Ignacio Jimenez

List of Publications by Year
in descending order

92 papers	3,261 citations	109137 35 h-index	161609 54 g-index
92 all docs	92 docs citations	92 times ranked	3783 citing authors

#	Article	IF	Citations
1	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	2.0	333
2	Core-level photoabsorption study of defects and metastable bonding configurations in boron nitride. Physical Review B, 1997, 55, 12025-12037.	1.1	146
3	Photoemission and x-ray-absorption study of boron carbide and its surface thermal stability. Physical Review B, 1998, 57, 13167-13174.	1.1	134
4	Characterization of nanocrystalline diamond films by coreâ€level photoabsorption. Applied Physics Letters, 1996, 68, 1640-1642.	1.5	111
5	Photoâ€oxidation of electroluminescent polymers studied by coreâ€level photoabsorption spectroscopy. Applied Physics Letters, 1996, 68, 2046-2048.	1.5	105
6	Nearâ€edge xâ€ray absorption fine structure study of bonding modifications in BN thin films by ion implantation. Applied Physics Letters, 1996, 68, 2816-2818.	1.5	100
7	Identification of a Plum pox virus CI-Interacting Protein from Chloroplast That Has a Negative Effect in Virus Infection. Molecular Plant-Microbe Interactions, 2006, 19, 350-358.	1.4	88
8	Influence of inorganic fullereneâ€like WS₂ nanoparticles on the thermal behavior of isotactic polypropylene. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 2309-2321.	2.4	77
9	Spectroscopy of Ï€ bonding in hard graphitic carbon nitride films: Superstructure of basal planes and hardening mechanisms. Physical Review B, 2000, 62, 4261-4264.	1.1	68
10	Novel Melt-Processable Poly(ether ether ketone)(PEEK)/Inorganic Fullerene-like WS₂ Nanoparticles for Critical Applications. Journal of Physical Chemistry B, 2010, 114, 11444-11453.	1.2	66
11	Evolution ofsp2networks with substrate temperature in amorphous carbon films: Experiment and theory. Physical Review B, 2005, 72, .	1.1	61
12	Bonding and hardness in nonhydrogenated carbon films with moderate sp3 content. Journal of Applied Physics, 2000, 87, 8174-8180.	1.1	57
13	Stoichiometry reversal in the growth of thin oxynitride films on Si(100) surfaces. Journal of Applied Physics, 1995, 78, 6761-6769.	1.1	55
14	Influence of a nucleating agent on the crystallization behaviour of isotactic polypropylene and elastomer blends. Polymer, 2007, 48, 5324-5331.	1.8	55
15	Bonding modifications in carbon nitride films induced by thermal annealing: An x-ray absorption near edge study. Applied Physics Letters, 1999, 74, 2620-2622.	1.5	54
16	Characterization of the unoccupied and partially occupied states of TTF-TCNQ by XANES and first-principles calculations. Physical Review B, 2003, 68, .	1.1	54
17	Use of Inorganic Fullerene-like WS₂ to Produce New High-Performance Polyphenylene Sulfide Nanocomposites: Role of the Nanoparticle Concentration. Journal of Physical Chemistry B, 2009, 113, 10104-10111.	1.2	54
18	Identification of ternary boronâ€“carbonâ€“nitrogen hexagonal phases by x-ray absorption spectroscopy. Applied Physics Letters, 2001, 78, 3430-3432.	1.5	50

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19	Unique Isothermal Crystallization Behavior of Novel Polyphenylene Sulfide/Inorganic Fullerene-like WS₂ Nanocomposites. Journal of Physical Chemistry B, 2008, 112, 14819-14828.	1.2	47
20	Synthesis and characterization of amorphous carbon nitride films. Thin Solid Films, 1996, 290-291, 94-98.	0.8	46
21	Accurate valence band width of diamond. Physical Review B, 1997, 56, 7215-7221.	1.1	45
22	Point defects in hexagonal BN, BC3 and BCxN compounds studied by x-ray absorption near-edge structure. Journal of Applied Physics, 2011, 110, 023511.	1.1	45
23	Interfacial Interactions in PP/MMT/SEBS Nanocomposites. Macromolecules, 2010, 43, 448-453.	2.2	44
24	Transition from amorphous boron carbide to hexagonal boron carbon nitride thin films induced by nitrogen ion assistance. Journal of Applied Physics, 2002, 92, 5177-5182.	1.1	43
25	Detecting with X-ray absorption spectroscopy the modifications of the bonding structure of graphitic carbon by amorphisation, hydrogenation and nitrogenation. Surface Science, 2001, 482-485, 530-536.	0.8	42
26	Optimizing the balance between impact strength and stiffness in polypropylene/elastomer blends by incorporation of a nucleating agent. Polymer Engineering and Science, 2008, 48, 80-87.	1.5	42
27	Boron carbides formed by coevaporation of B and C atoms: Vapor reactivity,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">B</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math> and bonding structure. Physical Review B, 2008, 77, .	1.1	42
28	X-ray absorption spectroscopy and atomic force microscopy study of bias-enhanced nucleation of diamond films. Applied Physics Letters, 1998, 72, 2105-2107.	1.5	41
29	Unique Nucleation Activity of Inorganic Fullerene-like WS₂ Nanoparticles in Polyphenylene Sulfide Nanocomposites: Isokinetic and Isoconversional Study of Dynamic Crystallization Kinetics. Journal of Physical Chemistry B, 2009, 113, 7107-7115.	1.2	41
30	X-Ray absorption studies of cubic boronâ€“carbonâ€“nitrogen films grown by ion beam assisted evaporation. Diamond and Related Materials, 2001, 10, 1165-1169.	1.8	40
31	Correlation between bonding structure and microstructure in fullerenelike carbon nitride thin films. Physical Review B, 2005, 71, .	1.1	40
32	Tribological properties of ternary BCN films with controlled composition and bonding structure. Diamond and Related Materials, 2004, 13, 1532-1537.	1.8	39
33	Electronic structure of the energetic material 1,3,5-triamino-2,4,6-trinitrobenzene. Physical Review B, 2000, 62, 15666-15672.	1.1	38
34	X-ray photoemission and photoabsorption of organic electroluminescent materials. Journal of Applied Physics, 1999, 86, 88-93.	1.1	37
35	Growth and characterisation of boronâ€“carbonâ€“nitrogen coatings obtained by ion beam assisted evaporation. Vacuum, 2002, 64, 199-204.	1.6	36
36	Tribological study of hydrogenated amorphous carbon films with tailored microstructure and composition produced by bias-enhanced plasma chemical vapour deposition. Diamond and Related Materials, 2010, 19, 1093-1102.	1.8	36

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37	Hardening Mechanisms in Graphitic Carbon Nitride Films Grown with N2/Ar Ion Assistance. Chemistry of Materials, 2001, 13, 129-135.	3.2	35
38	Isothermal crystallization kinetics of isotactic polypropylene with inorganic fullerene-like WS2 nanoparticles. Thermochimica Acta, 2008, 472, 11-16.	1.2	35
39	BCN films with controlled composition obtained by the interaction between molecular beams of B and C with nitrogen ion beams. Diamond and Related Materials, 2003, 12, 1079-1083.	1.8	34
40	Thin Films of Molecular Metals TTF-TCNQ. Journal of Solid State Chemistry, 2002, 168, 384-389.	1.4	33
41	Towards a new generation of polymer nanocomposites based on inorganic nanotubes. Journal of Materials Chemistry, 2011, 21, 3574.	6.7	33
42	Novel melt-processable nylon-6/inorganic fullerene-like WS2 nanocomposites for critical applications. Materials Chemistry and Physics, 2011, 129, 641-648.	2.0	33
43	X-Ray absorption studies of bonding environments in graphitic carbon nitride. Diamond and Related Materials, 2001, 10, 1170-1174.	1.8	30
44	Spectromicroscopy Study of Intercalation and Exfoliation in Polypropylene/Montmorillonite Nanocomposites. Journal of Physical Chemistry B, 2009, 113, 11160-11165.	1.2	30
45	Interfacial Interactions in Polypropyleneâ^'Organoclayâ^'Elastomer Nanocomposites: Influence of Polar Modifications on the Location of the Clay. Macromolecules, 2011, 44, 2179-2189.	2.2	30
46	Boronâ€“carbonâ€“nitrogen compounds grown by ion beam assisted evaporation. Thin Solid Films, 2000, 373, 277-281.	0.8	28
47	Orientation of graphitic planes during the bias-enhanced nucleation of diamond on silicon: An x-ray absorption near-edge study. Applied Physics Letters, 1998, 73, 2911-2913.	1.5	27
48	Fine structure at the X-ray absorption Ï€* and Ïƒ* bands of amorphous carbon. Diamond and Related Materials, 2003, 12, 110-115.	1.8	27
49	Bonding structure of BCN nanopowders prepared by ball milling. Diamond and Related Materials, 2007, 16, 1450-1454.	1.8	27
50	Photoemission, X-ray absorption and X-ray emission study of boron carbides. Journal of Electron Spectroscopy and Related Phenomena, 1999, 101-103, 611-615.	0.8	25
51	Tribological study of amorphous BC4N coatings. Diamond and Related Materials, 2007, 16, 63-73.	1.8	24
52	Hydrogen stability in hydrogenated amorphous carbon films with polymer-like and diamond-like structure. Journal of Applied Physics, 2012, 112, .	1.1	24
53	X-ray Spectroscopic and Magnetic Investigation of C:Ni Nanocomposite Films Grown by Ion Beam Cosputtering. Journal of Physical Chemistry C, 2008, 112, 12628-12637.	1.5	23
54	Influence of Si oxidation methods on the distribution of suboxides at Si/SiO2 interfaces and their band alignment: a synchrotron photoemission study. Surface Science, 2001, 482-485, 272-278.	0.8	22

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55	Effect of Carbon Incorporation on the Microstructure of BC_xN (x = 0.25, 1,) Tj ETQq1 1 0.784314 rgBT /Over 2010, 22, 1949-1951.	3.2	21
56	The effect of nitrogen incorporation on the bonding structure of hydrogenated carbon nitride films. Journal of Applied Physics, 2007, 101, 063515.	1.1	19
57	Characterization of surfaceâ€modified polyalkanoate films for biomedical applications. Journal of Applied Polymer Science, 2011, 119, 3286-3296.	1.3	19
58	Novel melt-processable nylon-6/inorganic fullerene-like WS2 nanocomposites: Complex isothermal crystallization kinetics and melting behaviour. Materials Chemistry and Physics, 2011, 128, 265-273.	2.0	18
59	Model of the bias-enhanced nucleation of diamond on silicon based on atomic force microscopy and x-ray-absorption studies. Physical Review B, 2000, 61, 10383-10387.	1.1	16
60	Composition and bonding structure of boron nitride B1â^'xNx thin films grown by ion-beam assisted evaporation. Chemical Physics Letters, 2011, 511, 235-240.	1.2	16
61	A review of monolithic and multilayer coatings within the boronâ€“carbonâ€“nitrogen system by ion-beam-assisted deposition. Journal of Materials Research, 2012, 27, 743-764.	1.2	16
62	SiO2growth on GaAs by reduction of GaAs oxides: Separation of stoichiometric changes fromSiO2/GaAs band-lineup effects. Physical Review B, 1994, 49, 11117-11126.	1.1	14
63	Electronic structure and nature of the bonding at the Cu(110)+c(2Ã—2)-Si surface alloy. Surface Science, 2000, 466, 144-154.	0.8	14
64	On the bonding structure of hydrogenated carbon nitrides grown by electron cyclotron resonance chemical vapour deposition: towards the synthesis of non-graphitic carbon nitrides. Diamond and Related Materials, 2002, 11, 1161-1165.	1.8	14
65	Coordination chemistry of titanium and zinc in Ti(1â^'x)Zn2xO2 (0 â‰¤xâ‰¤ 1) ultrathin films grown by DC reactive magnetron sputtering. RSC Advances, 2012, 2, 2696.	1.7	13
66	Friction and wear of amorphous BC4N coatings under different atmospheres. Diamond and Related Materials, 2007, 16, 1445-1449.	1.8	12
67	Detection of intrinsic stress in cubic boron nitride films by x-ray absorption near-edge structure: Stress relaxation mechanisms by simultaneous ion implantation during growth. Physical Review B, 2007, 76, .	1.1	11
68	Characterization of Nitrogen-Doped Carbon Nanotubes by Atomic Force Microscopy, X-ray Photoelectron Spectroscopy and X-ray Absorption Near Edge Spectroscopy. Journal of Nanoscience and Nanotechnology, 2009, 9, 3633-3638.	0.9	10
69	X-Ray absorption study of the bonding structure of BCN compounds enriched in carbon by CH4 ion assistance. Diamond and Related Materials, 2002, 11, 1295-1299.	1.8	9
70	Chemical changes in irradiated polypropylene studied by X-ray photoabsorption and advanced EPR/ENDOR spectroscopies. European Polymer Journal, 2014, 53, 223-229.	2.6	9
71	The chemisorption of H2C[Si(CH3)3]2 and Si6(CH3)12 on Si(100) surfaces. Journal of Applied Physics, 1997, 82, 3567-3571.	1.1	8
72	Tribological comparison of different C-based coatings in lubricated and unlubricated conditions. Surface and Coatings Technology, 2014, 257, 278-285.	2.2	8

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73	Thermal effects on the growth of SiO2 on GaAs(100) by reduction of native oxides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1993, 11, 1028-1032.	0.9	7
74	Electron-beam-induced reactions at O2/GaAs(1 0 0) interfaces. Surface Science, 2001, 482-485, 121-127.	0.8	7
75	Choice of boronâ€“carbonâ€“nitrogen coating material for electron emission based on photoelectric yield measurements during x-ray absorption studies. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 1358.	1.6	7
76	Reversed texture in nanometric carbon/boron nitride multilayers. Carbon, 2014, 74, 374-378.	5.4	7
77	Structural impact of chromium incorporation in as-grown and flash-lamp-annealed sputter deposited titanium oxide films. Journal of Alloys and Compounds, 2017, 729, 438-445.	2.8	7
78	Nitrogen incorporation in carbon nitride films produced by direct and dual ion-beam sputtering. Journal of Applied Physics, 2005, 98, 074907.	1.1	6
79	Influence of carbon content and nitrogen vacancies on the bonding structure and mechanical performance of graphite-like BCxN thin films. Journal of Applied Physics, 2012, 112, 063525.	1.1	6
80	Thin Film Growth by Ion-Beam-Assisted Deposition Techniques. , 2006, , 345-382.		6
81	Extended X-ray absorption fine structure (EXAFS) investigations of Ti bonding environment in sputter-deposited nanocomposite TiBC/a-C thin films. IOP Conference Series: Materials Science and Engineering, 2010, 12, 012012.	0.3	4
82	X-ray emission by electron impact as a surface characterization tool for the light elements B, C, N and O: sensitivity factors and effective attenuation length. Journal of Analytical Atomic Spectrometry, 2010, 25, 150-155.	1.6	4
83	Correlated effects of fluorine and hydrogen in fluorinated tin oxide (FTO) transparent electrodes deposited by sputtering at room temperature. Applied Surface Science, 2021, 537, 147906.	3.1	4
84	Materiales y tÃ©cnicas de fase vapor para la sÃntesis de recubrimientos cerÃ¡micos. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2007, 46, 171-176.	0.9	4
85	Photon assisted field electron emission from SiO2/Si substrates. Applied Physics Letters, 1996, 68, 3602-3604.	1.5	3
86	Phase Selectivity in Cr and N Co-Doped TiO2 Films by Modulated Sputter Growth and Post-Deposition Flash-Lamp-Annealing. Coatings, 2019, 9, 448.	1.2	3
87	Near-Edge X-Ray Absorption Fine Structure Examination of Chemical Bonding in Sputter Deposited Boron and Boron-Nitride Films. Materials Research Society Symposia Proceedings, 1996, 437, 207.	0.1	2
88	The benefit of the European User Community from transnational access to national radiation facilities. Journal of Synchrotron Radiation, 2014, 21, 638-639.	1.0	2
89	GaAs formation by reduction of As2O3 and Ga2O3 at SiO2/GaAs oxides/GaAs interfaces. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1994, 12, 1170-1175.	0.9	1
90	Surface and interface analysis at 3rd generation light sources. Progress in Surface Science, 1995, 50, 37-51.	3.8	1

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91	Stoichiometry reversal and depth-profiling in the growth of thin oxynitride films with N2O on Si(100) surfaces. Journal of Electron Spectroscopy and Related Phenomena, 1996, 80, 133-136.	0.8	1
92	Electron Microscopy (TEM) and X-ray Spectromicroscopy (STXM) of PP/MMT/PP-g-MA and PP/MMT/SEBS Nanocomposites. Materials Research Society Symposia Proceedings, 2010, 1257, 1.	0.1	0