Antonio Miotello

List of Publications by Year
in descending order

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406 papers	12,524 citations	29994 54 h-index	39575 94 g-index
409 all docs	409 docs citations	409 times ranked	10428 citing authors

#	Article	IF	Citations
1	Hydrogen production by photocatalytic water-splitting using Cr- or Fe-doped TiO2 composite thin films photocatalyst. International Journal of Hydrogen Energy, 2009, 34, 5337-5346.	3.8	377
2	Critical assessment of thermal models for laser sputtering at high fluences. Applied Physics Letters, 1995, 67, 3535-3537.	1.5	365
3	New Insights on the Mechanism of Palladium-Catalyzed Hydrolysis of Sodium Borohydride from 11B NMR Measurements. Journal of Physical Chemistry B, 2006, 110, 17024-17033.	1.2	272
4	Comments on explosive mechanisms of laser sputtering. Applied Surface Science, 1996, 96-98, 205-215.	3.1	269
5	Metal Borideâ€Based Catalysts for Electrochemical Waterâ€Splitting: A Review. Advanced Functional Materials, 2020, 30, 1906481.	7.8	268
6	Promoting effect of transition metal-doped Coâ€“B alloy catalysts for hydrogen production by hydrolysis of alkaline NaBH4 solution. Journal of Catalysis, 2010, 271, 315-324.	3.1	255
7	Cobalt-Boride: An efficient and robust electrocatalyst for Hydrogen Evolution Reaction. Journal of Power Sources, 2015, 279, 620-625.	4.0	255
8	Laser-induced phase explosion: new physical problems when a condensed phase approaches the thermodynamic critical temperature. Applied Physics A: Materials Science and Processing, 1999, 69, S67-S73.	1.1	253
9	Coâ€“Niâ€“B nanocatalyst for efficient hydrogen evolution reaction in wide pH range. Applied Catalysis B: Environmental, 2016, 192, 126-133.	10.8	231
10	Hydrogen generation by hydrolysis of NaBH4 with efficient Coâ€“Pâ€“B catalyst: A kinetic study. Journal of Power Sources, 2009, 188, 411-420.	4.0	200
11	Copper and Nitrogen co-doped TiO 2 photocatalyst with enhanced optical absorption and catalytic activity. Applied Catalysis B: Environmental, 2015, 168-169, 333-341.	10.8	199
12	Progress in Coâ€“B related catalyst for hydrogen production by hydrolysis of boron-hydrides: A review and the perspectives to substitute noble metals. International Journal of Hydrogen Energy, 2015, 40, 1429-1464.	3.8	178
13	Pd-C powder and thin film catalysts for hydrogen production by hydrolysis of sodium borohydride. International Journal of Hydrogen Energy, 2008, 33, 287-292.	3.8	172
14	Efficient catalytic properties of Coâ€“Niâ€“Pâ€“B catalyst powders for hydrogen generation by hydrolysis of alkaline solution of NaBH4. International Journal of Hydrogen Energy, 2009, 34, 2893-2900.	3.8	171
15	Systematic investigation on the interaction of bovine serum albumin with ZnO nanoparticles using fluorescence spectroscopy. Colloids and Surfaces B: Biointerfaces, 2013, 102, 257-264.	2.5	170
16	Improved visible light photocatalytic activity of TiO2 co-doped with Vanadium and Nitrogen. Applied Catalysis B: Environmental, 2012, 126, 47-54.	10.8	165
17	Studies on catalytic behavior of Coâ€“Niâ€“B in hydrogen production by hydrolysis of NaBH4. Journal of Molecular Catalysis A, 2009, 298, 1-6.	4.8	161
18	Hydrogen generation by hydrolysis of alkaline NaBH4 solution with Cr-promoted Coâ€“B amorphous catalyst. Applied Catalysis B: Environmental, 2009, 92, 68-74.	10.8	159

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19	Laser-pulse sputtering of aluminum: Vaporization, boiling, superheating, and gas-dynamic effects. Physical Review E, 1994, 50, 4716-4727.	0.8	156
20	Laser-induced phase explosion: new physical problems when a condensed phase approaches the thermodynamic critical temperature. Applied Physics A: Materials Science and Processing, 1999, 69, S67-S73.	1.1	134
21	Thin films of Coâ€“B prepared by pulsed laser deposition as efficient catalysts in hydrogen producing reactions. Applied Catalysis A: General, 2007, 323, 18-24.	2.2	131
22	Co3O4 nanoparticles assembled coatings synthesized by different techniques for photo-degradation of methylene blue dye. Applied Catalysis B: Environmental, 2013, 132-133, 204-211.	10.8	122
23	Nanoparticle-assembled Co-B thin film for the hydrolysis of ammonia borane: A highly active catalyst for hydrogen production. Applied Catalysis B: Environmental, 2010, 95, 137-143.	10.8	118
24	Kinetic Features of the Platinum Catalyzed Hydrolysis of Sodium Borohydride from ¹¹B NMR Measurements. Journal of Physical Chemistry C, 2007, 111, 18744-18750.	1.5	115
25	Structured and Nanoparticle Assembled Coâ^'B Thin Films Prepared by Pulsed Laser Deposition:â€‰ A Very Efficient Catalyst for Hydrogen Production. Journal of Physical Chemistry C, 2008, 112, 6968-6976.	1.5	112
26	Efficient photocatalytic degradation of organic water pollutants using Vâ€“N-codoped TiO2 thin films. Applied Catalysis B: Environmental, 2014, 150-151, 74-81.	10.8	112
27	Co-Mo-B Nanoparticles as a non-precious and efficient Bifunctional Electrocatalyst for Hydrogen and Oxygen Evolution. Electrochimica Acta, 2017, 232, 64-71.	2.6	112
28	A unique amorphous cobalt-phosphide-boride bifunctional electrocatalyst for enhanced alkaline water-splitting. Applied Catalysis B: Environmental, 2019, 259, 118051.	10.8	112
29	Physically and chemically synthesized TiO2 composite thin films for hydrogen production by photocatalytic water splitting. International Journal of Hydrogen Energy, 2008, 33, 6896-6903.	3.8	111
30	Comprehensive studies on the interaction of copper nanoparticles with bovine serum albumin using various spectroscopies. Colloids and Surfaces B: Biointerfaces, 2014, 113, 276-284.	2.5	105
31	Efficient indium tin oxide/Cr-doped-TiO2 multilayer thin films for H2 production by photocatalytic water-splitting. International Journal of Hydrogen Energy, 2010, 35, 9581-9590.	3.8	97
32	Pulsed laser deposition of Co3O4 nanoparticles assembled coating: Role of substrate temperature to tailor disordered to crystalline phase and related photocatalytic activity in degradation of methylene blue. Applied Catalysis A: General, 2012, 423-424, 21-27.	2.2	95
33	Efficient Co-B-codoped TiO 2 photocatalyst for degradation of organic water pollutant under visible light. Applied Catalysis B: Environmental, 2016, 183, 242-253.	10.8	95
34	Clustering of gold atoms in ion-implanted silica after thermal annealing in different atmospheres. Physical Review B, 2001, 63, .	1.1	91
35	Primary and secondary mechanisms in laser-pulse sputtering. Nuclear Instruments & Methods in Physics Research B, 1992, 65, 187-199.	0.6	90
36	On the mechanisms of target modification by ion beams and laser pulses. Nuclear Instruments & Methods in Physics Research B, 1997, 122, 374-400.	0.6	90

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37	Contribution of vaporization and boiling to thermal-spike sputtering by ions or laser pulses. Physical Review E, 1999, 60, 2616-2625.	0.8	77
38	Study of 2D MXene Cr2C material for hydrogen storage using density functional theory. Applied Surface Science, 2016, 389, 88-95.	3.1	77
39	Formation of an intermediate band in the energy gap of TiO2 by Cuâ€“N-codoping: First principles study and experimental evidence. Solar Energy Materials and Solar Cells, 2014, 125, 120-126.	3.0	75
40	Highly photo-catalytically active hierarchical 3D porous/urchin nanostructured Co3O4 coating synthesized by Pulsed Laser Deposition. Applied Catalysis B: Environmental, 2015, 166-167, 475-484.	10.8	75
41	Sievert-type apparatus for the study of hydrogen storage in solids. Measurement Science and Technology, 2004, 15, 127-130.	1.4	72
42	Two stages in the kinetics of gold cluster growth in ion-implanted silica during isothermal annealing in oxidizing atmosphere. Journal of Applied Physics, 2002, 92, 4249-4254.	1.1	71
43	Spectroscopic characterization of thermally treated carbon-rich Si1â^'xCx films. Thin Solid Films, 1993, 223, 114-121.	0.8	70
44	Tungsten-doped TiO 2 /reduced Graphene Oxide nano-composite photocatalyst for degradation of phenol: A system to reduce surfaceÂand bulk electron-hole recombination. Journal of Environmental Management, 2017, 203, 364-374.	3.8	70
45	Microstructure, oxidation and H2-permeation resistance of TiAlN films deposited by DC magnetron sputtering technique. Surface and Coatings Technology, 2004, 180-181, 9-14.	2.2	67
46	Efficient H2 production by water-splitting using indiumâ€“tin-oxide/V-doped TiO2 multilayer thin film photocatalyst. International Journal of Hydrogen Energy, 2011, 36, 6519-6528.	3.8	67
47	Catalytic effect on hydrogen desorption in Nb-doped microcrystalline MgH2. Applied Physics Letters, 2004, 85, 5212-5214.	1.5	66
48	Dehydrogenation of Ammonia Borane with transition metal-doped Coâ€“B alloy catalysts. International Journal of Hydrogen Energy, 2012, 37, 2397-2406.	3.8	66
49	Dependence of photocatalysis on charge carrier separation in Ag-doped and decorated TiO₂nanocomposites. Catalysis Science and Technology, 2016, 6, 8428-8440.	2.1	66
50	Revisiting the thermal-spike concept in ion-surface interactions. Nuclear Instruments & Methods in Physics Research B, 1997, 122, 458-469.	0.6	62
51	Laser-pulse sputtering of atoms and molecules Part II. Recondensation effects. Nuclear Instruments & Methods in Physics Research B, 1994, 91, 682-691.	0.6	61
52	Experimental and Theoretical Investigations on the Activity and Stability of Substitutional and Interstitial Boron in TiO₂ Photocatalyst. Journal of Physical Chemistry C, 2015, 119, 18581-18590.	1.5	57
53	Co oxide nanostructures for electrocatalytic water-oxidation: effects of dimensionality and related properties. Nanoscale, 2018, 10, 8806-8819.	2.8	56
54	Co-B catalyst supported over mesoporous silica for hydrogen production by catalytic hydrolysis of Ammonia Borane: A study on influence of pore structure. Applied Catalysis B: Environmental, 2013, 140-141, 125-132.	10.8	55

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55	Gas transport through nanocomposite membrane composed by polyethylene with dispersed graphite nanoplatelets. Journal of Membrane Science, 2014, 463, 196-204.	4.1	54
56	Wastewater remediation with ZnO photocatalysts: Green synthesis and solar concentration as an economically and environmentally viable route to application. Journal of Environmental Management, 2021, 286, 112226.	3.8	54
57	Nanodiamonds: Synthesis and Application in Sensing, Catalysis, and the Possible Connection with Some Processes Occurring in Space. Applied Sciences (Switzerland), 2020, 10, 4094.	1.3	50
58	On the debris phenomenon with laserâ€sputtered polymers. Applied Physics Letters, 1992, 60, 2980-2982.	1.5	48
59	Improved dehydrogenation of ammonia borane over Co-P-B coating on Ni: A single catalyst for both hydrolysis and thermolysis. Applied Catalysis B: Environmental, 2012, 111-112, 178-184.	10.8	48
60	Radiation effects in glasses. Radiation Effects, 1986, 98, 39-54.	0.4	46
61	Pulsed-laser sputtering of atoms and molecules. Part I: Basic solutions for gas-dynamic effects. Applied Physics B, Photophysics and Laser Chemistry, 1993, 57, 145-158.	1.5	46
62	Pulsed Laser Deposition of Co-nanoparticles embedded on B-thin film: A very efficient catalyst produced in a single-step process. Applied Catalysis B: Environmental, 2011, 103, 31-38.	10.8	46
63	Polymer surface modification by ion implantation and reactive deposition of transparent films. Surface and Coatings Technology, 1998, 103-104, 375-379.	2.2	44
64	Structural evolution of Fe-Al multilayer thin films for different annealing temperatures. Journal of Physics Condensed Matter, 2001, 13, 811-821.	0.7	44
65	Palladium membranes prepared by r.f. magnetron sputtering for hydrogen purification. Surface and Coatings Technology, 2004, 177-178, 73-79.	2.2	44
66	Solar Concentration for Wastewaters Remediation: A Review of Materials and Technologies. Applied Sciences (Switzerland), 2019, 9, 118.	1.3	44
67	Formation of a Noncrystalline Phase in Aluminum Irradiated with a Pulsed Ruby Laser. Physical Review Letters, 1980, 44, 88-91.	2.9	43
68	Novel geometrical effects observed in debris when polymers are laser sputtered. Applied Physics Letters, 1992, 61, 2784-2786.	1.5	43
69	Ion-beam mixing with chemical guidance IV. Thermodynamic effects without invoking thermal spikes. Surface Science, 1994, 314, 275-288.	0.8	43
70	Formation of silver nanoclusters by excimerâ€“laser interaction in silver-exchanged soda-lime glass. Applied Physics Letters, 2001, 79, 2456-2458.	1.5	43
71	Hydrogen kinetics in magnesium hydride: On different catalytic effects of niobium. Applied Physics Letters, 2006, 89, 014101.	1.5	43
72	Mesoporous Coâ€“B nanocatalyst for efficient hydrogen production by hydrolysis of sodium borohydride. International Journal of Hydrogen Energy, 2013, 38, 14685-14692.	3.8	43

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73	Slow electrons impinging on dielectric solids. II. Implantation profiles, electron mobility, and recombination processes. Physical Review B, 1997, 56, 2241-2247.	1.1	42
74	Does normal boiling exist due to laser-pulse or ion bombardment?. Journal of Applied Physics, 2000, 87, 3177-3179.	1.1	42
75	Numerical analysis of field-assisted sodium migration in electron-irradiated glasses. Journal of Physics C: Solid State Physics, 1982, 15, 5615-5621.	1.5	41
76	Chemical and compositional changes induced by N+implantation in amorphous SiC films. Journal of Applied Physics, 1993, 74, 2013-2020.	1.1	41
77	Enhanced hydrogen production by hydrolysis of NaBH4 using â€œCo-B nanoparticles supported on Carbon filmâ€•catalyst synthesized by pulsed laser deposition. Catalysis Today, 2011, 170, 20-26.	2.2	41
78	Analysis of the hydrogen permeation properties of TiN-TiC bilayers deposited on martensitic stainless steel. Surface and Coatings Technology, 1996, 83, 40-44.	2.2	40
79	Deuterium storage in nanocrystalline magnesium thin films. Journal of Applied Physics, 2004, 95, 1989-1995.	1.1	40
80	Structural evolution of Pd-capped Mg thin films under H2 absorption and desorption cycles. International Journal of Hydrogen Energy, 2009, 34, 4817-4826.	3.8	40
81	An integrated apparatus for production and measurement of molecular hydrogen. Measurement Science and Technology, 2007, 18, N21-N26.	1.4	39
82	On the thermodynamic path enabling a room-temperature, laser-assisted graphite to nanodiamond transformation. Scientific Reports, 2016, 6, 35244.	1.6	39
83	Effect of annealing and nanostructuring on pulsed laser deposited WS2 for HER catalysis. Applied Catalysis A: General, 2016, 510, 156-160.	2.2	39
84	Polymer rigidification in graphene based nanocomposites: Gas barrier effects and free volume reduction. Polymer, 2017, 121, 17-25.	1.8	39
85	Pulsed-laser deposition of carbon: from DLC to cluster-assembled films. Thin Solid Films, 2005, 482, 2-8.	0.8	38
86	Enhanced H 2 production from hydrolysis of sodium borohydride using Co 3 O 4 nanoparticles assembled coatings prepared by pulsed laser deposition. Applied Catalysis A: General, 2016, 515, 1-9.	2.2	38
87	Composition changes in bombarded oxides and carbides: the distinction between ballistic, chemically guided, and chemically random behavior. Nuclear Instruments & Methods in Physics Research B, 1993, 80-81, 1154-1163.	0.6	37
88	Ion beam induced enhanced adhesion of Au films deposited on polytetrafluoroethylene. Thin Solid Films, 2002, 420-421, 565-570.	0.8	37
89	Pulsed laser deposition of diamondlike carbon films on polycarbonate. Journal of Applied Physics, 2003, 93, 859-865.	1.1	37
90	Pulsed-Laser Deposition of Nanostructured Iron Oxide Catalysts for Efficient Water Oxidation. ACS Applied Materials & Interfaces, 2014, 6, 6186-6190.	4.0	37

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91	Ruthenium nanoparticles supported over carbon thin film catalyst synthesized by pulsed laser deposition for hydrogen production from ammonia borane. Applied Catalysis A: General, 2015, 495, 23-29.	2.2	37
92	On the effect of Sn-doping in hematite anodes for oxygen evolution. Electrochimica Acta, 2016, 214, 345-353.	2.6	37
93	Effect of graphene oxide loading on TiO2: Morphological, optical, interfacial charge dynamics-A combined experimental and theoretical study. Carbon, 2019, 143, 51-62.	5.4	37
94	Thermodynamic effects in depth profiling and ionâ€beam mixing without invoking thermal spikes. Applied Physics Letters, 1994, 64, 2649-2651.	1.5	36
95	Pulsed laser deposition apparatus for applied research. Measurement Science and Technology, 1999, 10, 27-30.	1.4	36
96	Pulsed laser deposition of diamond-like carbon films: reducing internal stress by thermal annealing. Applied Surface Science, 2003, 208-209, 561-565.	3.1	36
97	Coâ€“B nanoparticles supported on carbon film synthesized by pulsed laser deposition for hydrolysis of ammonia borane. International Journal of Hydrogen Energy, 2012, 37, 2007-2013.	3.8	36
98	Stability, durability, and reusability studies on transition metal-doped Coâ€“B alloy catalysts for hydrogen production. International Journal of Hydrogen Energy, 2011, 36, 13379-13391.	3.8	35
99	Clustering of silver atoms in hydrogenated silver-sodium exchanged glasses. Applied Physics A: Materials Science and Processing, 2000, 70, 415-419.	1.1	34
100	Coâ€“Pâ€“B catalyst thin films prepared by electroless and pulsed laser deposition for hydrogen generation by hydrolysis of alkaline sodium borohydride: A comparison. Thin Solid Films, 2010, 518, 4779-4785.	0.8	34
101	Mobility and surface recombination processes of primary electrons in dielectric systems during Auger electron spectroscopy. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 103, 279-282.	0.9	32
102	DIFFERENTIAL, TOTAL, AND TRANSPORT CROSS SECTIONS FOR ELASTIC SCATTERING OF LOW ENERGY POSITRONS BY NEUTRAL ATOMS (Z= 1â€“92,E= 500â€“4000 eV). Atomic Data and Nuclear Data Tables, 1998, 69, 1-100.	0.9	32
103	Influence of annealing atmosphere on metal and metal alloy nanoclusters produced by ion implantation in silica. Nuclear Instruments & Methods in Physics Research B, 2001, 178, 176-179.	0.6	32
104	Nb clusters formation in Nb-doped magnesium hydride. Applied Physics Letters, 2005, 87, 061904.	1.5	31
105	Coâ€“Moâ€“Bâ€“P Alloy with Enhanced Catalytic Properties for H2 Production by Hydrolysis of Ammonia Borane. Topics in Catalysis, 2012, 55, 1032-1039.	1.3	31
106	Mechanical behaviour of nitrogen-implanted aluminium alloys. Surface and Coatings Technology, 1996, 83, 284-289.	2.2	30
107	3D hierarchical nanostructures of iron oxides coatings prepared by pulsed laser deposition for photocatalytic water purification. Applied Catalysis B: Environmental, 2017, 219, 401-411.	10.8	30
108	Cobalt-Boride Nanostructured Thin Films with High Performance and Stability for Alkaline Water Oxidation. ACS Sustainable Chemistry and Engineering, 2019, 7, 16651-16658.	3.2	30

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109	Exploring the hydrogen evolution capabilities of earth-abundant ternary metal borides for neutral and alkaline water-splitting. Electrochimica Acta, 2020, 354, 136738.	2.6	30
110	Rapid hydrogenation of amorphous TiO2 to produce efficient H-doped anatase for photocatalytic water splitting. Applied Catalysis A: General, 2015, 500, 69-73.	2.2	29
111	Fast and Sensitive Detection of Paramagnetic Species Using Coupled Charge and Spin Dynamics in Strongly Fluorescent Nanodiamonds. ACS Applied Materials & Interfaces, 2019, 11, 24412-24422.	4.0	29
112	Electrochemical and corrosion behaviour of laser modified aluminium surfaces. Electrochimica Acta, 1980, 25, 1497-1499.	2.6	28
113	Alkali migration in ion irradiated glasses. Nuclear Instruments & Methods in Physics Research B, 1984, 1, 511-515.	0.6	28
114	On the origin of the different velocity peaks of particles sputtered from surfaces by laser pulses or charged-particle beams. Applied Surface Science, 1999, 138-139, 44-51.	3.1	28
115	Gas-dynamic effects in the laser-pulse sputtering of AlN: is there evidence for phase explosion?. Applied Surface Science, 1998, 133, 251-269.	3.1	27
116	Pulsed laser deposition of glass-like cluster assembled carbon films. Carbon, 2005, 43, 2122-2127.	5.4	27
117	Structural and electrical properties of AlN films deposited using reactive RF magnetron sputtering for solar concentrator application. Applied Surface Science, 2012, 258, 3450-3454.	3.1	27
118	Simulation of phase explosion in the nanosecond laser ablation of aluminum. Journal of Colloid and Interface Science, 2017, 489, 126-130.	5.0	27
119	Sputtering process during ion implantation in glasses: mathematical and physical analysis. Journal of Physics C: Solid State Physics, 1983, 16, 221-228.	1.5	26
120	Cooperative Transport Effects in Electron-Irradiated Glasses. Physical Review Letters, 1985, 54, 1675-1678.	2.9	26
121	Defect diffusion in ion implanted glasses. Nuclear Instruments & Methods in Physics Research B, 1992, 65, 387-391.	0.6	26
122	Laser-irradiation-induced structural changes on graphite. Physical Review B, 1999, 59, 13513-13516.	1.1	26
123	Superior hydrogen production rate by catalytic hydrolysis of ammonia borane using Co-B nanoparticles supported over mesoporous silica particles. Catalysis Communications, 2012, 23, 39-42.	1.6	26
124	Heat flow in an aluminium sample undergoing melting and resolidification under irradiation by a nanosecond laser pulse. Radiation Effects, 1980, 53, 7-17.	0.4	25
125	Angular distribution and expansion of laser ablation plumes measured by fast intensified charge coupled device photographs. Nuclear Instruments & Methods in Physics Research B, 1996, 116, 257-261.	0.6	25
126	Ion-beam mixing with chemical guidance. Surface Science, 1992, 268, 340-350.	0.8	24

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127	Structure and optical properties of TiN films prepared by dc sputtering and by ion beam assisted deposition. Vacuum, 1992, 43, 459-462.	1.6	24
128	Heating effects and gas-dynamic expansion of the plasma plume produced by irradiating a solid with laser pulses. Plasma Sources Science and Technology, 1997, 6, 260-269.	1.3	24
129	Ionic transport model for hydrogen permeation inducing silver nanocluster formation in silver-sodium exchanged glasses. Applied Physics A: Materials Science and Processing, 1998, 67, 527-529.	1.1	24
130	Structural evolution of nanocrystalline Pdâ€“Mg bilayers under deuterium absorption and desorption cycles. Thin Solid Films, 2004, 469-470, 350-355.	0.8	24
131	Catalytic properties on the hydrogen desorption process of metallic additives dispersed in the MgH2 matrix. Journal of Alloys and Compounds, 2007, 446-447, 58-62.	2.8	24
132	Structural and mechanical properties of ta-C films grown by pulsed laser deposition. Europhysics Letters, 2000, 50, 501-506.	0.7	23
133	Pulsed laser deposition of Co3O4 nanocatalysts for dye degradation and CO oxidation. Applied Surface Science, 2014, 302, 105-108.	3.1	23
134	Title is missing!. European Physical Journal B, 2002, 25, 269-280.	0.6	23
135	Laser irradiation effects on high dose implanted Cu and Pb in polycrystalline aluminum. Radiation Effects, 1980, 46, 133-139.	0.4	22
136	On the application of Darken's analysis to ion-beam mixing. Nuclear Instruments & Methods in Physics Research B, 1991, 59-60, 517-522.	0.6	22
137	Metal-ceramic ion-beam mixing: a quest for general principles. Surface and Coatings Technology, 1996, 83, 134-145.	2.2	22
138	XPS and UPS investigation of the diamond surface oxidation by UV irradiation. Diamond and Related Materials, 2009, 18, 804-807.	1.8	22
139	Atoms and Nanoparticles of Transition Metals as Catalysts for Hydrogen Desorption from Magnesium Hydride. Journal of Nanomaterials, 2011, 2011, 1-11.	1.5	22
140	Liquid nanodroplet formation through phase explosion mechanism in laser-irradiated metal targets. Physical Review E, 2015, 92, 031301.	0.8	22
141	Light-Induced Advanced Oxidation Processes as PFAS Remediation Methods: A Review. Applied Sciences (Switzerland), 2021, 11, 8458.	1.3	22
142	Alkali-metal segregation at glass surfaces during electron irradiation. Physical Review B, 1991, 43, 3831-3836.	1.1	21
143	Ion-beam mixing with chemical guidance II: Analysis for positive heats of mixing. Surface and Coatings Technology, 1992, 51, 343-351.	2.2	21
144	Hydrogen dimerization process: A probe for investigation of the Î±-SiO2structure. Physical Review B, 1993, 47, 14187-14192.	1.1	21

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145	Hydrogen permeation apparatus with thermal desorption spectroscopy capabilities. Measurement Science and Technology, 1995, 6, 1605-1611.	1.4	21
146	Influence of post-implantation thermal and laser annealing on the stability of metalâ€“alloy nanoclusters in silica. Nuclear Instruments & Methods in Physics Research B, 2001, 175-177, 410-416.	0.6	21
147	The role of oxygen in the one step amination process of nanocrystalline diamond surface. Diamond and Related Materials, 2011, 20, 990-994.	1.8	21
148	Enhanced kinetics of hydride-metal phase transition in magnesium by vacancy clustering. Physical Review B, 2011, 84, .	1.1	21
149	Improved H2 production rate by hydrolysis of Ammonia Borane using quaternary alloy catalysts. International Journal of Hydrogen Energy, 2013, 38, 3313-3322.	3.8	21
150	Realization of a solar hydrothermal carbonization reactor: A zero-energy technology for waste biomass valorization. Journal of Environmental Management, 2020, 259, 110067.	3.8	21
151	Heavy ion irradiation of glasses: Enhanced diffusion and preferential sputtering of alkali elements. Radiation Effects, 1986, 98, 101-108.	0.4	20
152	Characteristics of glass composition modification during heavy ion irradiation. Nuclear Instruments & Methods in Physics Research B, 1987, 19-20, 948-953.	0.6	20
153	Spectrophotometric study of oxide growth on arc evaporated TiN and ZrN coatings during hot air oxidation tests. Thin Solid Films, 1996, 290-291, 289-293.	0.8	20
154	Structural evolution and thermal stability of deuterated titanium thin films. Physical Review B, 1998, 58, 4130-4137.	1.1	20
155	Structure and mechanical properties of low stress tetrahedral amorphous carbon films prepared by pulsed laser deposition. European Physical Journal B, 2002, 25, 269-280.	0.6	20
156	Structural evolution of Feâ€“Al multilayers submitted to thermal annealing. Thin Solid Films, 2003, 433, 205-210.	0.8	20
157	Synthesis and characterization of polymer embedded LaNi5composite material for hydrogen storage. Journal Physics D: Applied Physics, 2007, 40, 4043-4048.	1.3	20
158	The modeling and synthesis of nanodiamonds by laser ablation of graphite and diamond-like carbon in liquid-confined ambient. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	20
159	On the route towards a facile fluorescent nanodiamonds laser-synthesis. Carbon, 2019, 153, 148-155.	5.4	20
160	Pulsed laser deposition of CoFe2O4/CoO hierarchical-type nanostructured heterojuction forming a Z-scheme for efficient spatial separation of photoinduced electron-hole pairs and highly active surface area. Applied Surface Science, 2019, 489, 584-594.	3.1	20
161	On the role of thermal processes in sputtering and composition changes due to ions or laser pulses. Nuclear Instruments & Methods in Physics Research B, 1998, 141, 49-60.	0.6	19
162	Monte Carlo simulation of positron-stimulated secondary electron emission from solids. Physical Review B, 2000, 61, 5979-5986.	1.1	19

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163	Free volumes and gas transport in polymers: amine-modified epoxy resins as a case study. Physical Chemistry Chemical Physics, 2016, 18, 3817-3824.	1.3	19
164	Field-assisted sodium migration in glasses during medium-energy proton irradiation. Journal of Physics C: Solid State Physics, 1982, 15, 5623-5627.	1.5	18
165	Enhanced diffusion processes in Ar+ implanted alkali-containing glasses. Nuclear Instruments & Methods in Physics Research B, 1985, 7-8, 517-520.	0.6	18
166	A note on enhanced diffusion and desorption processes in electron-irradiated glasses. Journal of Physics C: Solid State Physics, 1986, 19, 445-452.	1.5	18
167	Oxide growth at a Si surface. Thin Solid Films, 1994, 241, 383-387.	0.8	18
168	Spatial distribution of laser-ablated material by probing a plasma plume in three dimensions. Applied Surface Science, 1996, 96-98, 102-111.	3.1	18
169	Elastic constants of cubic boron nitride films. Applied Physics Letters, 2000, 77, 2168-2170.	1.5	18
170	Hydrogen sorption in metal-polymer composites: The role of interfaces. Journal of Applied Physics, 2009, 105, .	1.1	18
171	An all-optical single-step process for production of nanometric-sized fluorescent diamonds. Nanoscale, 2018, 10, 5738-5744.	2.8	18
172	Treatment of surfactant-rich industrial wastewaters with concentrated sunlight: toward solar wastewater remediation. International Journal of Environmental Science and Technology, 2019, 16, 2109-2114.	1.8	18
173	Silver cluster formation in ion-exchanged waveguides: processing technique and phenomenological model. Journal of Non-Crystalline Solids, 1999, 253, 261-267.	1.5	17
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