J Herrero

List of Publications by Year
in descending order

118 papers	5,031 citations	81900 39 h-index	98798 67 g-index
124 all docs	124 docs citations	124 times ranked	4523 citing authors

#	Article	IF	Citations
1	TCO/metal/TCO structures for energy and flexible electronics. Thin Solid Films, 2011, 520, 1-17.	1.8	418
2	Buffer layers and transparent conducting oxides for chalcopyrite Cu(In,Ga)(S,Se)₂ based thin film photovoltaics: present status and current developments. Progress in Photovoltaics: Research and Applications, 2010, 18, 411-433.	8.1	323
3	Deposition of transparent and conductive Al-doped ZnO thin films for photovoltaic solar cells. Solar Energy Materials and Solar Cells, 1997, 45, 75-86.	6.2	176
4	Process and Film Characterization of Chemicalâ€Bathâ€Deposited ZnS Thin Films. Journal of the Electrochemical Society, 1994, 141, 205-210.	2.9	173
5	Optical, electrical and structural characteristics of Al:ZnO thin films with various thicknesses deposited by DC sputtering at room temperature and annealed in air or vacuum. Vacuum, 2010, 84, 924-929.	3.5	167
6	ITO/metal/ITO multilayer structures based on Ag and Cu metal films for high-performance transparent electrodes. Solar Energy Materials and Solar Cells, 2008, 92, 938-941.	6.2	144
7	Comparison study of ITO thin films deposited by sputtering at room temperature onto polymer and glass substrates. Thin Solid Films, 2005, 480-481, 129-132.	1.8	135
8	Chemical Bath Deposition of CdS Thin Films: An Approach to the Chemical Mechanism Through Study of the Film Microstructure. Journal of the Electrochemical Society, 1997, 144, 4081-4091.	2.9	132
9	Structure, optical, and electrical properties of indium tin oxide thin films prepared by sputtering at room temperature and annealed in air or nitrogen. Journal of Applied Physics, 2007, 101, 073514.	2.5	108
10	Influence of oxygen in the deposition and annealing atmosphere on the characteristics of ITO thin films prepared by sputtering at room temperature. Vacuum, 2006, 80, 615-620.	3.5	104
11	Preparation of reactively sputtered Sb-doped SnO2 thin films: Structural, electrical and optical properties. Solar Energy Materials and Solar Cells, 2010, 94, 612-616.	6.2	102
12	n-Type In2S3 thin films prepared by gas chalcogenization of metallic electroplated indium: Photoelectrochemical characterization. Solar Energy Materials and Solar Cells, 1988, 17, 357-368.	0.4	92
13	Chemical bath codeposited CdSî—,ZnS film characterization. Thin Solid Films, 1995, 268, 5-12.	1.8	88
14	High conductivity and transparent ZnO:Al films prepared at low temperature by DC and MF magnetron sputtering. Thin Solid Films, 2006, 515, 640-643.	1.8	87
15	Chemical Bath Deposition of CdS Thin Films: Electrochemical In Situ Kinetic Studies. Journal of the Electrochemical Society, 1992, 139, 2810-2814.	2.9	84
16	Polycrystalline growth and recrystallization processes in sputtered ITO thin films. Thin Solid Films, 2006, 510, 260-264.	1.8	79
17	Transparent conductive ITO/Ag/ITO multilayer electrodes deposited by sputtering at room temperature. Optics Communications, 2009, 282, 574-578.	2.1	74
18	Chemicalâ€Bath Deposition of ZnSe Thin Films: Process and Material Characterization. Journal of the Electrochemical Society, 1995, 142, 764-770.	2.9	73

#	Article	IF	Citations
19	Photovoltaic windows by chemical bath deposition. Thin Solid Films, 2000, 361-362, 28-33.	1.8	73
20	Improved ITO thin films for photovoltaic applications with a thin ZnO layer by sputtering. Thin Solid Films, 2004, 451-452, 630-633.	1.8	70
21	SnO 2 substrate effects on the morphology and composition of chemical bath deposited ZnSe thin films. Thin Solid Films, 2000, 361-362, 177-182.	1.8	68
22	Chemical bath deposition of indium hydroxy sulphide thin films: process and XPS characterization. Thin Solid Films, 1999, 353, 100-107.	1.8	67
23	Transparent films on polymers for photovoltaic applications. Vacuum, 2002, 67, 611-616.	3.5	66
24	Morphological and structural studies of CBD-CdS thin films by microscopy and diffraction techniques. Applied Surface Science, 1998, 136, 8-16.	6.1	62
25	Morphological and compositional study of CBD-ZnSe thin films by microscopy techniques and angle resolved XPS. Thin Solid Films, 2000, 358, 22-29.	1.8	59
26	Electrodeposition of Cuî—¸In alloys for preparing CuInS2 thin films. Solar Energy Materials and Solar Cells, 1990, 20, 53-65.	0.4	53
27	Preparation of Indium Hydroxy Sulfide In x â€‰(â€‰â€‰OHâ€‰â€‰)â€‰ y â€‰Sâ€‰ z Thin Films by Chemical Bath Depositio of the Electrochemical Society, 1998, 145, 2775-2779.	2.9	50
28	Accurate control of thin film CdS growth process by adjusting the chemical bath deposition parameters. Thin Solid Films, 1998, 335, 37-42.	1.8	49
29	Structure and morphology of the indium hydroxy sulphide thin films. Applied Surface Science, 2000, 158, 49-57.	6.1	49
30	Optical characterization of In2S3 solar cell buffer layers grown by chemical bath and physical vapor deposition. Solar Energy Materials and Solar Cells, 2008, 92, 1145-1148.	6.2	48
31	Cathodic electrodeposition of CuInSe2 thin films. Thin Solid Films, 1991, 195, 137-146.	1.8	47
32	Dependence of Electroâ€•optical Properties on the Deposition Conditions of Chemical Bath Deposited CdS Thin Films. Journal of the Electrochemical Society, 1997, 144, 4091-4098.	2.9	46
33	Characteristics of SnSe and SnSe₂ thin films grown onto polycrystalline SnO₂â€•coated glass substrates. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 679-683.	1.8	46
34	Stability of sputtered ITO thin films to the damp-heat test. Surface and Coatings Technology, 2006, 201, 309-312.	4.8	45
35	Effects of Thermal and Chemical Treatments on the Composition and Structure of Electrodeposited CuInSe2 Thin Films. Journal of the Electrochemical Society, 1994, 141, 225-230.	2.9	44
36	Cadmium sulphide growth investigations on different SnO2 substrates. Applied Surface Science, 1999, 140, 182-189.	6.1	44

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37	Optical properties of electrochemically deposited CuInSe2 thin films. Solar Energy Materials and Solar Cells, 1991, 23, 31-45.	0.4	41
38	Tailoring growth conditions for modulated flux deposition of In2S3 thin films. Thin Solid Films, 2004, 451-452, 112-115.	1.8	40
39	Copper tin sulfide (CTS) absorber thin films obtained by co-evaporation: Influence of the ratio Cu/Sn. Journal of Alloys and Compounds, 2015, 642, 40-44.	5.5	40
40	Single-phase Cu2O and CuO thin films obtained by low-temperature oxidation processes. Journal of Alloys and Compounds, 2018, 737, 718-724.	5.5	40
41	Study of the optical transitions in electrodeposited CuInSe2thin films. Journal of Applied Physics, 1991, 69, 429-432.	2.5	38
42	Investigations of the electrical properties of electrodeposited CuInSe2 thin films. Journal of Applied Physics, 1992, 71, 5479-5483.	2.5	38
43	Improvement of the optical properties of electrodeposited CuInSe2 thin films by thermal and chemical treatments. Solar Energy Materials and Solar Cells, 1996, 43, 47-57.	6.2	38
44	Properties of In2S3 thin films deposited onto ITO/glass substrates by chemical bath deposition. Journal of Physics and Chemistry of Solids, 2010, 71, 1629-1633.	4.0	37
45	Optimisation of indium tin oxide thin films for photovoltaic applications. Thin Solid Films, 1995, 269, 80-84.	1.8	35
46	Structure, morphology and photoelectrochemical activity of CuInSe2 thin films as determined by the characteristics of evaporated metallic precursors. Solar Energy Materials and Solar Cells, 2002, 73, 141-149.	6.2	35
47	Indium sulfide buffer layers deposited by dry and wet methods. Thin Solid Films, 2007, 515, 6041-6044.	1.8	34
48	Structure, optical and electrical properties of Al:ZnO thin films deposited by DC sputtering at room temperature on glass and plastic substrates. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1531-1536.	1.8	34
49	Quartz crystal microbalance study of the growth of indium(III) sulphide films from a chemical solution. Electrochimica Acta, 2004, 49, 737-744.	5.2	33
50	Study of the electrodeposition of In2S3 thin films. Thin Solid Films, 2005, 480-481, 151-156.	1.8	33
51	Structural, chemical, and optical properties of tin sulfide thin films as controlled by the growth temperature during co-evaporation and subsequent annealing. Journal of Materials Science, 2013, 48, 3943-3949.	3.7	33
52	AZO/ATO double-layered transparent conducting electrode: A thermal stability study. Thin Solid Films, 2011, 519, 7564-7567.	1.8	32
53	P-type SnO thin films prepared by reactive sputtering at high deposition rates. Journal of Materials Science and Technology, 2019, 35, 1706-1711.	10.7	32
54	Influence of surface density on the CO2 photoreduction activity of a DC magnetron sputtered TiO2 catalyst. Applied Catalysis B: Environmental, 2018, 224, 912-918.	20.2	30

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55	Electrochemical stability of indium tin oxide thin films. Electrochimica Acta, 1992, 37, 2565-2571.	5.2	29
56	Post-deposition annealing effects in RF reactive magnetron sputtered indium tin oxide thin films. Solar Energy Materials and Solar Cells, 1992, 26, 309-321.	6.2	28
57	Photovoltaic activity of electrodepositedpâ€CuInSe2/electrolyte junction. Journal of Applied Physics, 1994, 76, 359-362.	2.5	26
58	Improved Selenization Procedure to Obtain CuInSe2 Thin Films from Sequentially Electrodeposited Precursors. Journal of the Electrochemical Society, 1996, 143, 493-498.	2.9	26
59	Structure, morphology and optical properties of CuInS2 thin films prepared by modulated flux deposition. Thin Solid Films, 2005, 480-481, 19-23.	1.8	26
60	Structural, optical and electrical characteristics of ITO thin films deposited by sputtering on different polyester substrates. Materials Chemistry and Physics, 2008, 112, 641-644.	4.0	26
61	Transparent electrodes based on metal and metal oxide stacked layers grown at room temperature on polymer substrate. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1563-1567.	1.8	26
62	Reaction Pathways to CuInSe2 Formation from Electrodeposited Precursors. Journal of the Electrochemical Society, 1995, 142, 1834-1838.	2.9	25
63	Reaction mechanism and kinetics for the chemical bath deposition of In(OH)xSy thin films. Thin Solid Films, 2001, 387, 111-114.	1.8	25
64	Influence of In2S3 film properties on the behavior of CuInS2/In2S3/ZnO type solar cells. Solar Energy Materials and Solar Cells, 2005, 87, 647-656.	6.2	25
65	Discharge power dependence of structural, optical and electrical properties of DC sputtered antimony doped tin oxide (ATO) films. Solar Energy Materials and Solar Cells, 2011, 95, 2113-2119.	6.2	24
66	Characterisation of CuInS2 / Zn(Se,O)/ZnO solar cells as a function of Zn(Se,O) buffer deposition kinetics in a chemical bath. Progress in Photovoltaics: Research and Applications, 2002, 10, 465-480.	8.1	22
67	Quartz-crystal microbalance study of the growth of Zn(Se,O) thin-films in a chemical bath. A sequential electroless-chemical process. Electrochimica Acta, 2001, 47, 977-986.	5.2	20
68	Study of CuInS2/buffer/ZnO solar cells, with chemically deposited ZnS-In2S3 buffer layers. Thin Solid Films, 2007, 515, 6036-6040.	1.8	20
69	Influence of the film thickness on the structure, optical and electrical properties of ITO coatings deposited by sputtering at room temperature on glass and plastic substrates. Semiconductor Science and Technology, 2008, 23, 075002.	2.0	20
70	Study of the spontaneous growth of ZnO thin films from aqueous solutions. Thin Solid Films, 2003, 431-432, 373-377.	1.8	19
71	Determination of the flat band potential for In2S3/electrolyte interfaces. Electrochimica Acta, 1990, 35, 345-349.	5.2	18
72	Semiconductor CuInSe2 formation by close-spaced selenization processes in vacuum. Vacuum, 2002, 67, 659-664.	3.5	18

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73	XPS analysis with depth resolution of chemical bath-deposited ZnSe thin films. Surface and Interface Analysis, 2000, 30, 522-526.	1.8	17
74	CuInSe2 thin films obtained by a novel electrodeposition and sputtering combined method. Vacuum, 2000, 58, 594-601.	3.5	17
75	Nanocrystalline antimony doped tin oxide (ATO) thin films: A thermal restructuring study. Surface and Coatings Technology, 2012, 211, 37-40.	4.8	17
76	Transparent and conductive electrodes combining AZO and ATO thin films for enhanced light scattering and electrical performance. Applied Surface Science, 2013, 264, 448-452.	6.1	17
77	Anatase and rutile TiO2 thin films prepared by reactive DC sputtering at high deposition rates on glass and flexible polyimide substrates. Journal of Materials Science, 2014, 49, 5035-5042.	3.7	17
78	Chemistry of CdS/CuInSe[sub 2] Structures as Controlled by the CdS Deposition Bath. Journal of the Electrochemical Society, 2001, 148, G602.	2.9	16
79	Transparent and conductive ZnO:Al thin films grown by pulsed magnetron sputtering in current or voltage regulation modes. Vacuum, 2008, 82, 668-672.	3.5	16
80	Optimisation of CdSî—¸TCO bilayers for their application as windows in photovoltaic solar cells. Solar Energy Materials and Solar Cells, 1996, 43, 297-310.	6.2	15
81	Characterisation of CuInS2/ZnSe junctions by XPS and electroreflectance. Thin Solid Films, 2001, 387, 104-107.	1.8	15
82	Simplified modulated evaporation process for the production of CuInS2 films with reduced substrate temperatures. Thin Solid Films, 2009, 517, 2167-2170.	1.8	15
83	Plasmonic characteristics of Ag and ITO/Ag ultrathin films as-grown by sputtering at room temperature and after heating. Journal Physics D: Applied Physics, 2013, 46, 295302.	2.8	15
84	Annealing of indium sulfide thin films prepared at low temperature by modulated flux deposition. Semiconductor Science and Technology, 2013, 28, 015004.	2.0	15
85	Intrinsic and extrinsic doping contributions in SnO2 and SnO2:Sb thin films prepared by reactive sputtering. Journal of Alloys and Compounds, 2019, 791, 68-74.	5.5	15
86	Structural and plasmonic characteristics of sputtered SnO2:Sb and ZnO:Al thin films as a function of their thickness. Journal of Materials Science, 2016, 51, 7276-7285.	3.7	14
87	Recrystallization and components redistribution processes in electrodeposited CuInSe2 thin films. Thin Solid Films, 2001, 387, 57-59.	1.8	13
88	Growth Mechanism of CBD-In(OH)[sub x]S[sub y] Thin Films. Journal of the Electrochemical Society, 2002, 149, C59.	2.9	13
89	Copper tin sulfide (Cu x SnS y) thin films evaporated with x = 3,4 atomic ratios: Influence of the substrate temperature and the subsequent annealing in sulfur. Materials Research Bulletin, 2016, 83, 116-121.	5.2	13
90	New approaches to obtain CuIn1â^'xGaxSe2 thin films by combining electrodeposited and evaporated precursors. Thin Solid Films, 1998, 323, 93-98.	1.8	11

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91	Leveling effect of solâ€“gel SiO2 coatings onto metallic foil substrates. Surface and Coatings Technology, 2001, 138, 205-210.	4.8	10
92	Influence of N-doping and air annealing on the structural and optical properties of TiO2 thin films deposited by reactive DC sputtering at room temperature. Journal of Alloys and Compounds, 2015, 647, 498-506.	5.5	10
93	ITO/ATO bilayer transparent electrodes with enhanced light scattering, thermal stability and electrical conductance. Applied Surface Science, 2016, 384, 45-50.	6.1	10
94	Influence of chemical bath deposition parameters on the formation of CuInS2 / Zn(Se,O) junctions for thin film solar cells. Materials Research Society Symposia Proceedings, 2001, 668, 1.	0.1	9
95	Arrangement of flexible foil substrates for CuInSe2-based solar cells. Surface and Coatings Technology, 2001, 148, 61-64.	4.8	9
96	Co-evaporated Tin Sulfide Thin Films on Bare and Mo-coated Glass Substrates as Photovoltaic Absorber Layers. Energy Procedia, 2014, 44, 96-104.	1.8	9
97	Cu 2 ZnSnS 4 thin films obtained by sulfurization of evaporated Cu 2 SnS 3 and ZnS layers: Influence of the ternary precursor features. Applied Surface Science, 2017, 400, 220-226.	6.1	8
98	SiO2 solâ€“gel-coated conducting substrates for CuInSe2 electrodeposition. Surface and Coatings Technology, 1999, 115, 45-51.	4.8	7
99	Study of CIGS/In(OH)xSy heterojunctions. Thin Solid Films, 2002, 403-404, 339-343.	1.8	7
100	Improving conductivity and texture in ZnO:Al sputtered thin films by sequential chemical and thermal treatments. Applied Surface Science, 2013, 282, 923-929.	6.1	7
101	Lithium intercalation in sputter deposited antimony-doped tin oxide thin films: Evidence from electrochemical and optical measurements. Journal of Applied Physics, 2014, 115, 153702.	2.5	7
102	Comparing metal oxide thin films as transparent p-type conductive electrodes. Materials Research Express, 2020, 7, 016411.	1.6	7
103	Performance of solâ€“gel SiO2 coatings onto glass/SnO2 superstrates. Surface and Coatings Technology, 2000, 132, 31-35.	4.8	6
104	Comparative study of In2S3-ITO bilayers deposited on glass and different plastic substrates. Thin Solid Films, 2009, 517, 2320-2323.	1.8	6
105	Transparent and p-type conductive Ni_xO:V thin films obtained by reactive DC sputtering at room temperature. Materials Research Express, 2019, 6, 096410.	1.6	6
106	Morphological investigations on CdS-TCO photovoltaic window layers using atomic force microscopy. Progress in Photovoltaics: Research and Applications, 1996, 4, 439-446.	8.1	5
107	Chemical studies of solar cell structures based on electrodeposited CuInSe2. Solar Energy Materials and Solar Cells, 1999, 58, 219-224.	6.2	5
108	Crystallization of wide-bandgap CuAlSe2 thin films deposited on antimony doped tin oxide substrates. Journal of Alloys and Compounds, 2015, 648, 104-110.	5.5	5

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109	Correlation of the near-infrared optical absorption with Cu concentration in coevaporated Cuâ€“Inâ€“S films. Thin Solid Films, 2009, 517, 2260-2263.	1.8	3
110	Components distribution in Cu(In,Ga)Se2 films prepared by selenization of evaporated metallic precursors on bare and ITO-coated glass substrates. Journal of Materials Science, 2012, 47, 1836-1842.	3.7	3
111	Characteristics of sequentially evaporated InxGaySez thin films. Journal of Physics and Chemistry of Solids, 2003, 64, 1717-1719.	4.0	2
112	Investigation of optical, structural, and chemical properties of indium sulfide thin films evaporated at low temperature by modulated flux deposition. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 320-326.	1.8	2
113	Comparing the plasmonic characteristics of sputtered ZnO:Al and In2O3:Sn thin films as a function of the heating temperature and atmosphere. Thin Solid Films, 2016, 605, 136-142.	1.8	2
114	Growth of Cu-Rich/Poor CuInS2 thin films by the sequential modulated flux deposition technique. Materials Research Society Symposia Proceedings, 2009, 1165, 1.	0.1	1
115	Zn incorporation and (CuIn)1âˆ’xZn2xSe2 thin film formation during the selenization of evaporated Cu and In precursors on Al:ZnO coated glass substrates. Journal of Physics and Chemistry of Solids, 2011, 72, 1362-1366.	4.0	1
116	Influence of the annealing temperature on CuAl_{<i>x</i>}Ga_{1âˆ’<i>x</i>}Se₂ thin films obtained by selenization. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1467-1474.	1.8	1
117	SnOx/Ag/SnOx heat-reflector coatings prepared by DC sputtering. SN Applied Sciences, 2020, 2, 1.	2.9	1
118	Effect of Annealing Temperature on the Optical Properties of Electrodeposited CuInSe2 Thin Films. , 1991, , 897-899.		0