

SCIENTIFIC PUBLICATIONS by **RICCARDO POLINI**

International journals / Riviste Internazionali

	IF (2010)
1. M. Barletta, G. Rubino, R. Valle and R. Polini, "Chemical Vapour Deposition of highly adherent diamond coatings onto Co-cemented tungsten carbides irradiated by high power diode laser", <i>ACS Appl. Mater. Interfaces</i> , 4 (2012) 694-701.	2.925
2. V. Valentini, R. Polini, "Confined Functionalization of Mesoporous Silicon Layers", <i>J. Electrochem. Soc.</i> , 158 (2011) K35-K41.	2.427
3. R. Polini, M. Barletta, G. Cristofanilli, "Wear resistance of nano- and micro-crystalline diamond coatings onto WC-Co with Cr/CrN interlayers", <i>Thin Solid Films</i> , 519 (2010) 1629-1635.	1.935
4. G. Cristofanilli, R. Polini, M. Barletta, "HF-CVD of diamond coatings onto Fluidized Bed (FB) treated CrN interlayers", <i>Thin Solid Films</i> , 519 (2010) 1594-1599.	1.935
5. S. Zeppilli, J.C. Arnault, G. Gesset, P. Bergonzo, R. Polini, "Thermal stability and surface modifications of detonation diamond nanoparticles studied with X-ray photoelectron spectroscopy", <i>Diamond Relat. Mater.</i> , 19 (2010) 846-853.	1.825
6. F. Bozza, R. Polini, E. Traversa, "Electrophoretic Deposition of Dense $\text{La}_{0.8}\text{Sr}_{0.2}\text{Ga}_{0.8}\text{Mg}_{0.115}\text{Co}_{0.085}\text{O}_{3-\delta}$ Electrolyte Films from Single-Phase Powders for Intermediate Temperature Solid Oxide Fuel Cells", <i>J. Am. Ceram. Soc.</i> , 92 [9] (2009) 1999-2004.	2.169
7. F. Bozza, R. Polini, E. Traversa, "High performance anode-supported intermediate temperature solid oxide fuel cells (IT-SOFCs) with $\text{La}_{0.8}\text{Sr}_{0.2}\text{Ga}_{0.8}\text{Mg}_{0.2}\text{O}_{3-\delta}$ electrolyte films prepared by electrophoretic deposition", <i>Electrochem. Comm.</i> , 11 (2009) 1680-1683.	4.287
8. R. Polini, V. Valentini, G. Mattei, "Nanostructured sp^2 -Carbon Infiltration of Mesoporous Silicon Layers", <i>Journal of Nanoscience and Nanotechnology</i> , 9 (2009) 3927-3931.	1.352
9. F. Bozza, R. Polini, E. Traversa, "Electrophoretic Deposition of Dense Sr- and Mg-Doped LaGaO_3 Electrolyte Films on Porous La-Doped Ceria for Intermediate Temperature Solid Oxide Fuel Cells", <i>Fuel Cells</i> , 5 (2008) 344-350.	3.320
10. F. Quadrini, V. Tagliaferri and R. Polini, "Effect of coating roughness on performance of small CVD diamond coated tools", <i>Machining Science and Technology</i> , 12 (2008) 390-404.	0.459
11. J. C. Arnault, S. Saada, S. Delclos, L. Rocha, L. Intiso, R. Polini, A. Hoffman, S. Michaelson and P. Bergonzo, "Surface Science Contribution to the BEN Control on Si (100) and 3C-SiC (100): Towards Ultrathin Nanocrystalline Diamond Films", <i>Chem. Vap. Deposition</i> , 14 (2008) 187-195.	1.804
12. J. C. Arnault, S. Saada, O. A. Williams, K. Haenen, P. Bergonzo, M. Nesladek, R. Polini, E. Osawa, "Surface characterization of silicon substrates with diamond nanoparticles under UHV annealing", <i>Phys. Stat. Sol. (a)</i> 205 , No. 9, (2008) 2108-2113.	1.472
13. G. Cabral, J. Gäbler, J. Lindner, J. Grácio, R. Polini, "A study of diamond film deposition on WC-Co inserts for graphite machining: Effectiveness of SiC interlayers prepared by HFCVD", <i>Diamond Relat. Mater.</i> , 17 (2008) 1008-1014.	1.825
14. R. Polini, M. Barletta: "On the use of CrN/Cr and CrN interlayers in hot filament chemical vapour deposition (HF-CVD) of diamond films onto WC-Co substrates", <i>Diamond Relat. Mater.</i> , 17 (2008) 325-335.	1.825
15. R. Polini, A. Falsetti, E. Traversa, O. Schäf, P. Knauth, "Sol-gel synthesis, X-Ray photoelectron spectroscopy and electrical properties of Co-doped $(\text{La,Sr})(\text{Ga,Mg})\text{O}_{3-\delta}$ perovskites", <i>J. Eur. Ceram. Soc.</i> , 27 (2007) 4291-4296.	2.575
16. J. C. Arnault, L. Intiso, S. Saada, S. Delclos, P. Bergonzo, R. Polini, "Effect of 3C-SiC(100) initial surface stoichiometry on bias enhanced diamond nucleation", <i>Appl. Phys. Lett.</i> , 90 (2007) 044101.	3.841

17.	J. C. Arnault, S. Saada, S. Delclos, L. Intiso, N. Tranchant, R. Polini, P. Bergonzo, "In situ study of the initial stages of diamond deposition on 3C-SiC(100) surfaces: towards the mechanisms of diamond nucleation", <i>Diamond Relat. Mater.</i> , 16 (2007) 690-694.	1.825
18.	G. Mattei, V. Valentini, R. Polini, "Chemical Vapour Infiltration of nano-structured carbon in Porous Silicon", <i>Phys. Stat. Sol. (c)</i> , 4 (2007) 2049-2053.	-
19.	G. Bolelli, L. Lusvarghi, T. Manfredini, F. Pighetti-Mantini, R. Polini, E. Turunen, T. Varis, S.-P. Hannula, "Comparison between plasma- and HVOF-sprayed ceramic coatings. Part 1: microstructure and mechanical properties", <i>Int. J. Surface Science and Engineering</i> , 1 (2007) 38-61.	0.414
20.	R. Polini, F. Pighetti Mantini, M. Barletta, R. Valle, F. Casadei, "Hot Filament Chemical Vapour Deposition and wear resistance of diamond films on WC-Co substrates coated by PVD-arc deposition technique", <i>Diamond Relat. Mater.</i> , 15 , 1284-1291 (2006).	1.825
21.	G. Cabral, P. Reis, R. Polini, E. Titus, N. Ali, J.P. Davim, J. Grácio, "Cutting performance of time-modulated chemical vapour deposited diamond coated tool inserts during machining graphite", <i>Diamond Relat. Mater.</i> , 15 , 1753-1758 (2006).	1.825
22.	R. Russo, A. Cianchi, Y.H. Akhmadeev, L. Catani, J. Langner, J. Lorkiewicz, R. Polini, B. Ruggiero, M.J. Sadowski, S. Tazzari, N.N. Koval, "UHV arc for high quality film deposition", <i>Surf. Coat. Technol.</i> , 201 , 3987-3992 (2006).	2.141
23.	R. Polini, "Chemically vapour deposited diamond coatings on cemented tungsten carbides: substrates pretreatments, adhesion and cutting performance", <i>Thin Solid Films</i> , 515 , 4-13 (2006).	1.935
24.	R. Polini, M. Barletta, M. Delogu, "Fluidized bed micro-machining and HFCVD of diamond films onto Co-cemented tungsten carbide (WC-Co) hardmetal slabs", <i>Thin Solid Films</i> , 515 , 87-94 (2006).	1.935
25.	M. Barletta, G. Costanza, R. Polini, "Al ₂ O ₃ thin coating of AA 6082 T6 components using a fast regime fluidized bed", <i>Thin Solid Films</i> , 515 , 141-151 (2006).	1.935
26.	R. Polini, G. Mattei, R. Valle, F. Casadei, "Raman spectroscopy characterization of diamond films on steel substrates with titanium carbide arc-plated interlayer", <i>Thin Solid Films</i> , 515 , 1011-1016 (2006).	1.935
27.	R. Polini, F. Pighetti Mantini, M. Braic, M. Amar, W. Ahmed, H. Taylor, "Effect of Ti- and Zr-based Interlayer Coatings on the Hot Filament Chemical Vapour Deposition of Diamond on High Speed Steel", <i>Thin Solid Films</i> , 494 , 116-122 (2006).	1.935
28.	R. Polini, M. Delogu, G. Marcheselli, "Adherent Diamond Coatings on Cemented Tungsten Carbide Substrates with new Fe/Ni/Co Binder Phase", <i>Thin Solid Films</i> , 494 , 133-140 (2006).	1.935
29.	H. Sein, W. Ahmed, C. Rego, M. Jackson, R. Polini, "Comparative Investigation of Smooth Polycrystalline Diamond Films on Dental Burs by Chemical Vapor Deposition", <i>Journal of Materials Engineering and Performance</i> , 15 , 195-200 (2006).	0.639
30.	R. Polini, F. Pighetti Mantini, M. Braic, M. Amar, W. Ahmed, H. Taylor, M.J. Jackson, "Effects of Ti- and Zr-Based Interlayer Coatings on Hot Filament Chemical Vapor Deposition of Diamond on High-Speed Steel", <i>Journal of Materials Engineering and Performance</i> , 15 , 201-207 (2006).	0.639
31.	R. Polini, S. Kumashiro, M.J. Jackson, M. Amar, W. Ahmed, H. Sein, "A Study of Diamond Synthesis by Hot Filament Chemical Vapor Deposition on Nc Coatings", <i>Journal of Materials Engineering and Performance</i> , 15 , 218-222 (2006).	0.639
32.	S. Licocchia, R. Polini, C. D' Ottavi, F. Serraino Fiory, M. L. Di Vona, E. Traversa, "A simple and versatile method for the synthesis of functional nanocrystalline oxides", <i>Journal of Nanoscience and Nanotechnology</i> , 5 , 592-595 (2005).	1.352

33.	R. Polini, A. Falsetti, E. Traversa, "Sol-gel synthesis and characterization of Co-doped LSGM perovskites", <i>J. Eur. Ceram. Soc.</i> , 25 , 2593-2598 (2005).	2.575
34.	R. Polini, M. Amar, W. Ahmed, S. Kumashiro, H. Sein, J. Colligon, "A study of diamond synthesis by Hot Filament Chemical Vapour Deposition on nanocomposite coatings", <i>Thin Solid Films</i> , 489 , 116-121 (2005).	1.935
35.	J. C. Arnault, G. Schull, R. Polini, M. Mermoux, J. Faerber, "Effects of bias enhanced nucleation hot-filament chemical-vapor deposition parameters on diamond nucleation on iridium", <i>J. Appl. Phys.</i> , 98 , 033521 1-9 (2005).	2.079
36.	J. C. Arnault, G. Schull, M. Mermoux, B. Marcus, A. Crisci, R. Polini, "BEN-HFCVD effects on diamond nucleation on iridium: a Raman imaging study", <i>Phys. Stat. Sol. (a)</i> , 202 , 2073-2078 (2005).	1.472
37.	A. Glot, E. Di Bartolomeo, A. Gapanov, R. Polini, E. Traversa, "Degradation of oxide varistor ceramics in air atmosphere containing NO ₂ at elevated temperatures", <i>J. Eur. Ceram. Soc.</i> , 24 , 1213-1216 (2004).	2.575
38.	R. Polini, A. Pamio, E. Traversa, "Effect of synthetic route on sintering behaviour, phase purity and conductivity of Sr- and Mg-doped LaGaO ₃ perovskites", <i>J. Eur. Ceram. Soc.</i> , 24 , 1365-1370 (2004).	2.575
39.	H. Sein, W. Ahmed, M. Jackson, R. Woodward and R. Polini, "Performance and Characterisation of CVD Diamond coated, Sintered Diamond and WC-Co Cutting Tools for Dental and Micromachining Applications", <i>Thin Solid Films</i> , 447-448 , 455-461 (2004).	1.935
40.	Skuratovsky, A. Glot, E. Di Bartolomeo, E. Traversa and R. Polini, "The effect of humidity on the voltage-current characteristic of SnO ₂ based ceramic varistor", <i>J. Eur. Ceram. Soc.</i> , 24 , 2597-2604 (2004).	2.575
41.	R. Polini, E. Traversa, "CVD Diamond as a Wear-Resistant Coating for Cutting Tools, Part 1", <i>Interceram</i> , 53 , 84-89 (2004).	-
42.	R. Polini, E. Traversa, "CVD Diamond as a Wear-Resistant Coating for Cutting Tools, Part 2", <i>Interceram</i> , 53 , 318-323 (2004).	-
43.	H. Sein, W. Ahmed, M. Jackson, R. Polini, I. Assan, M. Amar and C. Rego, "Enhancing Nucleation Density and Adhesion of Polycrystalline Diamond Films Deposited by HFCVD using Surface Treatments on Co-cemented Tungsten Carbide", <i>Diamond Relat. Mater.</i> , 12 , 610-615 (2004).	1.825
44.	W. Ahmed, H. Sein, M. Jackson, R. Polini, "Chemical vapour deposition of diamond films onto tungsten carbide dental burs", <i>Tribol. Internat.</i> , 37 , 957-964 (2004).	1.560
45.	M. L. Di Vona, R. Polini, P. Sebastianelli, S. Licoccia, "Non-Hydrolytic Sol-Gel Approach for Mg _x Al _{2(1-x)} Ti _{1+x} O ₅ powder formation", <i>J. Sol-Gel Sci. & Technol.</i> , 31 , 95-98 (2004).	1.525
46.	R. Polini, A. Allegri, S. Guarino, F. Quadrini, H. Sein, W. Ahmed, "Cutting Force and Wear Evaluation in Peripheral Milling by CVD Diamond Dental Tools", <i>Thin Solid Films</i> , 469-470 , 161-166 (2004).	1.935
47.	R. Polini, P. D'Antonio, E. Traversa, "Diamond nucleation from the gas phase onto cold-worked Co-cemented tungsten carbide", <i>Diamond Relat. Mater.</i> , 12 , 340-345 (2003).	1.825
48.	R. Polini, F. Casadei, P. D'Antonio, E. Traversa, "Dry turning of alumina/aluminum composites with CVD diamond coated Co-cemented tungsten carbide tools", <i>Surf. Coat. Technol.</i> , 166 , 127-134 (2003).	2.141
49.	H. Sein, W. Ahmed, C. A. Rego, A. N. Jones, M. Amar, M. Jackson and R. Polini, "Chemical vapour deposition diamond coating on tungsten carbide dental cutting tools", <i>J. Phys.: Condensed Matter</i> , 15 , S2961-S2967 (2003).	2.332
50.	R. Polini, F. Bravi, G. Mattei, G. Marcheselli, E. Traversa, "Effect of WC Grain Growth Inhibitors on the Adhesion of CVD Diamond Films on WC-Co cemented carbide", <i>Diamond Relat. Mater.</i> , 11 , 242-248 (2002).	1.825

51.	S. Kamiya, H. Takahashi, P. D'Antonio, R. Polini, E. Traversa, "Quantitative Comparison of Adhesive Toughness for Various Diamond Films on Co-Cemented Tungsten Carbide", <i>Diamond Relat. Mater.</i> , 11 , 716-720 (2002).	1.825
52.	R. Polini, F. Bravi, F. Casadei, P. D'Antonio, E. Traversa, "Effect of Substrate Grain Size on the Cutting Properties of Diamond Coated Co-Cemented Tungsten Carbide Tools", <i>Diamond Relat. Mater.</i> , 11 , 726-730 (2002).	1.825
53.	G. Gusmano, A. Bianco, R. Polini, P. Magistris, G. Marcheselli, "Chemical synthesis and sintering behaviour of highly dispersed W/Cu composite powders", <i>J. Mater. Sci.</i> , 36 , 901-907 (2001).	1.859
54.	S. Kamiya, H. Takahashi, R. Polini, P. D'Antonio, E. Traversa, "Effect of WC-Co substrate pretreatment and microstructure on the adhesive toughness of CVD diamond", <i>Diamond Relat. Mater.</i> , 10 , 786-789 (2001).	1.825
55.	J. W. Yoon, M.L. Grilli, E. Di Bartolomeo, R. Polini, E. Traversa, "The NO ₂ Response of Solid Electrolyte Sensors Made Using Nano-Sized LaFeO ₃ Electrodes", <i>Sensors and Actuators B</i> , 76 , 483-488 (2001).	3.370
56.	G. Straffelini, P. Scardi, A. Molinari, R. Polini, "Characterization and sliding behaviour of HFCVD diamond coatings on WC-Co", <i>Wear</i> , 249 , 461-472 (2001).	1.635
57.	J.C. Arnault, S. Pecoraro, J. Werckmann, F. Le Normand, N. Motta, R. Polini, "Early stages of the HFCVD process on multi-vicinal silicon surfaces studied by electron microscopy probes (SEM, TEM)", <i>Diamond Relat. Mater.</i> , 10 , 1612-1616 (2001).	1.825
58.	R. Polini, P. D'Antonio, S. Lo Casto, V. F. Ruisi, E. Traversa, "Cutting Performance and Indentation Behaviour of Diamond Films on Co-Cemented Tungsten Carbide", <i>Surf. Coat. Technol.</i> , 123 , 78-83 (2000).	2.141
59.	S. Kamiya, H. Takahashi, R. Polini, E. Traversa, "Quantitative determination of the adhesive fracture toughness of CVD diamond to WC-Co cemented carbide", <i>Diamond Relat. Mater.</i> , 9 , 191-194 (2000).	1.825
60.	R. Polini, F. Le Normand, G. Marcheselli, E. Traversa, "Early Stages of Diamond Film Formation on Cobalt-Cemented Tungsten Carbide", <i>J. Am. Ceram. Soc.</i> , 82 , 1429-1435 (1999).	2.169
61.	R. Polini, M. Santarelli, E. Traversa, "Nucleation and Adhesion of Diamond Films on Co-Cemented Tungsten Carbide", <i>J. Electrochem. Soc.</i> , 146 , 4490-4498 (1999).	2.427
62.	M. Fanfoni, R. Polini, V. Sessa, M. Tomellini, M. Volpe, "Effect of the impingement of island aggregation in the post-nucleation stage of film growth at solid surfaces", <i>Appl. Surf. Sci.</i> , 152 , 126-130 (1999).	1.795
63.	R. Polini, G. Mattei, A. Marucci, E. Traversa, "Diamond Synthesis on Silicon Nitride by the Hot Filament Chemical Vapor Deposition Technique", <i>J. Ceram. Soc. Jap.</i> , 106 , 1167-1171 (1998).	-
64.	R. Polini, M. Tomellini, M. Fanfoni, F. Le Normand, "Dirac δ Nucleation in the Framework of Avrami's Model: The Case of Diamond Growth on Deformed Si(100)", <i>Surf. Sci.</i> , 373 , 230-236 (1997).	2.011
65.	F. Le Normand, J. C. Arnault, L. Demuynck, C. Speisser, R. Polini, M. Tomellini, "Mechanism of CVD Diamond Nucleation and Growth on Mechanically Scratched and Virgin Monocrystalline Si(100)", <i>Diamond Relat. Mater.</i> , 6 , 235-239 (1997).	1.825
66.	L. Demuynck, J. C. Arnault, R. Polini, F. Le Normand, "CVD Diamond Nucleation and Growth on Scratched and Virgin Si(100) Surfaces Investigated by in situ Electron Spectroscopy", <i>Surf. Sci.</i> , 377-379 , 871-875 (1997).	2.011
67.	R. Polini, E. Traversa, A. Marucci, G. Mattei, G. Marcheselli, "A Raman Study of Diamond Film Growth on Co-Cemented Tungsten Carbide", <i>J. Electrochem. Soc.</i> , 144 , 1371-1375 (1997).	2.427
68.	R. Polini, V. Barbarossa, C. Minarini, A. Eray, A. Marucci, G. Mattei, "Growth of Si:H Thin Films by Hot Filament CVD: μ -Crystalline to Amorphous Transition", <i>Materials Science Forum</i> , 203 , 167-172 (1996).	-

69.	P. Scardi, S. Veneri, M. Leoni, R. Polini, E. Traversa, "Lattice Disorder and Texture in Diamond Coatings Deposited by HFCVD on Co-Cemented Tungsten Carbide", <i>Thin Solid Films</i> , 290-291 , 136-142 (1996).	1.935
70.	R. Polini, G. Marcheselli, G. Mattei, E. Traversa, "Nucleation and Growth of Diamond Films on Ni-Cemented Tungsten Carbide: II. Effects of Deposition Conditions", <i>J. Am. Ceram. Soc.</i> 78 , 2431-2436 (1995).	2.169
71.	R. Polini, M. Tomellini, "Analysis of Size Distribution Function of Diamond Crystallites Formed in the Early Stages of Chemical Vapour Deposition", <i>Diamond Relat. Mater.</i> 4 , 1311-1316 (1995).	1.825
72.	R. Polini, G. Marcheselli, E. Traversa, "Nucleation and Growth of Diamond Films on Ni-Cemented Tungsten Carbide: Effects of Substrate Pretreatments", <i>J. Am. Ceram. Soc.</i> 77 , 2043-2048 (1994).	2.169
73.	R. Polini, M. Tomellini, "Determination of the overall nucleation density on tungsten: a new treatment of the data", <i>Diamond Relat. Mater.</i> 2 , 952-957 (1993).	1.825
74.	E. Molinari, R. Polini, V. Sessa, M.L. Terranova, M. Tomellini, "Diamond nucleation from the gas phase: a kinetic approach", <i>J. Mater. Res.</i> 8 , 785-797 (1993).	1.402
75.	E. Molinari, R. Polini, M. Tomellini, "Patterns of diamond nucleation from the gas phase", <i>J. Mater. Res.</i> 8 , 798-810 (1993).	1.402
76.	L. Ferrari, S. Selci, A.C. Felici, M. Righini, M. A. Scarselli, A. Cricenti, R. Polini, "Early stages of nucleation and growth of diamond film by AES, SEM, UPS and optical reflectivity techniques: surface composition", <i>Physica B</i> 185 , 94-98 (1993).	0.856
77.	L. Ferrari, E. Cappelli, A. Cricenti, S. Selci, R. Polini, G. L. Chiarotti, "Study of early stages of diamond nucleation and growth by combined use of SEM and AES techniques", <i>Appl. Surf. Sci.</i> , 56-58 , 100 (1992).	1.795
78.	R. Polini, D. Gazzoli, E. Molinari, V. Sessa, M.L. Terranova, P. Ascarelli, S. Fontana, "Diamond nucleation on sintered tungsten: Temperature and Thermal Treatment Effects", <i>Diamond Relat. Mater.</i> , 1 , 205-210 (1992).	1.825
79.	M.L. Terranova, R. Polini, V. Sessa, M. Braglia, G. Cocito, "A study of diamond synthesis on glassy carbon by the hot filament chemical vapour deposition technique", <i>Diamond Relat. Mater.</i> , 1 , 969-977 (1992).	1.825
80.	E. Molinari, R. Polini, M.L. Terranova, P. Ascarelli, S. Fontana, "Uncoupling crystal growth and nucleation in the deposition of diamond from the gas phase", <i>J. Mater. Res.</i> , 7 , 1778-1787 (1992).	1.402
81.	R. Polini, "Diamond nucleation on cleaved Si (111)", <i>J. Appl. Phys.</i> 72 , 2517-2519 (1992).	2.079
82.	E. Molinari, R. Polini, M. Tomellini, "Diamond crystallite formation on Si(100) from the gas phase: seeding or heterogeneous nucleation?", <i>Appl. Phys. Lett.</i> 61 , 1287-1289 (1992).	3.841
83.	E. Molinari, R. Polini, V. Sessa, M.L. Terranova, P. Ascarelli, S. Fontana, "Analysis of Crystal Growth and Nucleation Rates in the Hot Filament Chemical Vapour Deposition of Diamond", <i>Materials Science Forum</i> 94-96 , 583-590 (1992).	-
84.	F. Pepe, R. Polini, "Catalytic Behaviour and Surface Chemistry of Copper/ZnO/Al ₂ O ₃ Catalysts for the Decomposition of 2-Propanol", <i>J. Catal.</i> 136 , 86-95 (1992).	5.415
85.	F. Pepe, R. Polini, L. Stoppa, "Role of the support and of the preparation method for copper based catalysts in the 2-propanol decomposition", <i>Catal. Lett.</i> 14 , 15-25 (1992).	1.907
86.	M. Tomellini, R. Polini, V. Sessa, "A model kinetics for nucleation at a solid surface with application to diamond deposition from the gas phase", <i>J. Appl. Phys.</i> , 70 , 7573-7578 (1991).	2.079

Riviste Nazionali / Italian Journals

1. O. Tassa, S. Fioravanti, R. Polini, "Impiego del Boro come elemento sostitutivo del Piombo. Effetto sulla lavorabilità degli acciai automatici", *La Metallurgia Italiana*, **82**, 945-951 (1990).
2. R. Polini, "L'uso degli 'spreadsheets' nell'insegnamento delle Scienze", *Didattica delle Scienze*, **n. 154**, pag. 53-56, Ed. La Scuola, Brescia (1991).
3. R. Polini, "Perturbazioni di equilibri chimici mediante spreadsheet", *Didattica delle Scienze*, **n. 157**, pag. 21-24, Ed. La Scuola, Brescia (1992).
4. R. Polini, "Perturbazioni di equilibri chimici mediante spreadsheet. Parte Seconda", *Didattica delle Scienze*, **n. 158**, pag. 30-33, Ed. La Scuola, Brescia (1992).
5. R. Polini, "Titolazioni potenziometriche e diagrammi di Gran", *Didattica delle Scienze*, **n. 159**, pag. 20-23, Ed. La Scuola, Brescia (1992).
6. R. Polini, "La Chimica dell' Atmosfera", *Didattica delle Scienze*, **n. 167**, pag. 8-14, Ed. La Scuola, Brescia (1993).
7. R. Polini, "I rivestimenti sottili e la sintesi del diamante da fase gassosa", *Didattica delle Scienze*, **n. 170**, pag. 30-35, Ed. La Scuola, Brescia (1994).

Brevetti / Patents

1. R. Polini, E. Traversa, G. Marcheselli, "*Procedimento per la produzione di un substrato di metallo duro rivestito con pellicola aderente di diamante*", brevetto italiano (Italian Patent) n. 1295418, 12/05/1999;
2. G. Gusmano, A. Bianco, R. Polini, "*Procedimento per la produzione di polveri composite tungsteno-rame sinterizzabili*", brevetto italiano (Italian Patent) n. 1302926, 10/10/2000;
3. G. Gusmano, A. Bianco, R. Polini, "*Process for the production of tungsten-copper composite sinterable powders*", Brevetto Internazionale (International Patent) WO 00/35616 (22/06/2000) & Brevetto Europeo (European Patent) EP 1 140 397 B1 (2/1/2003).

Lavori pubblicati su Volumi Collettivi con *referee* / Extended Abstracts

1. P. Ascarelli, E. Molinari, R. Polini, V. Sessa, M.L. Terranova, E. Cappelli, S. Fontana, "Diamond crystal growth by Hot Filament CVD and its characterization" in *Diamond and Diamond-Like Films and Coatings*, ed. by J.C. Angus, R.E. Clausing, L.L. Horton, P. Koidl, Plenum Press, New York, 1991, NATO ASI Series, series B: Physics Vol. 266, pp.729-736.
2. P. Ascarelli, S. Fontana, E. Molinari, R. Polini, V. Sessa, M.L. Terranova, E. Cappelli, "Diamond on Silicon: a Hot Filament CVD Study of Nucleation" in *Proceedings 2nd International Symposium on Diamond Materials*, ed. by A. J. Purdes, J.C. Angus, R. F. Davies, B. M. Meyerson, K.E. Spear, M.Yoder, The Electrochemical Society, Pennington, NJ, 1991, Vol. 91-8, pp. 266-273.
3. E. Molinari, R. Polini, M. Tomellini, "Kinetics of diamond nucleation at solid surfaces from the gas phase", in *Advances in Science and Technology*, Vol. 6: *New Diamond and Diamond-like Films*, ed. by P. Vincenzini, Techna, Faenza, 1995, pp. 149-156.
4. R. Polini, G. Marcheselli, G. Mattei, E. Traversa, "Diamond nucleation and growth on Ni-cemented WC", in *Advances in Science and Technology*, Vol. 6: *New Diamond and Diamond-like Films*, ed. by P. Vincenzini, Techna, Faenza, 1995, pp. 69-76.
5. R. Polini, E. Traversa, A. Marucci, G. Mattei, G. Marcheselli, "A Raman Study of Diamond Film Growth on Cemented Tungsten Carbide", in *Proceedings of the 13th International Conference on Chemical Vapor Deposition (CVD XIII)*, ed. by T.M. Besmann, M. D.

Allendorf, McD. Robinson, R.K. Ulrich, The Electrochemical Society, Pennington, NJ, 1996, Vol. 96-5, pp. 706-714.

6. N. Zacchetti, F. Arezzo, G. Mattei, M. Piantini, R. Polini, M. Scarselli, "Free-standing diamond membranes for optical applications", in *Advances in Science and Technology*, Vol. 21: *Diamond Films*, ed. by P. Vincenzini, Techna, Faenza, 1999, pp. 317-324.
7. R. Polini, F. Le Normand, G. Marcheselli, E. Traversa, "Binder segregation during diamond CVD on Co-cemented tungsten carbide", in *Advances in Science and Technology*, Vol. 21: *Diamond Films*, ed. by P. Vincenzini, Techna, Faenza, 1999, pp. 99-106.
8. G. Savo, A. D'Epifanio, R. Polini, E. Traversa, "Process and Characterization of YSZ Thick-Films Deposited by Electrophoretic Deposition for Intermediate-Temperature SOFC" in *Proceedings 8th International Symposium on Solid Oxide Fuel Cells (SOFC VIII)*, edited by S.C. Singhal, M. Dokiya, The Electrochemical Society, Pennington, NJ, 2003, Vol. 2003-07, pp. 246-252.
9. R. Polini, A. Pamio, E. Traversa, "Sol-Gel syntheses and phase purity of $\text{La}_{1-x}\text{Sr}_x\text{Ga}_{1-y}\text{Mg}_y\text{O}_{3-\delta}$ solid electrolytes" in *Proceedings 8th International Symposium on Solid Oxide Fuel Cells (SOFC VIII)*, ed. by S.C. Singhal, M. Dokiya, The Electrochemical Society, Pennington, NJ, 2003, Vol. 2003-07, pp. 324-329.
10. H. Sein, W. Ahmed, M. Jackson, R. Polini, "New Diamond Coated Carbide Dental Bur in Operation" in *Proceedings of the Seventh Applied Diamond Conference/Third Frontier Carbon Technology Joint Conference (ADC/FCT 2003)*, Edited by M. Murakawa, K. Miyoshi, Y. Koga, L. Schäfer, and Y. Tzeng, August 18-21, 2003, Tsukuba (Japan), pp. 234-243, NASA Glenn Research Center, Springfield, USA (2003) ISBN 0-9710327-1-8.
11. R. Polini, A. Falsetti, E. Traversa, O. Schäf, P. Knauth, "Electrochemical behaviour of Co-doped LSGM perovskites prepared by sol-gel synthesis", *Mater. Res. Soc. Symp. Proc.* Vol. 835, K3.15.1, Materials Research Society, Warrendale PA, USA (2005).

Memorie presentate a Congressi / Conference Proceedings

1. P. Ascarelli, S. Fontana, E. Molinari, R. Polini, V. Sessa, M.L. Terranova, E. Cappelli, in *Proceedings 1st Italian Workshop on "Materials for Photonic Devices"*, ed. by A. D'Andrea, A. Lapicciarella, G. Marletta, S. Viticoli, World Scientific Publishing Co. (Singapore), 1991, pp. 421-427.
2. E. Molinari, R. Polini, V. Sessa, M.L. Terranova, M. Tomellini, "Deposition of Diamond Films by the Hot Filament CVD Technique. I - A Study of the Nucleation and Growth Kinetics", in *Proceedings of the Meeting SYNTHESSES AND METHODOLOGIES IN INORGANIC CHEMISTRY - New Compounds and Materials*, Bressanone (BZ), 1991, pagg. 92-95.
3. M. L. Terranova, R. Polini, V. Sessa, V. Rigato, "Deposition of Diamond Films by the Hot Filament CVD Technique. II - Analysis of Carbonaceous Layers and of Hydrogen Content of the Substrate", *Proceedings of the Meeting SYNTHESSES AND METHODOLOGIES IN INORGANIC CHEMISTRY - New Compounds and Materials*, Bressanone (BZ), 1991, pagg. 203-205.
4. E. Molinari, R. Polini, V. Sessa, M. L. Terranova, M. Tomellini, "Nucleazione, crescita e condizioni superficiali dei substrati nella deposizione di diamante da fase gassosa con tecnica CVD", *Atti del Congresso "Omaggio scientifico a Renato Turriziani"*, Università "La Sapienza", Facoltà di Ingegneria, Roma, 1992, Vol.2, pagg. 533-540.
5. R. Polini, G. Marcheselli, A. Marucci, G. Mattei, E. Traversa, "Diamond Film Growth on Cemented Tungsten Carbide: A Raman Study of the Effect of Ni and Co as a Binder", in *Proceedings of the Fourth Euro-Ceramics*, Vol. 9, ed. by B.S. Tranchina, A. Bellosi, Faenza Editrice, Faenza (Italy), 1995, pp. 281-288.
6. P. Scardi, M. Leoni, R. Polini, E. Traversa, "Rivestimenti di diamante policristallino su WC-Co: microstruttura e stress residui", in *Atti del 3° Congresso Nazionale AIMAT* (a cura di Carmine Colella), De Frede Editore, Napoli, 1996, pp.134-142.

7. R. Polini, V. Barbarossa, A. Marucci, G. Mattei, "Growth and characterization of Si:H thin films deposited by Hot Filament CVD", in *Proceedings of the 14th European Photovoltaic Solar Energy Conference*, ed. by H. A. Ossensbrink, P. Helm, H. Ehmman, Barcellona, 1997, Vol. I, pp. 539-541.
8. G. Gusmano, A. Bianco, R. Polini, "Nuova procedura di sintesi di polveri composite W-Cu direttamente sinterizzabili", in *Atti del 2° Convegno Nazionale sulla Scienza e Tecnologia dei Materiali*, Acireale (CT), 14-16 ottobre 1999
9. R. Polini, M. Santarelli, E. Traversa, "Nucleazione ed adesione di film di diamante su carburo di tungsteno legato con cobalto", in *Atti del II Convegno Nazionale sulla Scienza e Tecnologia dei Materiali*, Acireale (CT), 14-16 ottobre 1999
10. R. Polini, P. D'Antonio, E. Traversa, V.F. Ruisi, S. Lo Casto, "Prove di indentazione e di lavorazione al taglio di film di diamante su carburo di tungsteno legato con cobalto", in *Atti del 2° Convegno Nazionale sulla Scienza e Tecnologia dei Materiali*, Acireale (CT), 14-16 ottobre 1999
11. R. Polini, E. Traversa, S. Kamiya, H. Takahashi, "Determinazione quantitativa della tenacità all'interfaccia diamante-carburo di tungsteno", in *Atti del 5° Congresso Nazionale AIMAT 2000*, Spoleto (PG), 17-21 luglio 2000, edited by J.M. Kenny, 2000, pp. 307-310.
12. P. D'Antonio, R. Polini, E. Traversa, S. Lo Casto, V. F. Ruisi, "Proprietà meccaniche di inserti da taglio in WC-Co rivestiti con film di diamante", *Atti del 5° Congresso Nazionale AIMAT 2000*, Spoleto (PG), 17-21 luglio 2000, edited by J.M. Kenny, 2000, pp. 237-240.
13. J. W. Yoon, M. L. Grilli, E. Di Bartolomeo, R. Polini, E. Traversa, "NO_x Response Properties of Solid Electrolyte Sensors Using Nano-Sized Semiconducting Oxide Electrodes", *8th International Meeting on Chemical Sensors*, Basel (Switzerland), 3-5 July, 2000, p. 204.
14. S. Licoccia, M.L Di Vona, R. Polini, E. Traversa, "Sol-Gel Routes for the Preparation of Nano-Sized Transition Metal Doped Titania", *6th Italian Meeting on NANOPHASE MATERIALS*, Rome (Italy) May 9-10, 2001.
15. R. Polini, F. Bravi, P. D'Antonio, E. Traversa, "Improvement of the Adhesive Strength of Diamond Films on WC-Co Cutting Inserts", in *Atti del III Convegno Nazionale sulla Scienza e Tecnologia dei Materiali*, Trento, 18-20 Giugno 2001.
16. A. Pamio, R. Polini, E. Traversa, "Effect of synthetic route on sintering behaviour, phase purity and conductivity of Sr- and Mg- doped LaGaO₃ perovskites", *8th International Conference on Electronic Ceramics and Their Applications*, August 25-28, 2002, Rome, Italy.
17. A. Glot, E. Di Bartolomeo, R. Polini, E. Traversa, "Electrical properties of non-ohmic SnO₂-based ceramics in different relative umidity environments", *8th International Conference on Electronic Ceramics and Their Applications*, August 25-28, 2002, Rome, Italy.
18. A. Glot, A. Gaponov, E. Di Bartolomeo, R. Polini, E. Traversa, "Degradation of oxide varistor ceramics in air atmosphere with NO₂ impurities at elevated temperatures", *8th International Conference on Electronic Ceramics and Their Applications*, August 25-28, 2002, Rome, Italy.
19. H. Sein, W. Ahmed, C. Maryan, P. Gough, R. Polini, "Performance testing and characterisation of dental diamond bur and hot filament chemical vapour deposited diamond coated WC-Co bur in laboratory application", *13th European Conference on Diamond, Diamond-like Materials, Carbon Nanotubes, Nitrides and Silicon Carbide*, September 8-13, 2002, Granada, Spain.
20. P. D'Antonio, R. Polini, "Diamond nucleation onto cold-worked Co-cemented tungsten carbide", *13th European Conference on Diamond, Diamond-like Materials, Carbon Nanotubes, Nitrides and Silicon Carbide*, September 8-13, 2002, Granada, Spain.
21. H. Sein, W. Ahmed, M. Jackson, R. Polini, I. Hussan, M. Ahmar, C. Rego, "Enhancing nucleation density and adhesion of polycrystalline diamond films deposited by HFCVD using surface treatments on Co cemented tungsten carbide", *14th European Conference on Diamond, Diamond-like Materials, Carbon Nanotubes, Nitrides and Silicon Carbide*, September 7-12, 2003, Salzburg, Austria.

22. R. Russo, A. Cianchi, R. Polini, S. Tazzari, L. Catani, F. Tazzioli, J. Langner, N. N. Koval, "UHV Arc for Superconducting Niobium Film Deposition" in *Proceedings of the 11th Workshop on RF Superconductivity (SRF 2003)*, September 8-12, 2003, Lubeck/Travemunde (Germany).
23. R. Polini, M. Ahmar, W. Ahmed, J. S. Colligon, "Hot Filament Chemical Vapour Deposition of diamond coatings onto Titanium Nitride (TiN) interlayers on high speed steel", *15th European Conference on Diamond, Diamond-like Materials, Carbon Nanotubes, Nitrides and Silicon Carbide*, September 12-17, 2004, Riva del Garda, Italy.
24. R. Polini, "CVD diamond coating on cemented tungsten carbides: substrate pretreatments, adhesion and cutting performance", **Invited Lecture** in *Proceedings of International Conference on Surfaces, Coatings and Nanostructured Materials (nanoSMat2005)*, edited by N. Ali, J. J. Gracio, M.J. Jackson, University of Aveiro, PORTUGAL, 7-9 Sept 2005, p. I-22/I-24, ISBN: 973-713-065-0.
25. R. Polini, M. Barletta, M. Delogu, "Fluidized Bed Micromachining of Co-Cemented Tungsten Carbide (WC-Co) Hard Metal Slabs", in *Proceedings of International Conference on Surfaces, Coatings and Nanostructured Materials (nanoSMat2005)*, edited by N. Ali, J. J. Gracio, M.J. Jackson, University of Aveiro, PORTUGAL, 7-9 Sept 2005, p. O-77/O-79, ISBN: 973-713-065-0.
26. M. Barletta, G. Costanza, R. Polini, "Al₂O₃ Thin Coatings of AA 6082 T6 Components by using a Fast Regime Fluidized Bed", in *Proceedings of International Conference on Surfaces, Coatings and Nanostructured Materials (nanoSMat2005)*, edited by N. Ali, J. J. Gracio, M.J. Jackson, University of Aveiro, PORTUGAL, 7-9 Sept 2005, p. O-153/O-155, ISBN: 973-713-065-0.
27. N. De Cristofaro, E. Mengaroni, G. Mortali, R. Polini, "Electrochemical behaviour of two low VOC coating systems in a Na₂SO₄+NaCl solution", in *Proceedings of International Conference on Surfaces, Coatings and Nanostructured Materials (nanoSMat2005)*, edited by N. Ali, J. J. Gracio, M.J. Jackson, University of Aveiro, PORTUGAL, 7-9 Sept 2005, p. O-165/O-167, ISBN: 973-713-065-0.
28. R. Polini, "Nanostructured electroceramics for Solid Oxide Fuel Cells applications", **Invited Lecture** at the *2nd International Conference on Advanced Nano Materials (ANM-2008)*, organized by University of Aveiro, June 22-25, 2008, Aveiro, Portugal (<http://anm2008.web.ua.pt>).
29. R. Polini, "Hot Wire Chemical Vapor Deposition of adherent diamond coatings on cemented tungsten carbides", **Invited Lecture** at the *5th International Conference on Hot-Wire Chemical Vapor Deposition (HWCVD-5)* organized by Prof. K.K. Glason (MIT, USA), August 20-24, 2008, Cambridge, MA (USA), <http://web.mit.edu/hwcvd5/>.
30. R. Polini, "High-performance intermediate temperature solid oxide fuel cells (IT-SOFCs) with electrolyte films prepared by electrophoretic deposition", **Keynote Lecture** at the *3rd International Conference on Advanced Nano Materials (ANM-2010)*, September 12-15, 2010, Agadir, Morocco (<http://anm2010.nanoac.org/>).
31. Riccardo Polini, Francesco Bozza and Enrico Traversa, "High-Performance Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs) with Electrolyte Films Prepared by Electrophoretic Deposition", **Invited Lecture** at the *2011 Materials Research Society (MRS) Fall Meeting*, November 28 – December 2, 2011, Boston (MA), USA (<http://www.mrs.org/f11-abstracts-b/>).
32. Francesco Bozza, Alessia Falsetti, Oliver Schaefer, Philippe Knauth, Enrico Traversa and Riccardo Polini, "Anode-Supported LSGMC Films for IT-SOFCs: Synthesis, Characterization and Processing", *2011 Materials Research Society (MRS) Fall Meeting*, November 28 – December 2, 2011, Boston (MA), USA (<http://www.mrs.org/f11-abstracts-b/>).
33. Brunella Maranesi, Hongying Hou, Philippe C. Knauth, Riccardo Polini and M. Luisa Di Vona, "Properties of Composite Membranes with S-PEEK and Nanodiamond", *2011 Materials Research Society (MRS) Fall Meeting*, November 28 – December 2, 2011, Boston (MA), USA (<http://www.mrs.org/f11-abstracts-b/>).