowski, I. Pofelska-Filip, A. Fedaczyński, *Powłoki PVD na płytkach skrawających z materiałów ceramicznych*, *Inżynieria Powierzchni* 2 (2005) 19-24.
179. K. Czechowski, I. Pofelska-Filip, P. Szlosek, A. Fedaczyński, J. Kasina, B. Królicka, *Wybrane właściwości i wpływ na trwałość ostrzy warstw twardych naniesionych metodą PVD*, *Inżynieria Materiałowa* 5 (2005) 261-264.
180. K. Czechowski, I. Pofelska-Filip, P. Szlosek, B. Królicka, J. Wszolek, *Kształtowanie właściwości użytkowych płytek skrawających z ceramiki tlenkowo-węglkowej za pomocą nanostrukturalnych powłok naniesionych metodą PVD*, *Inżynieria Materiałowa* 5 (2006) 913-916.

181. J. Musil, Hard and superhard nanocomposite coatings, *Surface & Coatings Technology* 125 (2000) 322-330.
182. S. Veprek, A.S. Argon, Towards the understanding of mechanical properties of super- and ultrahard nanocomposites, *Journal of Vacuum Science and Technology B20* (2002) 650-664.
183. S. Veprek S, Reiprich, A concept for the design of novel superhard coatings, *Thin Solid Films* 268 (1995) 64-71.
184. S. Veprek, Conventional and new approaches towards the design of novel superhard materials, *Surface & Coatings Technology* 97 (1997) 15-22.
185. S. Veprek, New development in superhard coatings: the superhard nanocrystalline-amorphous composites, *Thin Solid Films* 317 (1998) 449-454.
186. W. Juda, A. Kwatara, A. Sawka, Ulepszenie metody CVD nanoszenia czystych warstw ochronnych Al_2O_3 na podłoża z węglików spiekanych, *Inżynieria Materiałowa* 5 (2006) 1031-1034.
187. W. Gissler, P.N. Gibson, Titanium implantation into born nitride films and ion-beam mixing of titanium born nitride multilayers, *Ceramics International* 22 (1996) 335-340.
188. Y.H. Lu, Z.F. Zhou, P. Sit, Y.G. Shen, K.Y. Li, C. Haydn, X-Ray photoelectron spectroscopy characterization of reactively sputtered Ti-B-N thin films, *Surface & Coatings Technology* 187 (2004) 98-105.
189. T.P. Mollart, J. Haupt, R. Gilmore, W. Gissler, Tribological behaviour of homogeneous Ti-B-N, Ti-B-N-C and TiN/h-BN/TiB₂ multilayer coatings, *Surface & Coatings Technology* 86-87 (1996) 231-236.
190. Z. Werner, J. Stanisławski, J. Piekoszewski, E.A. Levashov, W. Szymczyk, New types of multi-component hard coatings deposited by ARC PVD on steel pre-treated by pulsed plasma beams, *Vacuum* 70 (2003) 263-267.
191. L.A. Donohue, J. Cawley, J.S. Brooks, Deposition and characterization of arc-bond sputter Ti_xZr_yN coatings from pure metallic and segmented targets, *Surface & Coatings Technology* 72 (1995) 128-138.
192. V.V. Uglov, V.M. Anishchik, S.V. Zlotski, G. Abadias, The phase composition and stress development in ternary Ti-Zr-N coatings grown by vacuum arc with combining of plasma flows, *Surface & Coatings Technology* 200 (2006) 6389-6394.
193. K. Lukaszkwicz, L.A. Dobrzański, J. Sondor, Microstructure, mechanical properties and corrosion resistance of nanocomposite coatings deposited by PVD technology, in: *Advances in Diverse Industrial Applications of Nanocomposites*, B.S.R. Reddy (ed.), InTech, Rijeka, 2011, 1-16.
194. K. Lukaszkwicz, J. Mięka K. Gołombek, L.A. Dobrzański, J. Szewczenko, M. Pancielejko, Structure and mechanical properties of nanocomposite coatings deposited by PVD process onto tool steel substrates, *Inżynieria Materiałowa* 29/6 (2008) 732-737.
195. L.A. Dobrzański, L.W. Żukowska, J. Mięka, K. Gołombek, T. Gawarecki, Hard gradient (Ti,Al,Si)N coating deposited on composite tool materials, *Archives of Materials Science and Engineering* 36/2 (2009) 69-75.
196. K. Lukaszkwicz, L.A. Dobrzański, J. Szewczenko, Microstructure and corrosion resistance of nanocomposite coatings deposited by cathodic arc evaporation method, *Proceedings of 13th International Materials Symposium, IMSP'2010, Denizli, Turkey, 2010*, 947-954.
197. K. Lukaszkwicz, L.A. Dobrzański, W. Kwaśny, K. Labisz, M. Pancielejko, Microstructure and mechanical properties of nanocomposite coatings deposited by cathodic arc

- evaporation, *Journal of Achievements in Materials and Manufacturing Engineering* 42 (2010) 156-163.
198. H. Dosch, M.H. Van de Voorde (eds.), *Gennesys, White Paper, A New European Partnership between Nanomaterials Science and Nanotechnology and Synchrotron Radiation and Neutron Facilities*, Max-Planck-Institut für Metalforschung, Stuttgart, 2009.
199. M. Montorio, M. Taisch, K.D. Thoben (eds.), *Advanced Manufacturing. An ICT and Systems Perspective*, Taylor & Francis Group, London, 2007.
200. H. Leiste, M. Stüber, V. Schier, H. Holleck, *Microstructural Characterisation of TiC-TiN Gradient Coatings Deposited by Non-Reactive Magnetron Sputtering*, *Materials Science Forum* 308-311 (1999) 467-475.