Jose Herrero

List of Publications by Year
in descending order

130 papers	4,957 citations	94381 37 h-index	106281 65 g-index
130 all docs	130 docs citations	130 times ranked	4992 citing authors

#	Article	IF	Citations
1	TCO/metal/TCO structures for energy and flexible electronics. Thin Solid Films, 2011, 520, 1-17.	0.8	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.	4.4	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.	3.0	176
4	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.	1.6	167
5	CdS photoluminescence inhibition by a photonic structure. Applied Physics Letters, 1998, 73, 1781-1783.	1.5	150
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.	3.0	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.	0.8	135
8	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.	1.1	108
9	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.	1.6	104
10	Preparation of reactively sputtered Sb-doped SnO2 thin films: Structural, electrical and optical properties. Solar Energy Materials and Solar Cells, 2010, 94, 612-616.	3.0	102
11	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
12	Chemical bath codeposited CdSî—¸ZnS film characterization. Thin Solid Films, 1995, 268, 5-12.	0.8	88
13	High conductivity and transparent ZnO:Al films prepared at low temperature by DC and MF magnetron sputtering. Thin Solid Films, 2006, 515, 640-643.	0.8	87
14	Polycrystalline growth and recrystallization processes in sputtered ITO thin films. Thin Solid Films, 2006, 510, 260-264.	0.8	79
15	Transparent conductive ITO/Ag/ITO multilayer electrodes deposited by sputtering at room temperature. Optics Communications, 2009, 282, 574-578.	1.0	74
16	Photovoltaic windows by chemical bath deposition. Thin Solid Films, 2000, 361-362, 28-33.	0.8	73
17	Improved ITO thin films for photovoltaic applications with a thin ZnO layer by sputtering. Thin Solid Films, 2004, 451-452, 630-633.	0.8	70
18	SnO 2 substrate effects on the morphology and composition of chemical bath deposited ZnSe thin films. Thin Solid Films, 2000, 361-362, 177-182.	0.8	68

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19	Chemical bath deposition of indium hydroxy sulphide thin films: process and XPS characterization. Thin Solid Films, 1999, 353, 100-107.	0.8	67
20	Transparent films on polymers for photovoltaic applications. Vacuum, 2002, 67, 611-616.	1.6	66
21	Morphological and structural studies of CBD-CdS thin films by microscopy and diffraction techniques. Applied Surface Science, 1998, 136, 8-16.	3.1	62
22	Morphological and compositional study of CBD-ZnSe thin films by microscopy techniques and angle resolved XPS. Thin Solid Films, 2000, 358, 22-29.	0.8	59
23	Electrochemical synthesis of photoactive In2Se3 thin films. Solar Energy Materials and Solar Cells, 1987, 16, 477-485.	0.4	58
24	Study of CuInS2/ZnS/ZnO solar cells, with chemically deposited ZnS buffer layers from acidic solutions. Solar Energy Materials and Solar Cells, 2008, 92, 302-306.	3.0	58
25	Electrodeposition of Cuî—¸In alloys for preparing CuInS2 thin films. Solar Energy Materials and Solar Cells, 1990, 20, 53-65.	0.4	53
26	Accurate control of thin film CdS growth process by adjusting the chemical bath deposition parameters. Thin Solid Films, 1998, 335, 37-42.	0.8	49
27	Structure and morphology of the indium hydroxy sulphide thin films. Applied Surface Science, 2000, 158, 49-57.	3.1	49
28	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.	3.0	48
29	Cathodic electrodeposition of CuInSe2 thin films. Thin Solid Films, 1991, 195, 137-146.	0.8	47
30	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.	0.8	46
31	Stability of sputtered ITO thin films to the damp-heat test. Surface and Coatings Technology, 2006, 201, 309-312.	2.2	45
32	Preparation of In Xâ€‰â€‰â€‰â€‰(â€‰Xâ€‰=â€‰â€‰Pâ€‰â€‰,â€‰Asâ€‰,â€‰Sbâ€‰)â€‰ Thin Films by Electrochemi Society, 1989, 136, 3388-3391.	1.3	44
33	Cadmium sulphide growth investigations on different SnO2 substrates. Applied Surface Science, 1999, 140, 182-189.	3.1	44
34	Optical properties of electrochemically deposited CuInSe2 thin films. Solar Energy Materials and Solar Cells, 1991, 23, 31-45.	0.4	41
35	Tailoring growth conditions for modulated flux deposition of In2S3 thin films. Thin Solid Films, 2004, 451-452, 112-115.	0.8	40
36	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.	2.8	40

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37	Single-phase Cu2O and CuO thin films obtained by low-temperature oxidation processes. Journal of Alloys and Compounds, 2018, 737, 718-724.	2.8	40
38	Study of the optical transitions in electrodeposited CuInSe2thin films. Journal of Applied Physics, 1991, 69, 429-432.	1.1	38
39	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.	3.0	38
40	Electrochemical growth and properties of CuInS2 thin films for solar energy conversion. Thin Solid Films, 2006, 511-512, 117-120.	0.8	38
41	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.	1.9	37
42	Optimisation of indium tin oxide thin films for photovoltaic applications. Thin Solid Films, 1995, 269, 80-84.	0.8	35
43	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.	3.0	35
44	Indium sulfide buffer layers deposited by dry and wet methods. Thin Solid Films, 2007, 515, 6041-6044.	0.8	34
45	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.	0.8	34
46	Quartz crystal microbalance study of the growth of indium(III) sulphide films from a chemical solution. Electrochimica Acta, 2004, 49, 737-744.	2.6	33
47	CuInS2and CuGaS2thin films grown by modulated flux deposition with various Cu contents. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 2438-2443.	0.8	33
48	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.	1.7	33
49	AZO/ATO double-layered transparent conducting electrode: A thermal stability study. Thin Solid Films, 2011, 519, 7564-7567.	0.8	32
50	P-type SnO thin films prepared by reactive sputtering at high deposition rates. Journal of Materials Science and Technology, 2019, 35, 1706-1711.	5.6	32
51	Heterogeneous photocatalysis: degradation of ethylbenzene in TiO2 aqueous suspensions. Journal of Photochemistry and Photobiology A: Chemistry, 1994, 79, 213-219.	2.0	30
52	SnS absorber thin films by co-evaporation: Optimization of the growth rate and influence of the annealing. Thin Solid Films, 2015, 582, 249-252.	0.8	30
53	Influence of surface density on the CO2 photoreduction activity of a DC magnetron sputtered TiO2 catalyst. Applied Catalysis B: Environmental, 2018, 224, 912-918.	10.8	30
54	Electrochemical stability of indium tin oxide thin films. Electrochimica Acta, 1992, 37, 2565-2571.	2.6	29

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55	Post-deposition annealing effects in RF reactive magnetron sputtered indium tin oxide thin films. Solar Energy Materials and Solar Cells, 1992, 26, 309-321.	3.0	28
56	Structure, morphology and optical properties of CuInS2 thin films prepared by modulated flux deposition. Thin Solid Films, 2005, 480-481, 19-23.	0.8	26
57	Structural, optical and electrical characteristics of ITO thin films deposited by sputtering on different polyester substrates. Materials Chemistry and Physics, 2008, 112, 641-644.	2.0	26
58	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.	0.8	26
59	Comparative Performance of Semi-Transparent PV Modules and Electrochromic Windows for Improving Energy Efficiency in Buildings. Energies, 2018, 11, 1526.	1.6	26
60	Properties of RF sputtered zinc oxide based thin films made from different targets. Solar Energy Materials and Solar Cells, 1994, 31, 489-498.	3.0	25
61	Reaction mechanism and kinetics for the chemical bath deposition of In(OH)xSy thin films. Thin Solid Films, 2001, 387, 111-114.	0.8	25
62	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.	3.0	25
63	Thin-film polyimide/indium tin oxide composites for photovoltaic applications. Journal of Applied Polymer Science, 2007, 103, 3491-3497.	1.3	25
64	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.	3.0	24
65	Surface-properties relationship in sputtered Ag thin films: Influence of the thickness and the annealing temperature in nitrogen. Applied Surface Science, 2015, 324, 245-250.	3.1	23
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.	4.4	22
67	CuIn1â^'Al Se2 thin film solar cells with depth gradient composition prepared by selenization of evaporated metallic precursors. Solar Energy Materials and Solar Cells, 2015, 132, 245-251.	3.0	22
68	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.	2.6	20
69	Study of CuInS2/buffer/ZnO solar cells, with chemically deposited ZnS-In2S3 buffer layers. Thin Solid Films, 2007, 515, 6036-6040.	0.8	20
70	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.	1.0	20
71	Study of the spontaneous growth of ZnO thin films from aqueous solutions. Thin Solid Films, 2003, 431-432, 373-377.	0.8	19
72	Determination of the flat band potential for In2S3/electrolyte interfaces. Electrochimica Acta, 1990, 35, 345-349.	2.6	18

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73	Semiconductor CuInSe2 formation by close-spaced selenization processes in vacuum. Vacuum, 2002, 67, 659-664.	1.6	18
74	Low-resistivity Mo thin films prepared by evaporation onto cm glass substrates. Journal of Materials Processing Technology, 2003, 143-144, 144-147.	3.1	18
75	CuInSe2 thin films obtained by a novel electrodeposition and sputtering combined method. Vacuum, 2000, 58, 594-601.	1.6	17
76	Nanocrystalline antimony doped tin oxide (ATO) thin films: A thermal restructuring study. Surface and Coatings Technology, 2012, 211, 37-40.	2.2	17
77	Transparent and conductive electrodes combining AZO and ATO thin films for enhanced light scattering and electrical performance. Applied Surface Science, 2013, 264, 448-452.	3.1	17
78	Interlaboratory indoor ageing of roll-to-roll and spin coated organic photovoltaic devices: Testing the ISOS tests. Polymer Degradation and Stability, 2014, 109, 162-170.	2.7	17
79	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.	1.7	17
80	Chemistry of CdS/CuInSe[sub 2] Structures as Controlled by the CdS Deposition Bath. Journal of the Electrochemical Society, 2001, 148, G602.	1.3	16
81	Transparent and conductive ZnO:Al thin films grown by pulsed magnetron sputtering in current or voltage regulation modes. Vacuum, 2008, 82, 668-672.	1.6	16
82	Optimisation of CdSî—¸TCO bilayers for their application as windows in photovoltaic solar cells. Solar Energy Materials and Solar Cells, 1996, 43, 297-310.	3.0	15
83	Characterisation of CuInS2/ZnSe junctions by XPS and electroreflectance. Thin Solid Films, 2001, 387, 104-107.	0.8	15
84	Simplified modulated evaporation process for the production of CuInS2 films with reduced substrate temperatures. Thin Solid Films, 2009, 517, 2167-2170.	0.8	15
85	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.	1.3	15
86	Annealing of indium sulfide thin films prepared at low temperature by modulated flux deposition. Semiconductor Science and Technology, 2013, 28, 015004.	1.0	15
87	Round robin performance testing of organic photovoltaic devices. Renewable Energy, 2014, 63, 376-387.	4.3	15
88	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.	2.8	15
89	Growth of SnS thin films by co-evaporation and sulfurization for use as absorber layers in solar cells. Materials Chemistry and Physics, 2015, 167, 165-170.	2.0	14
90	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.	1.7	14

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91	TiO2 coatings obtained by reactive sputtering at room temperature: Physical properties as a function of the sputtering pressure and film thickness. Thin Solid Films, 2017, 636, 193-199.	0.8	14
92	Recrystallization and components redistribution processes in electrodeposited CuInSe2 thin films. Thin Solid Films, 2001, 387, 57-59.	0.8	13
93	Growth Mechanism of CBD-In(OH)[sub x]S[sub y] Thin Films. Journal of the Electrochemical Society, 2002, 149, C59.	1.3	13
94	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.	2.7	13
95	Electrical contacts on polyimide substrates for flexible thin film photovoltaic devices. Thin Solid Films, 2003, 431-432, 403-406.	0.8	12
96	Preferential Orientation and Surface Oxidation Control in Reactively Sputter Deposited Nanocrystalline SnO₂:Sb Films: Electrochemical and Optical Results. ECS Journal of Solid State Science and Technology, 2014, 3, N151-N153.	0.9	12
97	New approaches to obtain CuIn1â^'xGaxSe2 thin films by combining electrodeposited and evaporated precursors. Thin Solid Films, 1998, 323, 93-98.	0.8	11
98	Leveling effect of solâ€“gel SiO2 coatings onto metallic foil substrates. Surface and Coatings Technology, 2001, 138, 205-210.	2.2	10
99	CuAlxGa1â^'xSe2 thin films for photovoltaic applications: Structural, electrical and morphological analysis. Materials Research Bulletin, 2012, 47, 2518-2524.	2.7	10
100	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.	2.8	10
101	ITO/ATO bilayer transparent electrodes with enhanced light scattering, thermal stability and electrical conductance. Applied Surface Science, 2016, 384, 45-50.	3.1	10
102	Nanocrystalline copper sulfide and copper selenide thin films with p-type metallic behavior. Journal of Materials Science, 2017, 52, 13886-13896.	1.7	10
103	Arrangement of flexible foil substrates for CuInSe2-based solar cells. Surface and Coatings Technology, 2001, 148, 61-64.	2.2	9
104	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
105	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.	3.1	8
106	SiO2 solâ€“gel-coated conducting substrates for CuInSe2 electrodeposition. Surface and Coatings Technology, 1999, 115, 45-51.	2.2	7
107	Study of CIGS/In(OH)xSy heterojunctions. Thin Solid Films, 2002, 403-404, 339-343.	0.8	7
108	Study of the interface formed between poly(2-methoxy-5-(2â€²-ethyl-hexyloxyl)-p-phenylene vinylene) and indium tin oxide in top emission organic light emitting diodes. Applied Surface Science, 2006, 252, 8388-8393.	3.1	7

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109	Characteristics of stacked CuInS2 and CuGaS2 layers as determined by the growth sequence. Thin Solid Films, 2007, 515, 5917-5920.	0.8	7
110	Improving conductivity and texture in ZnO:Al sputtered thin films by sequential chemical and thermal treatments. Applied Surface Science, 2013, 282, 923-929.	3.1	7
111	Lithium intercalation in sputter deposited antimony-doped tin oxide thin films: Evidence from electrochemical and optical measurements. Journal of Applied Physics, 2014, 115, 153702.	1.1	7
112	Performance of solâ€“gel SiO2 coatings onto glass/SnO2 superstrates. Surface and Coatings Technology, 2000, 132, 31-35.	2.2	6
113	Comparative study of In2S3-ITO bilayers deposited on glass and different plastic substrates. Thin Solid Films, 2009, 517, 2320-2323.	0.8	6
114	Copper oxy-sulfide and copper sulfate thin films as transparent p-type conductive electrodes. Materials Research Bulletin, 2018, 101, 116-122.	2.7	6
115	Transparent and p-type conductive Ni_xO:V thin films obtained by reactive DC sputtering at room temperature. Materials Research Express, 2019, 6, 096410.	0.8	6
116	Morphological investigations on CdS-TCO photovoltaic window layers using atomic force microscopy. Progress in Photovoltaics: Research and Applications, 1996, 4, 439-446.	4.4	5
117	Chemical studies of solar cell structures based on electrodeposited CuInSe2. Solar Energy Materials and Solar Cells, 1999, 58, 219-224.	3.0	5
118	Crystallization of wide-bandgap CuAlSe2 thin films deposited on antimony doped tin oxide substrates. Journal of Alloys and Compounds, 2015, 648, 104-110.	2.8	5
119	Correlation of the near-infrared optical absorption with Cu concentration in coevaporated Cuâ€“Inâ€“S films. Thin Solid Films, 2009, 517, 2260-2263.	0.8	3
120	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.	1.7	3
121	CuAl Ga1â^'Se2 thin films for photovoltaic applications: Optical and compositional analysis. Materials Research Bulletin, 2013, 48, 1082-1087.	2.7	3
122	Characteristics of sequentially evaporated InxGaySez thin films. Journal of Physics and Chemistry of Solids, 2003, 64, 1717-1719.	1.9	2
123	Titanium Incorporation to In2S3 Thin Films for Photovoltaic Applications. Materials Research Society Symposia Proceedings, 2009, 1165, 1.	0.1	2
124	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.	0.8	2
125	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.	0.8	2
126	Photoelectrochemical measurements of amorphous silicon thin films. Electrochimica Acta, 1991, 36, 915-920.	2.6	1

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127	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
128	Zn incorporation and (CuIn)1â^'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.	1.9	1
129	Influence of the annealing temperature on CuAl_xGa_{1â^'x}Se₂ thin films obtained by selenization. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1467-1474.	0.8	1
130	Optical characterization procedure for large thin films. , 2007, 6617, 312.		0