Carlos Jose Macedo Tavares

List of Publications by Year
in descending order

96 papers	2,788 citations	172457 29 h-index	197818 49 g-index
100 all docs	100 docs citations	100 times ranked	3205 citing authors

#	Article	IF	Citations
1	Nucleation of the Electroactive Î³ Phase and Enhancement of the Optical Transparency in Low Filler Content Poly(vinylidene)/Clay Nanocomposites. Journal of Physical Chemistry C, 2011, 115, 18076-18082.	3.1	255
2	Use and misuse of the Kubelka-Munk function to obtain the band gap energy from diffuse reflectance measurements. Solid State Communications, 2022, 341, 114573.	1.9	177
3	Micro and nanofilms of poly(vinylidene fluoride) with controlled thickness, morphology and electroactive crystalline phase for sensor and actuator applications. Smart Materials and Structures, 2011, 20, 087002.	3.5	116
4	Hard nanocomposite Tiâ€“Siâ€“N coatings prepared by DC reactive magnetron sputtering. Surface and Coatings Technology, 2000, 133-134, 234-239.	4.8	115
5	Iron-doped photocatalytic TiO2 sputtered coatings on plastics for self-cleaning applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2007, 138, 144-150.	3.5	102
6	Photocatalytic and antimicrobial multifunctional nanocomposite membranes for emerging pollutants water treatment applications. Chemosphere, 2020, 250, 126299.	8.2	95
7	Structural, electrical, optical, and mechanical characterizations of decorative ZrOxNy thin films. Journal of Applied Physics, 2005, 98, 023715.	2.5	87
8	Reactive sputtering deposition of photocatalytic TiO2 thin films on glass substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2007, 138, 139-143.	3.5	73
9	Improving Photocatalytic Performance and Recyclability by Development of Er-Doped and Er/Pr-Codoped TiO₂/Poly(vinylidene difluoride)â€“Trifluoroethylene Composite Membranes. Journal of Physical Chemistry C, 2014, 118, 27944-27953.	3.1	73
10	A new route for the synthesis of highly-active N-doped TiO2 nanoparticles for visible light photocatalysis using urea as nitrogen precursor. Catalysis Today, 2019, 326, 36-45.	4.4	73
11	Synthesis of iron-doped TiO2 nanoparticles by ball-milling process: the influence of process parameters on the structural, optical, magnetic, and photocatalytic properties. Journal of Materials Science, 2014, 49, 7476-7488.	3.7	71
12	Microstructure, mechanical properties and cutting performance of superhard (Ti,Si,Al)N nanocomposite films grown by d.c. reactive magnetron sputtering. Surface and Coatings Technology, 2004, 177-178, 459-468.	4.8	58
13	Solar selective absorbing coatings based on AlSiN/AlSiON/AlSiO y layers. Applied Surface Science, 2015, 356, 203-212.	6.1	53
14	PVD grown (Ti,Si,Al)N nanocomposite coatings and (Ti,Al)N/(Ti,Si)N multilayers: structural and mechanical properties. Surface and Coatings Technology, 2003, 172, 109-116.	4.8	52
15	Microencapsulation of Essential Oils: A Review. Polymers, 2022, 14, 1730.	4.5	50
16	PVD-Grown photocatalytic TiO2 thin films on PVDF substrates for sensors and actuators applications. Thin Solid Films, 2008, 517, 1161-1166.	1.8	48
17	Dependence of Ga-doped ZnO thin film properties on different sputtering process parameters: Substrate temperature, sputtering pressure and bias voltage. Thin Solid Films, 2015, 586, 13-21.	1.8	46
18	Diethylenetriamine/diamines/copper (II) complexes [Cu(dien)(NN)]Br 2 : Synthesis, solvatochromism, thermal, electrochemistry, single crystal, Hirshfeld surface analysis and antibacterial activity. Arabian Journal of Chemistry, 2017, 10, 845-854.	4.9	43

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19	Comparative efficiency of TiO₂ nanoparticles in suspension vs. immobilization into P(VDFâ€“TrFE) porous membranes. RSC Advances, 2016, 6, 12708-12716.	3.6	42
20	XPS analysis of ZnO:Ga films deposited by magnetron sputtering: Substrate bias effect. Applied Surface Science, 2018, 458, 1043-1049.	6.1	42
21	The role of composition, morphology and crystalline structure in the electrochemical behaviour of TiNx thin films for dry electrode sensor materials. Electrochimica Acta, 2009, 55, 59-67.	5.2	40
22	Optical and structural analysis of solar selective absorbing coatings based on AlSiOx:W cermets. Solar Energy, 2017, 150, 335-344.	6.1	40
23	Development of electrospun photocatalytic TiO2-polyamide-12 nanocomposites. Materials Chemistry and Physics, 2015, 164, 91-97.	4.0	38
24	Enhancement in the photocatalytic nature of nitrogen-doped PVD-grown titanium dioxide thin films. Journal of Applied Physics, 2009, 106, .	2.5	37
25	Structural evolution of Tiâ€“Alâ€“Siâ€“N nanocomposite coatings. Vacuum, 2009, 83, 1206-1212.	3.5	36
26	Deposition and characterization of multilayered TiN/ZrN coatings. Thin Solid Films, 1998, 317, 124-128.	1.8	34
27	Synthesis of Bi2O3/TiO2 nanostructured films for photocatalytic applications. Ceramics International, 2018, 44, 22638-22644.	4.8	34
28	Mechanical characterisation of TiN/ZrN multi-layered coatings. Journal of Materials Processing Technology, 1999, 92-93, 177-183.	6.3	33
29	XRD and FTIR analysis of Tiâ€“Siâ€“Câ€“ON coatings for biomedical applications. Surface and Coatings Technology, 2008, 203, 490-494.	4.8	31
30	Drinking water treatment in a gravimetric flow system with TiO2 coated membranes. Chemical Engineering Journal, 2011, 174, 102-109.	12.7	29
31	Comprehensive design analysis of ZnO anti-reflection nanostructures for Si solar cells. Superlattices and Microstructures, 2018, 124, 1-9.	3.1	27
32	Compositional analysis by RBS, XPS and EDX of ZnO:Al,Bi and ZnO:Ga,Bi thin films deposited by d.c. magnetron sputtering. Vacuum, 2019, 161, 268-275.	3.5	26
33	Strain analysis of photocatalytic TiO2 thin films on polymer substrates. Thin Solid Films, 2008, 516, 1434-1438.	1.8	24
34	Structural and electrical properties of Al doped ZnO thin films deposited at room temperature on poly(vinilidene fluoride) substrates. Thin Solid Films, 2009, 517, 6290-6293.	1.8	24
35	Structural characterization of multilayered sputtered TiN/ZrN coatings. Surface and Coatings Technology, 1998, 100-101, 65-71.	4.8	22
36	Synthesis, solvatochromism and crystal structure of trans -[Cu(Et 2 NCH 2 CH 2 NH 2) 2 .H 2 O](NO 3) 2 complex: Experimental withÂDFTÂcombination. Journal of Molecular Structure, 2017, 1148, 328-338.	3.6	22

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37	Study of the effect of the silver content on the structural and mechanical behavior of Agâ€“ZrCN coatings for orthopedic prostheses. Materials Science and Engineering C, 2014, 42, 782-790.	7.3	21
38	Microencapsulation of citronella oil for solar-activated controlled release as an insect repellent. Applied Materials Today, 2016, 5, 90-97.	4.3	21
39	Is Poly(methyl methacrylate) (PMMA) a Suitable Substrate for ALD?: A Review. Polymers, 2021, 13, 1346.	4.5	21
40	A structural and mechanical analysis on PVD-grown (Ti,Al)N/Mo multilayers. Thin Solid Films, 2000, 377-378, 425-429.	1.8	20
41	Optimisation of surface treatments of TiO2:Nb transparent conductive coatings by a post-hot-wire annealing in a reducing H2 atmosphere. Thin Solid Films, 2014, 550, 404-412.	1.8	20
42	Multifunctional Tiâ€“Me (Me=Al, Cu) thin film systems for biomedical sensing devices. Vacuum, 2015, 122, 353-359.	3.5	20
43	Ultrasonic synthesis of Oct. trans-Br2Cu(Nâ€¯â^©â€¯N)2 Jahn-Teller distortion complex: XRD-properties, solvatochromism, thermal, kinetic and DNA-binding evaluations. Ultrasonics Sonochemistry, 2019, 52, 428-436.	8.2	20
44	Dielectric relaxation, XPS and structural studies of polyethylene oxide/iodine complex composite films. Polymer Bulletin, 2022, 79, 3759-3778.	3.3	20
45	Influence of Nb-doping on the local structure and thermoelectric properties of transparent TiO2:Nb thin films. Journal of Alloys and Compounds, 2020, 838, 155561.	5.5	20
46	Hard ZrO2/Al2O3 nanolaminated PVD coatings evaluated by nanoindentation. Surface and Coatings Technology, 2005, 200, 765-768.	4.8	19
47	Effect of hot-filament annealing in a hydrogen atmosphere on the electrical and structural properties of Nb-doped TiO2 sputtered thin films. Thin Solid Films, 2012, 520, 2514-2519.	1.8	19
48	Deposition of Pdâ€“Ag thin film membranes on ceramic supports for hydrogen purification/separation. Materials Research Bulletin, 2015, 61, 528-533.	5.2	19
49	Photocatalytic degradation of C.I. Reactive Blue 19 with nitrogen-doped TiO2 catalysts thin films under UV/visible light. Journal of Molecular Structure, 2010, 983, 147-152.	3.6	18
50	Optical and structural properties of ZnO NPs and ZnOâ€“Bi2O3 nanocomposites. Ceramics International, 2022, 48, 266-277.	4.8	18
51	Biodegradable Polymers for Microencapsulation Systems. Advances in Polymer Technology, 2022, 2022, 1-43.	1.7	18
52	Optimization and thermal stability of TiAlN/Mo multilayers. Surface and Coatings Technology, 2005, 200, 288-292.	4.8	16
53	Influence of hydrogen plasma thermal treatment on the properties ofÂZnO:Al thin films prepared by dc magnetron sputtering. Vacuum, 2014, 107, 145-154.	3.5	16
54	Interfacial roughness of multilayered coatings. Nuclear Instruments & Methods in Physics Research B, 1998, 136-138, 278-282.	1.4	15

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55	Study of roughness in Ti0.4Al0.6N/Mo multilayer structures. Nuclear Instruments & Methods in Physics Research B, 2002, 188, 90-95.	1.4	14
56	Multifunctional hybrid membranes for photocatalytic and adsorptive removal of water contaminants of emerging concern. Chemosphere, 2022, 293, 133548.	8.2	14
57	Strain dependence electrical resistance and cohesive strength of ITO thin films deposited on electroactive polymer. Thin Solid Films, 2010, 518, 4525-4528.	1.8	13
58	Effect on the electrical and morphological properties of Bi incorporation into ZnO:Ga and ZnO:Al thin films deposited by confocal magnetron sputtering. Vacuum, 2018, 152, 252-260.	3.5	13
59	Joining of Î³-TiAl Alloy to Ni-Based Superalloy Using Ag-Cu Sputtered Coated Ti Brazing Filler Foil. Metals, 2018, 8, 723.	2.3	13
60	Nb-doped Ti2O3 Films Deposited Through Grid-Assisted Magnetron Sputtering on Glass Substrate: Electrical and Optical Analysis. Materials Research, 2019, 22, .	1.3	13
61	Friction and adhesion behavior of polycrystalline diamond films deposited on metals. Surface and Coatings Technology, 2000, 126, 110-115.	4.8	12
62	Microstructure of superhard (Ti,Al)N/Mo multilayers. Thin Solid Films, 2001, 398-399, 397-404.	1.8	12
63	N-Doped Photocatalytic Titania Thin Films on Active Polymer Substrates. Journal of Nanoscience and Nanotechnology, 2010, 10, 1072-1077.	0.9	11
64	Mn-doped ZnO nanocrystals embedded in Al₂O₃: structural and electrical properties. Nanotechnology, 2010, 21, 505705.	2.6	11
65	X-ray scattering experiments on sputtered titanium dioxide coatings onto PVDF polymers for self-cleaning applications. Journal of Applied Polymer Science, 2011, 119, 726-731.	2.6	11
66	Atomic environment and interfacial structural order of TiAlN/Mo multilayers. Surface and Coatings Technology, 2004, 187, 393-398.	4.8	10
67	Mechanical and surface analysis of Ti0.4Al0.6N/Mo multilayers. Vacuum, 2001, 60, 339-346.	3.5	9
68	HRTEM interfacial analysis on superhard TiAlN/Mo multilayers. Surface and Coatings Technology, 2003, 174-175, 273-280.	4.8	9
69	Joining Alumina to Titanium Alloys Using Ag-Cu Sputter-Coated Ti Brazing Filler. Materials, 2020, 13, 4802.	2.9	9
70	Development of stable current collectors for large area dye-sensitized solar cells. Applied Surface Science, 2017, 423, 549-556.	6.1	8
71	Synthesis and characterization of photocatalytic polyurethane and poly(methyl methacrylate) microcapsules for the controlled release of methotrexate. Drug Development and Industrial Pharmacy, 2018, 44, 2083-2088.	2.0	8
72	Photocatalytic Bi2O3/TiO2:N Thin Films with Enhanced Surface Area and Visible Light Activity. Coatings, 2020, 10, 445.	2.6	8

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73	Development of Photocatalytic 3D-Printed Cementitious Mortars: Influence of the Curing, Spraying Time Gaps and TiO2 Coating Rates. Buildings, 2021, 11, 381.	3.1	8
74	Study of Nd-doping effect and mechanical cracking on photoreactivity of TiO2 thin films. Vacuum, 2008, 82, 1475-1481.	3.5	7
75	Food contact surfaces coated with nitrogen-doped titanium dioxide: effect on Listeria monocytogenes survival under different light sources. Applied Surface Science, 2013, 270, 1-5.	6.1	7
76	Release of Volatile Compounds from Polymeric Microcapsules Mediated by Photocatalytic Nanoparticles. International Journal of Photoenergy, 2013, 2013, 1-9.	2.5	7
77	The role of Ga and Bi doping on the local structure of transparent zinc oxide thin films. Journal of Alloys and Compounds, 2021, 870, 159489.	5.5	6
78	Autler-Townes modulation of coherent transients in photoexcited color centers. Physical Review B, 1994, 50, 13795-13798.	3.2	5
79	Electron backscatter diffraction analysis of ZnO:Al thin films. Applied Surface Science, 2012, 259, 590-595.	6.1	4
80	Optical, electrical and morphological properties of (PANI/CSA-PEO)/(AgNPs-AgNO3) nanocomposite films. Physica B: Condensed Matter, 2022, 634, 413636.	2.7	4
81	Structure determination of (Ti,Al)N/Mo multilayers. Thin Solid Films, 2000, 373, 287-292.	1.8	3
82	Preparation of robust polyamide microcapsules by interfacial polycondensation ofp-phenylenediamine and sebacoyl chloride and plasticization with oleic acid. Journal of Microencapsulation, 2015, 32, 349-357.	2.8	3
83	Joining of TiAl Alloy Using Novel Agâ€“Cu Sputtered Coated Ti Brazing Filler. Microscopy and Microanalysis, 2019, 25, 192-195.	0.4	3
84	Effect of Cu-In-Ga Target Composition on Hybrid-Sputtered Cu(In,Ga)Se2 Solar Cells. IEEE Journal of Photovoltaics, 2021, 11, 1206-1212.	2.5	3
85	Transparent niobium-doped titanium dioxide thin films with high Seebeck coefficient for thermoelectric applications. Surface and Coatings Technology, 2021, 425, 127724.	4.8	3
86	Nanometer-Scale Multilayered Mo/Ti_{0.4}Al_{0.6}N Hard Coatings. Key Engineering Materials, 2002, 230-232, 623-626.	0.4	2
87	Transmission electron microscopy analysis of the interfaces of TiAlN/Mo multilayers. Microscopy and Microanalysis, 2008, 14, 1-4.	0.4	2
88	Photocatalytic thin films coupled with polymeric microcapsules for the controlled-release of volatile agents upon solar activation. Journal of Physics: Conference Series, 2013, 439, 012018.	0.4	2
89	Combined in-depth X-ray Photoelectron Spectroscopy and Time-of-Flight Secondary Ion Mass Spectroscopy study of the effect of deposition pressure and substrate bias on the electrical properties and composition of Ga-doped ZnO thin films grown by magnetron sputtering. Thin Solid Films, 2018, 665, 184-192.	1.8	2
90	Self-assembly modification of polyamide membrane by coating titanium dioxide nanoparticles for water treatment applications. Revista Ambiente & Ãgua, 2019, 14, 1.	0.3	2

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91	Chemical preparation, crystal structure, Hirshfeld surface analysis, spectroscopy, DFT studies, thermal decomposition and magnetic measurements of (C4H12N2)[FeCl3(H2O)3]Cl2. Inorganic Chemistry Communication, 2020, 112, 107748.	3.9	2
92	Joining of Zirconia to Ti6Al4V Using Ag-Cu Sputter-Coated Ti Brazing Filler. Metals, 2022, 12, 358.	2.3	2
93	PMMA Microcapsules for the Inactivation of SARS-CoV-2. ACS Omega, 2022, 7, 22383-22393.	3.5	2
94	<scp>XPS</scp>, <scp>UVâ€“Vis</scp>, <scp>XRD,</scp> and <scp>PL</scp> spectroscopies for studying nickel nanoparticle positioning effect on nanocomposite film properties. Journal of Applied Polymer Science, 2022, 139, .	2.6	1
95	Autler-townes splittings of photo-excited point defects. Radiation Effects and Defects in Solids, 1995, 134, 453-455.	1.2	0
96	Influence of Substrate Temperature and Post-Annealing Treatment on the Microstructure and Electric Properties of ZnO:Al Thin Films Deposited by Sputtering. Materials Science Forum, 0, 730-732, 215-220.	0.3	0