Riccardo Polini

List of Publications by Year
in descending order

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118 papers	2,676 citations	159358 30 h-index	243296 44 g-index
118 all docs	118 docs citations	118 times ranked	1745 citing authors

#	Article	IF	Citations
1	LIPSS Applied to Wide Bandgap Semiconductors and Dielectrics: Assessment and Future Perspectives. Materials, 2022, 15, 1378.	1.3	19
2	Charge Transport Mechanisms of Black Diamond at Cryogenic Temperatures. Nanomaterials, 2022, 12, 2253.	1.9	2
3	Dielectric Microâ€•and Subâ€Micrometric Spacers for Highâ€Temperature Energy Converters. Energy Technology, 2021, 9, .	1.8	15
4	Deep-Subwavelength 2D Periodic Surface Nanostructures on Diamond by Double-Pulse Femtosecond Laser Irradiation. Nano Letters, 2021, 21, 4477-4483.	4.5	47
5	Toward Greener Synthesis of WC Powders for Cemented Tungsten Carbides Manufacturing. ACS Sustainable Chemistry and Engineering, 2021, 9, 8458-8466.	3.2	9
6	Novel concepts and nanostructured materials for thermionic-based solar and thermal energy converters. Nanotechnology, 2021, 32, 024002.	1.3	14
7	Aluminum (Oxy)nitride thin films grown by fs-PLD as electron emitters for thermionic applications. AIP Conference Proceedings, 2021, , .	0.3	6
8	Femtosecond-Laser Nanostructuring of Black Diamond Films under Different Gas Environments. Materials, 2020, 13, 5761.	1.3	5
9	Direct synthesis of highly reactive nanostructured scheelite from enriched wolframite and calcium oxide through planetary ball milling. Materials Today Communications, 2020, 24, 101032.	0.9	1
10	Enhanced selective solar absorption of surface nanotextured semi-insulating 6Hâ€“SiC. Optical Materials, 2020, 107, 109967.	1.7	25
11	All-carbon THz components based on laser-treated diamond. Carbon, 2020, 163, 197-201.	5.4	17
12	Work function and negative electron affinity of ultrathin barium fluoride films. Surface and Interface Analysis, 2020, 52, 968-974.	0.8	4
13	Nanocrystalline lanthanum boride thin films by femtosecond pulsed laser deposition as efficient emitters in hybrid thermionic-photovoltaic energy converters. Applied Surface Science, 2020, 513, 145829.	3.1	17
14	Ultra-thin films of barium fluoride with low work function for thermionic-thermophotovoltaic applications. Materials Chemistry and Physics, 2020, 249, 122989.	2.0	10
15	Synthesis of scheelite nanoparticles by mechanically assisted solid-state reaction of wolframite and calcium carbonate. Minerals Engineering, 2019, 138, 133-138.	1.8	13
16	Lanthanum (oxy)boride thin films for thermionic emission applications. Applied Surface Science, 2019, 479, 296-302.	3.1	16
17	Solar Thermionicâ€Thermoelectric Generator (ST²G): Concept, Materials Engineering, and Prototype Demonstration. Advanced Energy Materials, 2018, 8, 1802310.	10.2	77
18	Optical characterization of double-nanotextured black diamond films. Carbon, 2018, 138, 384-389.	5.4	35

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19	Size tailoring of WC particles in the carbothermic reduction of scheelite (CaWO4). International Journal of Refractory Metals and Hard Materials, 2017, 64, 75-82.	1.7	5
20	Thermoelectric Analysis of ZnSb Thin Films Prepared by ns-Pulsed Laser Deposition. Journal of Nanoscience and Nanotechnology, 2017, 17, 1564-1570.	0.9	2
21	Impact of Laser Wavelength on the Optical and Electronic Properties of Black Diamond. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700250.	0.8	9
22	ZnSb-based thin films prepared by ns-PLD for thermoelectric applications. Applied Surface Science, 2017, 418, 589-593.	3.1	15
23	HFCVD nanostructured diamond films deposited by a combination of seeding suspensions and novel nucleation process. International Journal of Surface Science and Engineering, 2017, 11, 225.	0.4	3
24	Black diamond for solar energy conversion. Carbon, 2016, 105, 401-407.	5.4	70
25	Optimization of black diamond films for solar energy conversion. Applied Surface Science, 2016, 380, 8-11.	3.1	33
26	Carbothermic reduction of scheelite (CaWO4) doped with cobalt or nickel. International Journal of Refractory Metals and Hard Materials, 2016, 59, 93-99.	1.7	4
27	Infrared absorption of fs-laserÂtextured CVD diamond. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	12
28	Effect of carbon excess and milling conditions on the synthesis of nanostructured WC by carbothermic reduction of scheelite (CaWO4). International Journal of Refractory Metals and Hard Materials, 2016, 54, 178-185.	1.7	8
29	Absorptance enhancement in fsâ€laserâ€treated CVD diamond. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2463-2467.	0.8	15
30	Nanostructured tungsten carbide synthesis by carbothermic reduction of scheelite: A comprehensive study. International Journal of Refractory Metals and Hard Materials, 2015, 51, 289-300.	1.7	20
31	Fs-pulsed laser deposition of PbTe and PbTe/Ag thermoelectric thin films. Applied Physics A: Materials Science and Processing, 2014, 117, 401-407.	1.1	11
32	Crossâ€Linking of Sulfonated Poly(ether ether ketone) by Thermal Treatment: How Does the Reaction Occur?. Fuel Cells, 2013, 13, 107-117.	1.5	56
33	Thermal crosslinked and nanodiamond reinforced SPEEK composite membrane for PEMFC. International Journal of Hydrogen Energy, 2013, 38, 3346-3351.	3.8	30
34	Proton Mobility in Sulfonated PolyEtherEtherKetone (SPEEK): Influence of Thermal Crosslinking and Annealing. Fuel Cells, 2013, 13, 79-85.	1.5	27
35	Recent Advances in the Deposition of Diamond Coatings on Co-Cemented Tungsten Carbides. Advances in Materials Science and Engineering, 2012, 2012, 1-14.	1.0	21
36	Crosslinked SPEEK membranes: Mechanical, thermal, and hydrothermal properties. Journal of Materials Research, 2012, 27, 1950-1957.	1.2	34

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37	Properties of Composite Membranes of SPEEK and Nanodiamond. Materials Research Society Symposia Proceedings, 2012, 1384, 1.	0.1	1
38	Chemical Vapor Deposition of Highly Adherent Diamond Coatings onto Co-Cemented Tungsten Carbides Irradiated by High Power Diode Laser. ACS Applied Materials & Interfaces, 2012, 4, 694-701.	4.0	21
39	Confined Functionalization of Mesoporous Silicon Layers. Journal of the Electrochemical Society, 2011, 158, K35.	1.3	4
40	HF-CVD of diamond coatings onto Fluidized Bed (FB) treated CrN interlayers. Thin Solid Films, 2010, 519, 1594-1599.	0.8	4
41	Wear resistance of nano- and micro-crystalline diamond coatings onto WCâ€“Co with Cr/CrN interlayers. Thin Solid Films, 2010, 519, 1629-1635.	0.8	48
42	Thermal stability and surface modifications of detonation diamond nanoparticles studied with X-ray photoelectron spectroscopy. Diamond and Related Materials, 2010, 19, 846-853.	1.8	32
43	Electrophoretic Deposition of Dense La_{0.8}Sr_{0.2}Ga_{0.8}Mg_{0.115}Co_{0.085}O_{3â^'Î´} Electrolyte Films from Singleâ€Phase Powders for Intermediate Temperature Solid Oxide Fuel Cells. Journal of the American Ceramic Society, 2009, 92, 1999-2004.	1.9	9
44	High performance anode-supported intermediate temperature solid oxide fuel cells (IT-SOFCs) with La0.8Sr0.2Ga0.8Mg0.2O3â^'Î´ electrolyte films prepared by electrophoretic deposition. Electrochemistry Communications, 2009, 11, 1680-1683.	2.3	69
45	Nanostructured sp²-Carbon Infiltration of Mesoporous Silicon Layers. Journal of Nanoscience and Nanotechnology, 2009, 9, 3927-3931.	0.9	0
46	Surface characterisation of silicon substrates seeded with diamond nanoparticles under UHV annealing. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2108-2113.	0.8	16
47	Surface Science Contribution to the BEN Control on Si(100) and 3Câ€SiC(100): Towards Ultrathin Nanocrystalline Diamond Films. Chemical Vapor Deposition, 2008, 14, 187-195.	1.4	17
48	Electrophoretic Deposition of Dense Srâ€•and Mgâ€Doped LaGaO₃ Electrolyte Films on Porous Laâ€Doped Ceria for Intermediate Temperature Solid Oxide Fuel Cells. Fuel Cells, 2008, 8, 344-350.	1.5	25
49	A study of diamond film deposition on WCâ€“Co inserts for graphite machining: Effectiveness of SiC interlayers prepared by HFCVD. Diamond and Related Materials, 2008, 17, 1008-1014.	1.8	77
50	On the use of CrN/Cr and CrN interlayers in hot filament chemical vapour deposition (HF-CVD) of diamond films onto WC-Co substrates. Diamond and Related Materials, 2008, 17, 325-335.	1.8	50
51	EFFECT OF COATING ROUGHNESS ON PERFORMANCE OF SMALL CVD DIAMOND COATED TOOLS. Machining Science and Technology, 2008, 12, 390-404.	1.4	12
52	Comparison between plasma- and HVOF-sprayed ceramic coatings. Part I: microstructure and mechanical properties. International Journal of Surface Science and Engineering, 2007, 1, 38.	0.4	52
53	Deposition and Characterisation of Niobium Films for SRF Cavity Application. , 2007, , .		2
54	Effect of 3C-SiC(100) initial surface stoichiometry on bias enhanced diamond nucleation. Applied Physics Letters, 2007, 90, 044101.	1.5	11

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55	<title>Recent achievements in ultra-high vacuum arc deposition of superconducting Nb layers</title>. Proceedings of SPIE, 2007, , .	0.8	2
56	In situ study of the initial stages of diamond deposition on 3Câ€“SiC (100) surfaces: Towards the mechanisms of diamond nucleation. Diamond and Related Materials, 2007, 16, 690-694.	1.8	19
57	Solâ€“gel synthesis, X-ray photoelectron spectroscopy and electrical conductivity of Co-doped (La,) Tj ETQq1 1 0.784314 rgBT /Overlock	2.8	59
58	Chemical vapour infiltration of nano-structured carbon in porous silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2049-2053.	0.8	6
59	Hot filament chemical vapour deposition and wear resistance of diamond films on WC-Co substrates coated using PVD-arc deposition technique. Diamond and Related Materials, 2006, 15, 1284-1291.	1.8	40
60	Cutting performance of time-modulated chemical vapour deposited diamond coated tool inserts during machining graphite. Diamond and Related Materials, 2006, 15, 1753-1758.	1.8	43
61	UHV arc for high quality film deposition. Surface and Coatings Technology, 2006, 201, 3987-3992.	2.2	19
62	Adherent diamond coatings on cemented tungsten carbide substrates with new Fe/Ni/Co binder phase. Thin Solid Films, 2006, 494, 133-140.	0.8	21
63	Effects of Ti- and Zr-based interlayer coatings on the hot filament chemical vapour deposition of diamond on high speed steel. Thin Solid Films, 2006, 494, 116-122.	0.8	34
64	Fluidized bed micro-machining and HFCVD of diamond films onto Co-cemented tungsten carbide (WC-Co) hardmetal slabs. Thin Solid Films, 2006, 515, 87-94.	0.8	16
65	Al2O3 thin coating of AA 6082 T6 components using a fast regime fluidized bed. Thin Solid Films, 2006, 515, 141-151.	0.8	21
66	Comparative Investigation of Smooth Polycrystalline Diamond Films on Dental Burs by Chemical Vapor Deposition. Journal of Materials Engineering and Performance, 2006, 15, 195-200.	1.2	4
67	Effects of Ti- and Zr-Based Interlayer Coatings on Hot-Filament Chemical Vapor Deposition of Diamond on High-Speed Steel. Journal of Materials Engineering and Performance, 2006, 15, 201-207.	1.2	10
68	A Study of Diamond Synthesis by Hot Filament Chemical Vapor Deposition on Nc Coatings. Journal of Materials Engineering and Performance, 2006, 15, 218-222.	1.2	7
69	Chemically vapour deposited diamond coatings on cemented tungsten carbides: Substrate pretreatments, adhesion and cutting performance. Thin Solid Films, 2006, 515, 4-13.	0.8	118
70	Raman spectroscopy characterization of diamond films on steel substrates with titanium carbide arc-plated interlayer. Thin Solid Films, 2006, 515, 1011-1016.	0.8	24
71	Solâ€“gel synthesis and characterization of Co-doped LSGM perovskites. Journal of the European Ceramic Society, 2005, 25, 2593-2598.	2.8	20
72	A study of diamond synthesis by hot filament chemical vapour deposition on nanocomposite coatings. Thin Solid Films, 2005, 489, 116-121.	0.8	5

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73	BEN-HFCVD effects on diamond nucleation on iridium: a Raman imaging study. Physica Status Solidi A, 2005, 202, 2073-2078.	1.7	1
74	Effects of the bias enhanced nucleation hot-filament chemical-vapor deposition parameters on diamond nucleation on iridium. Journal of Applied Physics, 2005, 98, 033521.	1.1	1
75	A Simple and Versatile Solâ€“Gel Method for the Synthesis of Functional Nanocrystalline Oxides. Journal of Nanoscience and Nanotechnology, 2005, 5, 592-595.	0.9	11
76	Electrochemical behaviour of Co-doped LSGM perovskites prepared by sol-gel synthesis. Materials Research Society Symposia Proceedings, 2004, 835, K3.15.1.	0.1	0
77	Performance and characterisation of CVD diamond coated, sintered diamond and WCâ€“Co cutting tools for dental and micromachining applications. Thin Solid Films, 2004, 447-448, 455-461.	0.8	67
78	A Non-Hydrolytic Sol-Gel Approach for the Preparation of MgxAl2(1-x)Ti(1+x)O5Powders. Journal of Sol-Gel Science and Technology, 2004, 31, 95-98.	1.1	3
79	Degradation of oxide varistor ceramics in air atmosphere containing NO2 at elevated temperatures. Journal of the European Ceramic Society, 2004, 24, 1213-1216.	2.8	3
80	Effect of synthetic route on sintering behaviour, phase purity and conductivity of Sr- and Mg-doped LaGaO3 perovskites. Journal of the European Ceramic Society, 2004, 24, 1365-1370.	2.8	87
81	Chemical vapour deposition of diamond films onto tungsten carbide dental burs. Tribology International, 2004, 37, 957-964.	3.0	16
82	Cutting force and wear evaluation in peripheral milling by CVD diamond dental tools. Thin Solid Films, 2004, 469-470, 161-166.	0.8	26
83	The effect of humidity on the voltageâ€“current characteristic of SnO2 based ceramic varistor. Journal of the European Ceramic Society, 2004, 24, 2597-2604.	2.8	35
84	Enhancing nucleation density and adhesion of polycrystalline diamond films deposited by HFCVD using surface treaments on Co cemented tungsten carbide. Diamond and Related Materials, 2004, 13, 610-615.	1.8	38
85	Dry turning of alumina/aluminum composites with CVD diamond coated Co-cemented tungsten carbide tools. Surface and Coatings Technology, 2003, 166, 127-134.	2.2	50
86	Diamond nucleation from the gas phase onto cold-worked Co-cemented tungsten carbide. Diamond and Related Materials, 2003, 12, 340-345.	1.8	15
87	Performance and characterisation of CVD diamond coated, sintered diamond and WCâ€“Co cutting tools for dental and micromachining applications. Thin Solid Films, 2003, 447-448, 455-455.	0.8	0
88	Chemical vapour deposition diamond coating on tungsten carbide dental cutting tools. Journal of Physics Condensed Matter, 2003, 15, S2961-S2967.	0.7	32
89	Effect of WC grain growth inhibitors on the adhesion of chemical vapor deposition diamond films on WCâ€“Co cemented carbide. Diamond and Related Materials, 2002, 11, 242-248.	1.8	20
90	Quantitative comparison of adhesive toughness for various diamond films on co-cemented tungsten carbide. Diamond and Related Materials, 2002, 11, 716-720.	1.8	5

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91	Effect of substrate grain size and surface treatments on the cutting properties of diamond coated Co-cemented tungsten carbide tools. Diamond and Related Materials, 2002, 11, 726-730.	1.8	44
92	Effect of WC-Co substrates pre-treatment and microstructure on the adhesive toughness of CVD diamond. Diamond and Related Materials, 2001, 10, 786-789.	1.8	15
93	Early stages of the HFCVD process on multi-vicinal silicon surfaces studied by electron microscopy probes (SEM, TEM). Diamond and Related Materials, 2001, 10, 1612-1616.	1.8	6
94	The NO2 response of solid electrolyte sensors made using nano-sized LaFeO3 electrodes. Sensors and Actuators B: Chemical, 2001, 76, 483-488.	4.0	119
95	Chemical synthesis and sintering behaviour of highly dispersed W/Cu composite powders. Journal of Materials Science, 2001, 36, 901-907.	1.7	30
96	Characterization and sliding behavior of HFCVD diamond coatings on WCâ€“Co. Wear, 2001, 249, 461-472.	1.5	27
97	Cutting performance and indentation behaviour of diamond films on Co-cemented tungsten carbide. Surface and Coatings Technology, 2000, 123, 78-83.	2.2	39
98	Quantitative determination of the adhesive fracture toughness of CVD diamond to WCâ€“Co cemented carbide. Diamond and Related Materials, 2000, 9, 191-194.	1.8	42
99	Nucleation and Adhesion of Diamond Films on Co Cemented Tungsten Carbide. Journal of the Electrochemical Society, 1999, 146, 4490-4498.	1.3	22
100	Effect of the impingement on the kinetics of island aggregation in the post-nucleation stage of film growth at solid surfaces. Applied Surface Science, 1999, 152, 126-130.	3.1	13
101	Early Stages of Diamondâ€Film Formation on Cobaltâ€Cemented Tungsten Carbide. Journal of the American Ceramic Society, 1999, 82, 1429-1435.	1.9	17
102	Diamond Synthesis on Silicon Nitride by the Hot Filament Chemical Vapor Deposition Technique. Journal of the Ceramic Society of Japan, 1998, 106, 1167-1171.	1.3	4
103	A Raman Study of Diamond Film Growth on Coâ€Cemented Tungsten Carbide. Journal of the Electrochemical Society, 1997, 144, 1371-1375.	1.3	11
104	Lattice disorder and texture in diamond coatings deposited by HFCVD on Co-cemented tungsten carbide. Thin Solid Films, 1996, 290-291, 136-142.	0.8	12
105	Nucleation and Growth of Diamond Films on Ni-Cemented Tungsten Carbide: II, Effects of Deposition Conditions. Journal of the American Ceramic Society, 1995, 78, 2431-2436.	1.9	5
106	Analysis of size distribution functions of diamond crystallites formed in the early stages of chemical vapour deposition. Diamond and Related Materials, 1995, 4, 1311-1316.	1.8	12
107	Nucleation and Growth of Diamond Films on Ni-Cemented Tungsten Carbide: Effects of Substrate Pretreatments. Journal of the American Ceramic Society, 1994, 77, 2043-2048.	1.9	31
108	Early stages of nucleation and growth of diamond film by AES, SEM, UPS and optical reflectivity techniques: Surface composition. Physica B: Condensed Matter, 1993, 185, 94-98.	1.3	0

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109	Determination of the â€œoverallâ€•nucleation density on tungsten: a new treatment of the data. Diamond and Related Materials, 1993, 2, 952-957.	1.8	4
110	Uncoupling crystal growth and nucleation in the deposition of diamond from the gas phase. Journal of Materials Research, 1992, 7, 1778-1787.	1.2	35
111	Diamond nucleation on cleaved Si(111). Journal of Applied Physics, 1992, 72, 2517-2519.	1.1	18
112	Diamond crystallite formation on Si(100) from the gas phase: Seeding or heterogeneous nucleation?. Applied Physics Letters, 1992, 61, 1287-1289.	1.5	20
113	A study of diamond synthesis on glassy carbon by the hot filament chemical vapour deposition technique. Diamond and Related Materials, 1992, 1, 969-977.	1.8	17
114	Diamond crystallites nucleation on sintered tungsten: temperature and thermal treatment effects. Diamond and Related Materials, 1992, 1, 205-210.	1.8	17
115	Study of early stages of diamond nucleation and growth by combined use of SEM and AES techniques. Applied Surface Science, 1992, 56-58, 100-103.	3.1	5
116	Role of the support and of the preparation method for copper-based catalysts in the 2-propanol decomposition. Catalysis Letters, 1992, 14, 15-25.	1.4	15
117	Catalytic behavior and surface chemistry of Copper/ZnO/Al2O3 catalysts for the decomposition of 2-propanol. Journal of Catalysis, 1992, 136, 86-95.	3.1	14
118	A model kinetics for nucleation at a solid surface with application to diamond deposition from the gas phase. Journal of Applied Physics, 1991, 70, 7573-7578.	1.1	47