JosÃ© Cotrino Bautista

List of Publications by Year
in descending order

103 papers	2,974 citations	156536 32 h-index	223390 49 g-index
105 all docs	105 docs citations	105 times ranked	3380 citing authors

#	Article	IF	Citations
1	Plasma assisted CO2 dissociation in pure and gas mixture streams with a ferroelectric packed-bed reactor in ambient conditions. Chemical Engineering Journal, 2022, 430, 133066.	6.6	22
2	Plasma engineering of microstructured piezo â€“ Triboelectric hybrid nanogenerators for wide bandwidth vibration energy harvesting. Nano Energy, 2022, 91, 106673.	8.2	12
3	Comparative analysis of the germination of barley seeds subjected to drying, hydrogen peroxide, or oxidative air plasma treatments. Plasma Processes and Polymers, 2022, 19, .	1.6	4
4	Electrical and reaction performances of packedâ€bed plasma reactors moderated with ferroelectric or dielectric materials. Plasma Processes and Polymers, 2021, 18, 2000193.	1.6	6
5	Factors triggering germination in plasma-activated cotton seeds: water imbibition vs. reactive speciesâ€™ formation. Journal Physics D: Applied Physics, 2021, 54, 325205.	1.3	4
6	Unraveling Discharge and Surface Mechanisms in Plasma-Assisted Ammonia Reactions. ACS Sustainable Chemistry and Engineering, 2020, 8, 14855-14866.	3.2	37
7	Kinetic energy-induced growth regimes of nanocolumnar Ti thin films deposited by evaporation and magnetron sputtering. Nanotechnology, 2019, 30, 475603.	1.3	13
8	Large gap atmospheric pressure barrier discharges using ferroelectric materials. Plasma Sources Science and Technology, 2019, 28, 075002.	1.3	1
9	Isotope Labelling for Reaction Mechanism Analysis in DBD Plasma Processes. Catalysts, 2019, 9, 45.	1.6	14
10	Growth of nanocolumnar thin films on patterned substrates at oblique angles. Plasma Processes and Polymers, 2019, 16, 1800135.	1.6	11
11	Growth of nanocolumnar porous TiO 2 thin films by magnetron sputtering using particle collimators. Surface and Coatings Technology, 2018, 343, 172-177.	2.2	25
12	Improving the pollutant removal efficiency of packed-bed plasma reactors incorporating ferroelectric components. Chemical Engineering Journal, 2017, 314, 311-319.	6.6	29
13	Structural control in porous/compact multilayer systems grown by magnetron sputtering. Nanotechnology, 2017, 28, 465605.	1.3	6
14	Surface chemistry and germination improvement of Quinoa seeds subjected to plasma activation. Scientific Reports, 2017, 7, 5924.	1.6	81
15	About the enhancement of chemical yield during the atmospheric plasma synthesis of ammonia in a ferroelectric packed bed reactor. Plasma Processes and Polymers, 2017, 14, 1600081.	1.6	58
16	Isotope labelling to study molecular fragmentation during the dielectric barrier discharge wet reforming of methane. Journal of Power Sources, 2016, 325, 501-505.	4.0	4
17	Nanostructured Ti thin films by magnetron sputtering at oblique angles. Journal Physics D: Applied Physics, 2016, 49, 045303.	1.3	54
18	Modulating Low Energy Ion Plasma Fluxes for the Growth of Nanoporous Thin Films. Plasma Processes and Polymers, 2015, 12, 719-724.	1.6	9

#	Article	IF	Citations
19	Efficient synthesis of ammonia from N₂and H₂alone in a ferroelectric packed-bed DBD reactor. Plasma Sources Science and Technology, 2015, 24, 065011.	1.3	106
20	Plasma reforming of methane in a tunable ferroelectric packed-bed dielectric barrier discharge reactor. Journal of Power Sources, 2015, 296, 268-275.	4.0	32
21	Plasma Deposition of Superhydrophobic Ag@TiO₂ Core@shell Nanorods on Processable Substrates. Plasma Processes and Polymers, 2014, 11, 164-174.	1.6	8
22	On the Deposition Rates of Magnetron Sputtered Thin Films at Oblique Angles. Plasma Processes and Polymers, 2014, 11, 571-576.	1.6	38
23	On the kinetic and thermodynamic electron temperatures in non-thermal plasmas. Europhysics Letters, 2014, 105, 15001.	0.7	3
24	Nanocolumnar growth of thin films deposited at oblique angles: Beyond the tangent rule. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	0.6	42
25	<i>c</i>-C₄F₈Plasmas for the Deposition of Fluorinated Carbon Films. Plasma Processes and Polymers, 2014, 11, 289-299.	1.6	10
26	Low Temperature Production of Formaldehyde from Carbon Dioxide and Ethane by Plasma-Assisted Catalysis in a Ferroelectrically Moderated Dielectric Barrier Discharge Reactor. ACS Catalysis, 2014, 4, 402-408.	5.5	51
27	Low refractive index SiOF thin films prepared by reactive magnetron sputtering. Thin Solid Films, 2013, 542, 332-337.	0.8	20
28	Effects of plasma surface treatments of diamond-like carbon and polymeric substrata on the cellular behavior of human fibroblasts. Journal of Biomaterials Applications, 2013, 27, 669-683.	1.2	11
29	Atomistic model of ultra-smooth amorphous thin film growth by low-energy ion-assisted physical vapour deposition. Journal Physics D: Applied Physics, 2013, 46, 395303.	1.3	5
30	Growth regimes of porous gold thin films deposited by magnetron sputtering at oblique incidence: from compact to columnar microstructures. Nanotechnology, 2013, 24, 045604.	1.3	71
31	Growth of SiO₂ and TiO₂ thin films deposited by reactive magnetron sputtering and PECVD by the incorporation of nonâ€directional deposition fluxes. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 796-801.	0.8	15
32	Influence of plasma-generated negative oxygen ion impingement on magnetron sputtered amorphous SiO2 thin films during growth at low temperatures. Journal of Applied Physics, 2012, 111, 054312.	1.1	29
33	Vertical and tilted Ag-NPs@ZnO nanorods by plasma-enhanced chemical vapour deposition. Nanotechnology, 2012, 23, 255303.	1.3	17
34	Superhydrophobic supported Ag-NPs@ZnO-nanorods with photoactivity in the visible range. Journal of Materials Chemistry, 2012, 22, 1341-1346.	6.7	41
35	Roughness assessment and wetting behavior of fluorocarbon surfaces. Journal of Colloid and Interface Science, 2012, 376, 274-282.	5.0	32
36	Lateral and in-depth distribution of functional groups on diamond-like carbon after oxygen plasma treatments. Diamond and Related Materials, 2011, 20, 49-56.	1.8	20

#	Article	IF	Citations
37	Colored semi-transparent Cu-Si oxide thin films prepared by magnetron sputtering. Optical Materials Express, 2011, 1, 1100.	1.6	13
38	Nitrogen plasma functionalization of low density polyethylene. Surface and Coatings Technology, 2011, 205, 3356-3364.	2.2	18
39	Theoretical and experimental characterization of TiO₂ thin films deposited at oblique angles. Journal Physics D: Applied Physics, 2011, 44, 385302.	1.3	45
40	Morphological evolution of pulsed laser deposited ZrO2 thin films. Journal of Applied Physics, 2010, 107, .	1.1	32
41	Band Gap Narrowing versus Formation of Electronic States in the Gap in Nâ€"TiO₂ Thin Films. Journal of Physical Chemistry C, 2010, 114, 22546-22557.	1.5	34
42	Surface Functionalization, Oxygen Depth Profiles, and Wetting Behavior of PET Treated with Different Nitrogen Plasmas. ACS Applied Materials & Interfaces, 2010, 2, 980-990.	4.0	34
43	Evaluation of Different Dielectric Barrier Discharge Plasma Configurations As an Alternative Technology for Green C₁ Chemistry in the Carbon Dioxide Reforming of Methane and the Direct Decomposition of Methanol. Journal of Physical Chemistry A, 2010, 114, 4009-4016.	1.1	62
44	On the microstructure of thin films grown by an isotropically directed deposition flux. Journal of Applied Physics, 2010, 108, 064316.	1.1	30
45	Formation of Nitrogen Functional Groups on Plasma Treated DLC. Plasma Processes and Polymers, 2009, 6, 555-565.	1.6	17
46	Chemical State of Nitrogen and Visible Surface and Schottky Barrier Driven Photoactivities of N-Doped TiO₂ Thin Films. Journal of Physical Chemistry C, 2009, 113, 13341-13351.	1.5	63
47	Water plasmas for the revalorisation of heavy oils and cokes from petroleum refining. Environmental Science & Technology, 2009, 43, 2557-2562.	4.6	26
48	Hybrid catalytic-DBD plasma reactor for the production of hydrogen and preferential CO oxidation (CO-PROX) at reduced temperatures. Chemical Communications, 2009, , 6192.	2.2	36
49	Plasmas and atom beam activation of the surface of polymers. Journal Physics D: Applied Physics, 2008, 41, 225209.	1.3	25
50	Ar + NO microwave plasmas for<i>Escherichia coli</i>sterilization. Journal Physics D: Applied Physics, 2008, 41, 092002.	1.3	14
51	Type of Plasmas and Microstructures of TiO[sub 2] Thin Films Prepared by Plasma Enhanced Chemical Vapor Deposition. Journal of the Electrochemical Society, 2007, 154, P152.	1.3	56
52	Global model of a low pressure ECR microwave plasma applied to the PECVD of SiO2thin films. Journal Physics D: Applied Physics, 2007, 40, 3411-3422.	1.3	16
53	Scaling behavior and mechanism of formation of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Si</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>thin films grown by plasma-enhanced chemical vapor deposition. Physical Review B, 2007, 76, .	1.1	25
54	Relationship between scaling behavior and porosity of plasma-deposited<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>TiO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>thin films. Physical Review B, 2007, 76, .	1.1	34

#	Article	IF	Citations
55	Removal of NO in NO/N2, NO/N2/O2, NO/CH4/N2, and NO/CH4/O2/N2Systems by Flowing Microwave Discharges. Journal of Physical Chemistry A, 2007, 111, 1057-1065.	1.1	25
56	Determination of the hydrogen content in diamond-like carbon and polymeric thin films by reflection electron energy loss spectroscopy. Diamond and Related Materials, 2007, 16, 107-111.	1.8	37
57	Plasma catalysis over lanthanum substituted perovskites. Catalysis Communications, 2007, 8, 1739-1742.	1.6	16
58	Optically Active Thin Films Deposited by Plasma Polymerization of Dye Molecules. Chemical Vapor Deposition, 2007, 13, 319-325.	1.4	18
59	XPS investigation of the reaction of carbon with NO, O2, N2 and H2O plasmas. Carbon, 2007, 45, 89-96.	5.4	222
60	Hydrogen production by reforming of hydrocarbons and alcohols in a dielectric barrier discharge. Journal of Power Sources, 2007, 169, 140-143.	4.0	112
61	Factors that Contribute to the Growth of Ag@TiO₂ Nanofibers by Plasma Deposition. Plasma Processes and Polymers, 2007, 4, 515-527.	1.6	25
62	Plasma catalysis with perovskite-type catalysts for the removal of NO and CH4 from combustion exhausts. Journal of Catalysis, 2007, 247, 288-297.	3.1	51
63	First nucleation steps during deposition of SiO2 thin films by plasma enhanced chemical vapour deposition. Surface Science, 2007, 601, 2223-2231.	0.8	10
64	Measuring the electron temperature by optical emission spectroscopy in two temperature plasmas at atmospheric pressure: A critical approach. Journal of Applied Physics, 2006, 99, 033104.	1.1	59
65	Plasma Characterization of Oxygen-TetramethylsilaneÂMixtures for the Plasma-Enhanced CVD of SiOxCyHz Thin Films. Chemical Vapor Deposition, 2006, 12, 728-735.	1.4	21
66	Influence of the Angular Distribution Function of Incident Particles on the Microstructure and Anomalous Scaling Behavior of Thin Films. Physical Review Letters, 2006, 96, 236101.	2.9	42
67	Growth mechanisms of SiO2 thin films prepared by plasma enhanced chemical vapour deposition. Surface and Coatings Technology, 2005, 200, 881-885.	2.2	4
68	An update of argon inelastic cross sections for plasma discharges. Journal Physics D: Applied Physics, 2005, 38, 1588-1598.	1.3	129
69	Deposition of Thin Films of SiOxCyH in a Surfatron Microwave Plasma Reactor with Hexamethyldisiloxane as Precursor. Chemical Vapor Deposition, 2005, 11, 317-323.	1.4	26
70	Quantification of the H content in diamondlike carbon and polymeric thin films by reflection electron energy loss spectroscopy. Applied Physics Letters, 2005, 87, 084101.	1.5	55
71	Influence of the excited states on the electron-energy distribution function in low-pressure microwave argon plasmas. Physical Review E, 2005, 72, 016401.	0.8	10
72	Plasma Chemistry of NO in Complex Gas Mixtures Excited with a Surfatron Launcher. Journal of Physical Chemistry A, 2005, 109, 4930-4938.	1.1	29

#	Article	IF	Citations
73	Reforming of ethanol in a microwave surface-wave plasma discharge. Applied Physics Letters, 2004, 85, 4004-4006.	1.5	74
74	Room temperature synthesis of porous SiO2 thin films by plasma enhanced chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1275-1284.	0.9	17
75	Collisional radiative model of an argon atmospheric capillary surface-wave discharge. Physics of Plasmas, 2004, 11, 5497-5506.	0.7	17
76	A Novel PECVD Procedure for the Room-Temperature Synthesis of SiO2 Thin Films with Controlled Porosity. Chemical Vapor Deposition, 2004, 10, 17-20.	1.4	7
77	A structural study of organo-silicon polymeric thin films deposited by remote microwave plasma enhanced chemical vapour deposition. Surface and Coatings Technology, 2004, 180-181, 244-249.	2.2	22
78	Polymeric Sacrificial Layers for the Control of Microstructure and Porosity of Oxide Thin Films Deposited by Plasma-Enhanced Chemical Vapor Deposition. Chemistry of Materials, 2003, 15, 3041-3043.	3.2	7
79	Plasma-enhanced chemical vapor deposition of SiO2 from a Si(CH3)3Cl precursor and mixtures Ar/O2 as plasma gas. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 900-905.	0.9	2
80	Oxygenated polymeric thin films deposited from toluene and oxygen by remote plasma enhanced chemical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2003, 21, 1655-1664.	0.9	5
81	Gas heating in low-pressure microwave argon discharges. Physical Review E, 2002, 66, 066401.	0.8	7
82	Gas Temperature Measurement in a Surface-Wave Argon Plasma Column at Low Pressures. Japanese Journal of Applied Physics, 2002, 41, 5787-5791.	0.8	4
83	Gas temperature equation in a high-frequency argon plasma column at low pressures. Physics of Plasmas, 2002, 9, 358-363.	0.7	6
84	Electron temperature measurement in a slot antenna 2.45 GHz microwave plasma source. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 410.	1.6	19
85	Electron temperature measurement in a surface-wave-produced argon plasma at intermediate pressures. European Physical Journal D, 2001, 14, 361-366.	0.6	21
86	Low temperature synthesis of dense SiO2 thin films by ion beam induced chemical vapor deposition. Thin Solid Films, 2001, 396, 9-15.	0.8	43
87	Synthesis of SiO2 and SiOxCyHz thin films by microwave plasma CVD. Thin Solid Films, 2001, 401, 150-158.	0.8	53
88	Room temperature synthesis of SiO2 thin films by ion beam induced and plasma enhanced CVD. Surface and Coatings Technology, 2001, 142-144, 856-860.	2.2	14
89	Discharge characteristics of high-frequency non-equilibrium argon plasmas from a three-level atomic model. Journal Physics D: Applied Physics, 1995, 28, 1888-1902.	1.3	5
90	On the stability conditions of a stationary argon plasma at atmospheric pressure conditions. Physics of Plasmas, 1995, 2, 1778-1781.	0.7	0

#	Article	IF	Citations
91	A simplified hydrokinetic model for a steadyâ€state microwave discharge sustained by traveling waves at atmospheric pressure conditions. Journal of Applied Physics, 1995, 78, 4360-4370.	1.1	6
92	Determination of bromide by low power surfatron microwave induced plasma after bromine continuous generation. Talanta, 1992, 39, 341-347.	2.9	37
93	Determination of iodide by low power surfatron microwave induced plasma after iodine continuous generation. Spectrochimica Acta, Part B: Atomic Spectroscopy, 1992, 47, 79-87.	1.5	22
94	Spectroscopic determination of fundamental parameters in an argon microwave-induced plasma (surfatron) at atmospheric pressure. Spectrochimica Acta, Part B: Atomic Spectroscopy, 1992, 47, 425-435.	1.5	30
95	Tandem on-line continuous separations for atomic spectroscopic indirect analysis: Iodide determination by ICP-AES. Mikrochimica Acta, 1992, 106, 277-285.	2.5	12
96	Temporal evolution of the electric field intensity in pulsed surface-wave-produced plasmas. Journal Physics D: Applied Physics, 1989, 22, 1482-1486.	1.3	6
97	Experimental study of the ionization front in pulsedâ€surfaceâ€waveâ€produced plasmas. Journal of Applied Physics, 1989, 65, 2199-2204.	1.1	19
98	Empirical similarity laws for argon plasmas produced by a surface wave at 2.45 GHz. Journal Physics D: Applied Physics, 1988, 21, 1112-1116.	1.3	13
99	The electron density stabilisation process in pulsed surface wave plasmas. Journal Physics D: Applied Physics, 1988, 21, 1275-1281.	1.3	33
100	Effective recombination coefficients in argon surface-wave-produced plasma. Journal Physics D: Applied Physics, 1988, 21, 1377-1383.	1.3	21
101	Reexamination of recent experimental results in surfaceâ€waveâ€produced argon plasmas at 2.45 GHz: Comparison with the diffusionâ€recombination model results. Journal of Applied Physics, 1988, 64, 3419-3423.	1.1	10
102	Study of surface-wave-produced plasma column lengths. Journal Physics D: Applied Physics, 1987, 20, 1250-1258.	1.3	28
103	Plasma Deposition of N-TiO2 Thin Films. , 0, , 349-356.		1