Ana Borras

List of Publications by Year
in descending order

100 papers	2,803 citations	159358 30 h-index	197535 49 g-index
105 all docs	105 docs citations	105 times ranked	3944 citing authors

#	Article	IF	Citations
1	Perspectives on oblique angle deposition of thin films: From fundamentals to devices. Progress in Materials Science, 2016, 76, 59-153.	16.0	564
2	Enhancing Moisture and Water Resistance in Perovskite Solar Cells by Encapsulation with Ultrathin Plasma Polymers. ACS Applied Materials & Interfaces, 2018, 10, 11587-11594.	4.0	125
3	Impact of moisture on efficiency-determining electronic processes in perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 10917-10927.	5.2	95
4	Reversible Superhydrophobic to Superhydrophilic Conversion of Ag@TiO2 Composite Nanofiber Surfaces. Langmuir, 2008, 24, 8021-8026.	1.6	87
5	Effect of Visible and UV Illumination on the Water Contact Angle of TiO2Thin Films with Incorporated Nitrogen. Journal of Physical Chemistry C, 2007, 111, 1801-1808.	1.5	71
6	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
7	Correlation lengths, porosity and water adsorption in TiO2thin films prepared by glancing angle deposition. Nanotechnology, 2012, 23, 205701.	1.3	61
8	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
9	The interaction between hybrid organicâ€“inorganic halide perovskite and selective contacts in perovskite solar cells: an infrared spectroscopy study. Physical Chemistry Chemical Physics, 2016, 18, 13583-13590.	1.3	55
10	Growth of Crystalline TiO2 by Plasma Enhanced Chemical Vapor Deposition. Crystal Growth and Design, 2009, 9, 2868-2876.	1.4	54
11	Laser Treatment of Ag@ZnO Nanorods as Long-Life-Span SERS Surfaces. ACS Applied Materials & Interfaces, 2015, 7, 2331-2339.	4.0	50
12	Oxygen Optical Sensing in Gas and Liquids with Nanostructured ZnO Thin Films Based on Exciton Emission Detection. Journal of Physical Chemistry C, 2014, 118, 9852-9859.	1.5	48
13	Effect of visible light on the water contact angles on illuminated oxide semiconductors other than TiO2. Solar Energy Materials and Solar Cells, 2006, 90, 2944-2949.	3.0	47
14	Porosity and microstructure of plasma deposited TiO2 thin films. Microporous and Mesoporous Materials, 2009, 118, 314-324.	2.2	42
15	Superhydrophobic supported Ag-NPs@ZnO-nanorods with photoactivity in the visible range. Journal of Materials Chemistry, 2012, 22, 1341-1346.	6.7	41
16	Synthesis of Supported Single-Crystalline Organic Nanowires by Physical Vapor Deposition. Chemistry of Materials, 2008, 20, 7371-7373.	3.2	40
17	3D core-multishell piezoelectric nanogenerators. Nano Energy, 2019, 58, 476-483.	8.2	39
18	Preillumination of TiO2 and Ta2O5 Photoactive Thin Films As a Tool to Tailor the Synthesis of Composite Materials. Langmuir, 2008, 24, 9460-9469.	1.6	37

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19	Optically Active Luminescent Perylene Thin Films Deposited by Plasma Polymerization. Journal of Physical Chemistry C, 2009, 113, 431-438.	1.5	37
20	Wetting Properties of Polycrystalline TiO₂ Surfaces: A Scaling Approach to the Roughness Factors. Langmuir, 2010, 26, 15875-15882.	1.6	37
21	Selective Dichroic Patterning by Nanosecond Laser Treatment of Ag Nanostripes. Advanced Materials, 2011, 23, 848-853.	11.1	37
22	Reduced-dose and high-speed acquisition strategies for multi-dimensional electron microscopy. Advanced Structural and Chemical Imaging, 2015, 1, .	4.0	37
23	Robust anti-icing superhydrophobic aluminum alloy surfaces by grafting fluorocarbon molecular chains. Applied Materials Today, 2020, 21, 100815.	2.3	37
24	One-Step Dry Method for the Synthesis of Supported Single-Crystalline Organic Nanowires Formed by Ï€-Conjugated Molecules. Langmuir, 2010, 26, 5763-5771.	1.6	36
25	Vertically Aligned Hybrid Core/Shell Semiconductor Nanowires for Photonics Applications. Advanced Functional Materials, 2013, 23, 5981-5989.	7.8	36
26	Design and control of porosity in oxide thin films grown by PECVD. Journal of Materials Science, 2006, 41, 5220-5226.	1.7	35
27	A novel 3D absorption correction method for quantitative EDX-STEM tomography. Ultramicroscopy, 2016, 160, 118-129.	0.8	35
28	Plasma-Enabled Amorphous TiO₂ Nanotubes as Hydrophobic Support for Molecular Sensing by SERS. ACS Applied Materials & Interfaces, 2020, 12, 50721-50733.	4.0	35
29	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>thi films. Physical Review B, 2007, 76, .	1.1	34
30	Transparent Nanometric Organic Luminescent Films as UVâ€Active Components in Photonic Structures. Advanced Materials, 2011, 23, 761-765.	11.1	33
31	Roughness assessment and wetting behavior of fluorocarbon surfaces. Journal of Colloid and Interface Science, 2012, 376, 274-282.	5.0	32
32	Tunable Nanostructure and Photoluminescence of Columnar ZnO Films Grown by Plasma Deposition. Journal of Physical Chemistry C, 2010, 114, 20932-20940.	1.5	30
33	The Role of Surface Recombination on the Performance of Perovskite Solar Cells: Effect of Morphology and Crystalline Phase of TiO₂ Contact. Advanced Materials Interfaces, 2018, 5, 1801076.	1.9	30
34	Enhanced Stability of Perovskite Solar Cells Incorporating Dopantâ€Free Crystalline Spiroâ€OMeTAD Layers by Vacuum Sublimation. Advanced Energy Materials, 2020, 10, 1901524.	10.2	30
35	Wetting Angles on Illuminated Ta2O5 Thin Films with Controlled Nanostructure. Journal of Physical Chemistry C, 2009, 113, 3775-3784.	1.5	29
36	Hydrophobicity, Freezing Delay, and Morphology of Laser-Treated Aluminum Surfaces. Langmuir, 2019, 35, 6483-6491.	1.6	29

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37	Supported Agâ€“TiO2coreâ€“shell nanofibres formed at low temperature by plasma deposition. Nanotechnology, 2006, 17, 3518-3522.	1.3	28
38	Factors that Contribute to the Growth of Ag@TiO₂ Nanofibers by Plasma Deposition. Plasma Processes and Polymers, 2007, 4, 515-527.	1.6	25
39	Anisotropic Resistivity Surfaces Produced in ITO Films by Laserâ€Induced Nanoscale Selfâ€organization. Advanced Optical Materials, 2021, 9, 2001086.	3.6	24
40	Enhanced Photoactivity in Bilayer Films with Buried Rutileâ€“Anatase Heterojunctions. ChemPhysChem, 2011, 12, 191-196.	1.0	23
41	In Situ Determination of the Water Condensation Mechanisms on Superhydrophobic and Superhydrophilic Titanium Dioxide Nanotubes. Langmuir, 2017, 33, 6449-6456.	1.6	23
42	Mechanisms of Electron Transport and Recombination in ZnO Nanostructures for Dyeâ€Sensitized Solar Cells. ChemPhysChem, 2014, 15, 1088-1097.	1.0	22
43	Air- and Light-Stable Superhydrophobic Colored Surfaces Based on Supported Organic Nanowires. Langmuir, 2010, 26, 1487-1492.	1.6	21
44	Soft plasma processing of organic nanowires: a route for the fabrication of 1D organic heterostructures and the template synthesis of inorganic 1D nanostructures. Nanoscale, 2011, 3, 4554.	2.8	20
45	Critical thickness and nanoporosity of TiO2 optical thin films. Microporous and Mesoporous Materials, 2012, 160, 1-9.	2.2	19
46	Tunable In-Plane Optical Anisotropy of Ag Nanoparticles Deposited by DC Sputtering onto SiO2 Nanocolumnar Films. Plasmonics, 2010, 5, 241-250.	1.8	18
47	Connecting Organic Nanowires. Advanced Materials, 2009, 21, 4816-4819.	11.1	17
48	Vertical and tilted Ag-NPs@ZnO nanorods by plasma-enhanced chemical vapour deposition. Nanotechnology, 2012, 23, 255303.	1.3	17
49	Luminescent and Optical Properties of Nanocomposite Thin Films Deposited by Remote Plasma Polymerization of Rhodamine 6G. Plasma Processes and Polymers, 2009, 6, 17-26.	1.6	16
50	Luminescent 3-hydroxyflavone nanocomposites with a tuneable refractive index for photonics and UV detection by plasma assisted vacuum deposition. Journal of Materials Chemistry C, 2014, 2, 6561-6573.	2.7	16
51	Bending Induced Self-Organized Switchable Gratings on Polymeric Substrates. ACS Applied Materials & Interfaces, 2014, 6, 11924-11931.	4.0	16
52	Plasma assisted deposition of single and multistacked TiO₂ hierarchical nanotube photoanodes. Nanoscale, 2017, 9, 8133-8141.	2.8	16
53	Anisotropic In-Plane Conductivity and Dichroic Gold Plasmon Resonance in Plasma-Assisted ITO Thin Films e-Beam-Evaporated at Oblique Angles. ACS Applied Materials & Interfaces, 2015, 7, 10993-11001.	4.0	15
54	Vacuum template synthesis of multifunctional nanotubes with tailored nanostructured walls. Scientific Reports, 2016, 6, 20637.	1.6	14

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55	Hydrophobic and Icephobic Behaviour of Polyurethane-Based Nanocomposite Coatings. Coatings, 2019, 9, 811.	1.2	14
56	Preparation and characterization of CrO2 films by Low Pressure Chemical Vapor Deposition from CrO3. Thin Solid Films, 2013, 539, 1-11.	0.8	13
57	Plasma Enabled Conformal and Damage Free Encapsulation of Fragile Molecular Matter: from Surfaceâ€Supported to Onâ€Device Nanostructures. Advanced Functional Materials, 2019, 29, 1903535.	7.8	13
58	3D Organic Nanofabrics: Plasma-Assisted Synthesis and Antifreezing Behavior of Superhydrophobic and Lubricant-Infused Slippery Surfaces. Langmuir, 2019, 35, 16876-16885.	1.6	13
59	Hydrophobic and Anti-Icing Behavior of UV-Laser-Treated Polyester Resin-Based Gelcoats. Processes, 2020, 8, 1642.	1.3	13
60	Enhancement of visible light-induced surface photo-activity of nanostructured Nâ€"TiO2 thin films modified by ion implantation. Chemical Physics Letters, 2013, 582, 95-99.	1.2	12
61	Multicolored Emission and Lasing in DCM-Adamantane Plasma Nanocomposite Optical Films. ACS Applied Materials & Interfaces, 2017, 9, 8948-8959.	4.0	12
62	Plasma engineering of microstructured piezo â€" Triboelectric hybrid nanogenerators for wide bandwidth vibration energy harvesting. Nano Energy, 2022, 91, 106673.	8.2	12
63	Supported plasma-made 1D heterostructures: perspectives and applications. Journal Physics D: Applied Physics, 2011, 44, 174016.	1.3	11
64	Following the Wetting of One-Dimensional Photoactive Surfaces. Langmuir, 2012, 28, 15047-15055.	1.6	11
65	Laser induced enhancement of dichroism in supported silver nanoparticles deposited by evaporation at glancing angles. Nanotechnology, 2013, 24, 045301.	1.3	11
66	Comments on â€œAn Essay on Contact Angle Measurementsâ€ Determination of Surface Roughness and Modeling of the Wetting Behavior. Plasma Processes and Polymers, 2011, 8, 998-1002.	1.6	10
67	Ripening and recrystallization of NaCl nanocrystals in humid conditions. RSC Advances, 2016, 6, 3778-3782.	1.7	10
68	Lowâ€Temperature Plasma Processing of Platinum Porphyrins for the Development of Metal Nanostructured Layers. Advanced Materials Interfaces, 2017, 4, 1601233.	1.9	10
69	Fabrication of ordered crystalline zirconium nanoporous membranes by an one-step procedure. Nano Today, 2009, 4, 21-26.	6.2	9
70	Self-Assembly of the Nonplanar Fe(III) Phthalocyanine Small-Molecule: Unraveling the Impact on the Magnetic Properties of Organic Nanowires. Chemistry of Materials, 2018, 30, 879-887.	3.2	9
71	Plasma Deposition of Superhydrophobic Ag@TiO₂ Core@shell Nanorods on Processable Substrates. Plasma Processes and Polymers, 2014, 11, 164-174.	1.6	8
72	One-reactor plasma assisted fabrication of ZnO@TiO 2 multishell nanotubes: assessing the impact of a full coverage on the photovoltaic performance. Scientific Reports, 2017, 7, 9621.	1.6	8

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73	Multifunctional antimicrobial chlorhexidine polymers by remote plasma assisted vacuum deposition. Frontiers of Chemical Science and Engineering, 2019, 13, 330-339.	2.3	8
74	Ultrathin Plasma Polymer Passivation of Perovskite Solar Cells for Improved Stability and Reproducibility. Advanced Energy Materials, 2022, 12, .	10.2	8
75	Highly Porous ZnO Thin Films and 1D Nanostructures by Remote Plasma Processing of Zn-Phthalocyanine. Plasma Processes and Polymers, 2016, 13, 287-297.	1.6	7
76	Synthesis of undoped and Ni doped InTaO4 photoactive thin films by metal organic chemical vapor deposition. Surface and Coatings Technology, 2007, 201, 9365-9368.	2.2	6
77	Plasmaâ€Assisted Deposition of TiO₂ 3D Nanomembranes: Selective Wetting, Superomniphobicity, and Selfâ€Cleaning. Advanced Materials Interfaces, 2021, 8, 2100767.	1.9	6
78	Ultraviolet Pretreatment of Titanium Dioxide and Tin-Doped Indium Oxide Surfaces as a Promoter of the Adsorption of Organic Molecules in Dry Deposition Processes: Light Patterning of Organic Nanowires. Langmuir, 2015, 31, 8294-8302.	1.6	5
79	Highly Anisotropic Organometal Halide Perovskite Nanowalls Grown by Glancingâ€Angle Deposition. Advanced Materials, 2022, 34, e2107739.	11.1	5
80	One-reactor vacuum and plasma synthesis of transparent conducting oxide nanotubes and nanotrees: from single wire conductivity to ultra-broadband perfect absorbers in the NIR. Nanoscale, 2021, 13, 13882-13895.	2.8	4
81	A Full Vacuum Approach for the Fabrication of Hybrid White-Light-Emitting Thin Films and Wide-Range In Situ Tunable Luminescent Microcavities. Advanced Optical Materials, 2016, 4, 1124-1131.	3.6	3
82	Supported Porous Nanostructures Developed by Plasma Processing of Metal Phthalocyanines and Porphyrins. Frontiers in Chemistry, 2020, 8, 520.	1.8	3
83	Luminescent Thin Films: Transparent Nanometric Organic Luminescent Films as UV-Active Components in Photonic Structures (Adv. Mater. 6/2011). Advanced Materials, 2011, 23, 684-684.	11.1	2
84	Enhanced reactivity and related optical changes of Ag nanoparticles on amorphous Al2O3supports. Nanotechnology, 2013, 24, 365702.	1.3	2
85	Performance of Porous, Nanocolumnar ZnO Electrodes Obtained at Low Temperature by Plasma-Enhanced Chemical Vapor Deposition in Dye-Sensitized Solar Cells. Energy and Environment Focus, 2013, 2, 270-276.	0.3	2
86	Micronâ€scale wedge thin films prepared by plasma enhanced chemical vapor deposition. Plasma Processes and Polymers, 2017, 14, 1700043.	1.6	2
87	Mechanically Switchable Wetting Petal Effect in Self-Patterned Nanocolumnar Films on Poly(dimethylsiloxane). Nanomaterials, 2021, 11, 2566.	1.9	2
88	Coarseâ€grained approach to amorphous and anisotropic materials in kinetic Monte Carlo thinâ€filmÂgrowth simulations: A case study of TiO₂ and ZnO by plasmaâ€enhanced chemical vapor deposition. Plasma Processes and Polymers, 2022, 19, .	1.6	2
89	(Invited) Plasma Assisted Oblique Angle Deposition of Transparent and Conductive in-Plane Anisotropic ITO Thin Films. ECS Transactions, 2017, 77, 9-15.	0.3	1
90	Highly Anisotropic Organometal Halide Perovskite Nanowalls Grown by Glancingâ€Angle Deposition (Adv. Mater. 18/2022). Advanced Materials, 2022, 34, .	11.1	1

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91	Dichroic Optical Structures: Selective Dichroic Patterning by Nanosecond Laser Treatment of Ag Nanostripes (Adv. Mater. 7/2011). Advanced Materials, 2011, 23, 800-800.	11.1	0
92	White Light Emission: A Full Vacuum Approach for the Fabrication of Hybrid Whiteâ€Lightâ€Emitting Thin Films and Wideâ€Range In Situ Tunable Luminescent Microcavities (Advanced Optical Materials 7/2016). Advanced Optical Materials, 2016, 4, 1134-1134.	3.6	0
93	Solar Cells: Lowâ€Temperature Plasma Processing of Platinum Porphyrins for the Development of Metal Nanostructured Layers (Adv. Mater. Interfaces 14/2017). Advanced Materials Interfaces, 2017, 4, .	1.9	0
94	Perovskite Solar Cells: Enhanced Stability of Perovskite Solar Cells Incorporating Dopantâ€Free Crystalline Spiroâ€OMeTAD Layers by Vacuum Sublimation (Adv. Energy Mater. 2/2020). Advanced Energy Materials, 2020, 10, 2070007.	10.2	0
95	Anisotropic Resistivity ITO Surfaces produced by Laser-induced Self-organization at the Nanoscale. , 2021, , .		0
96	(Invited) Plasma Assisted Oblique Angle Deposition of Transparent and Conductive in-Plane Anisotropic ITO Thin Films. ECS Meeting Abstracts, 2017, , .	0.0	0
97	Hierarchical Photocatalytic Surfaces: From 1D to 3D Photoactive TiO2 Nanotubes Grown By Plasma Assisted Deposition Techniques. ECS Meeting Abstracts, 2021, MA2021-02, 675-675.	0.0	0
98	Plasmaâ€Assisted Deposition of TiO₂ 3D Nanomembranes: Selective Wetting, Superomniphobicity, and Selfâ€Cleaning (Adv. Mater. Interfaces 21/2021). Advanced Materials Interfaces, 2021, 8, 2170122.	1.9	0
99	(Invited) Supported Core@Multishell Nanowires and Nanotubes As a Platform for Water Management and Water Energy Harvesting. ECS Meeting Abstracts, 2021, MA2021-02, 670-670.	0.0	0
100	Rhodamine 6G and 800 intermolecular heteroaggregates embedded in PMMA for Near-Infrared wavelength shifting. Journal of Materials Chemistry C, 0, , .	2.7	0