Klaus Ellmer

List of Publications by Year
in descending order

52	3,906	279798 23	182427 51
papers	citations	h-index	g-index

54	54	54	5925
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Past achievements and future challenges in the development of optically transparent electrodes. Nature Photonics, 2012, 6, 809-817.	31.4	1,688
2	Magnetron sputtering of transparent conductive zinc oxide: relation between the sputtering parameters and the electronic properties. Journal Physics D: Applied Physics, 2000, 33, R17-R32.	2.8	527
3	Carrier transport in polycrystalline transparent conductive oxides: A comparative study of zinc oxide and indium oxide. Thin Solid Films, 2008, 516, 4620-4627.	1.8	321
4	Carrier transport in polycrystalline ITO and ZnO:Al II: The influence of grain barriers and boundaries. Thin Solid Films, 2008, 516, 5829-5835.	1.8	164
5	Intrinsic and extrinsic doping of ZnO and ZnO alloys. Journal Physics D: Applied Physics, 2016, 49, 413002.	2.8	146
6	Reactive magnetron sputtering of transparent conductive oxide thin films: Role of energetic particle (ion) bombardment. Journal of Materials Research, 2012, 27, 765-779.	2.6	115
7	Electrical transport parameters of heavily-doped zinc oxide and zinc magnesium oxide single and multilayer films heteroepitaxially grown on oxide single crystals. Thin Solid Films, 2006, 496, 104-111.	1.8	72
8	The impact of negative oxygen ion bombardment on electronic and structural properties of magnetron sputtered ZnO:Al films. Applied Physics Letters, 2013, 102, .	3.3	63
9	Analytical model of electron transport in polycrystalline, degenerately doped ZnO films. Journal of Applied Physics, 2014, 116, .	2.5	50
10	BiVO4 photoanodes for water splitting with high injection efficiency, deposited by reactive magnetron co-sputtering. AIP Advances, 2016, 6, .	1.3	45
11	Reactive magnetron sputtering of Nb-doped TiO2 films: Relationships between structure, composition and electrical properties. Thin Solid Films, 2016, 605, 44-52.	1.8	44
12	Negative oxygen ion formation in reactive magnetron sputtering processes for transparent conductive oxides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, .	2.1	41
13	Reactive magnetron sputtering of CuInS2 absorbers for thin film solar cells: Problems and prospects. Thin Solid Films, 2009, 517, 3143-3147.	1.8	39
14	Highly (001)-textured p-type WSe2 Thin Films as Efficient Large-Area Photocathodes for Solar Hydrogen Evolution. Scientific Reports, 2017, 7, 16003.	3.3	39
15	Energy-Band Alignment of BiVO₄ from Photoelectron Spectroscopy of Solid-State Interfaces. Journal of Physical Chemistry C, 2018, 122, 20861-20870.	3.1	38
16	The influence of the target age on laterally resolved ion distributions in reactive planar magnetron sputtering. Surface and Coatings Technology, 2011, 205, S294-S298.	4.8	35
17	A comparative study of electronic and structural properties of polycrystalline and epitaxial magnetron-sputtered ZnO:Al and Zn1-xMgxO:Al Filmsâ€”Origin of the grain barrier traps. Journal of Applied Physics, 2013, 114, .	2.5	35
18	Efficient charge transfer at a homogeneously distributed (NH₄)₂Mo₃S₁₃/WSe₂ heterojunction for solar hydrogen evolution. Journal of Materials Chemistry A, 2019, 7, 10769-10780.	10.3	35

#	ARTICLE	IF	CITATIONS
19	Elucidating the Pulsed Laser Deposition Process of BiVO₄ Photoelectrodes for Solar Water Splitting. Journal of Physical Chemistry C, 2020, 124, 4438-4447.	3.1	35
20	The correlation between the radial distribution of high-energetic ions and the structural as well as electrical properties of magnetron sputtered ZnO:Al films. Journal of Applied Physics, 2013, 114, .	2.5	28
21	In Situ Structural Study of MnP_i-Modified BiVO₄ Photoanodes by Soft X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 19668-19676.	3.1	26
22	Influence of the deposition temperature on electronic transport and structural properties of radio frequency magnetron-sputtered Zn_{1-x}Mg_xO:Al and ZnO:Al films. Journal of Materials Research, 2012, 27, 2249-2256.	2.6	25
23	Comparison of ion energies and fluxes at the substrate during magnetron sputtering of ZnOâ€‰:â€‰Al for dc and rf discharges. Journal Physics D: Applied Physics, 2013, 46, 315202.	2.8	25
24	Preparation of highly (001)-oriented photoactive tungsten diselenide (WSe₂) films by an amorphous solid-liquid-crystalline solid (aSLcS) rapid-crystallization process. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2013-2019.	1.8	22
25	Passivation of recombination active PdSex centers in (001)-textured photoactive WSe2 films. Materials Science in Semiconductor Processing, 2019, 93, 284-289.	4.0	20
26	Voltage bias dependency of the space charge capacitance of wet chemically grown ZnO nanorods employed in a dye sensitized photovoltaic cell. Thin Solid Films, 2008, 516, 7139-7143.	1.8	19
27	Research Update: Inhomogeneous aluminium dopant distribution in magnetron sputtered ZnO:Al thin films and its influence on their electrical properties. APL Materials, 2015, 3, .	5.1	17
28	Thin film transition metal dichalcogenide photoelectrodes for solar hydrogen evolution: a review. Journal of Materials Chemistry A, 2022, 10, 9327-9347.	10.3	16
29	Metalâ€sulfide assisted rapid crystallization of highly (001)â€textured tungsten disulphide (WS₂) films on metallic back contacts. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 317-322.	1.8	15
30	Growth and morphology of thin Cu(In,Ga)S2 films during reactive magnetron co-sputtering. Thin Solid Films, 2013, 536, 172-178.	1.8	14
31	Evaluation of Pt, Rh, SnO2, (NH4)2Mo3S13, BaSO4 protection coatings on WSe2 photocathodes for solar hydrogen evolution. International Journal of Hydrogen Energy, 2020, 45, 19112-19120.	7.1	14
32	Negative ions in reactive magnetron sputtering. Vakuum in Forschung Und Praxis, 2013, 25, 52-56.	0.1	13
33	Microstructure evolution of Al-doped zinc oxide and Sn-doped indium oxide deposited by radio-frequency magnetron sputtering: A comparison. Journal of Applied Physics, 2015, 117, 155301.	2.5	13
34	Niobiumâ€doped TiO₂ films as window layer for chalcopyrite solar cells. Physica Status Solidi (B): Basic Research, 2008, 245, 1849-1857.	1.5	11
35	Electrical and Optical Properties of Amorphous SnO2:Ta Films, Prepared by DC and RF Magnetron Sputtering: A Systematic Study of the Influence of the Type of the Reactive Gas. Coatings, 2020, 10, 204.	2.6	11
36	Ruthenium sulphide thin layers as catalysts for the electrooxidation of water. Physical Chemistry Chemical Physics, 2013, 15, 1452-1459.	2.8	10

#	Article	IF	Citations
37	Defect analysis by transmission electron microscopy of epitaxial Al-doped ZnO films grown on (0001) ZnO and <i>a</i>-sapphire by RF magnetron sputtering. Journal of Applied Physics, 2016, 120, .	2.5	10
38	Evidence for the AlZn-Oi defect-complex model for magnetron-sputtered aluminum-doped zinc oxide: A combined X-ray absorption near edge spectroscopy, X-ray diffraction and electronic transport study. Journal of Applied Physics, 2019, 126, 045106.	2.5	10
39	A combined sensor for the diagnostics of plasma and film properties in magnetron sputtering processes. Thin Solid Films, 2012, 520, 6429-6433.	1.8	8
40	Morphology and structure evolution of tin-doped indium oxide thin films deposited by radio-frequency magnetron sputtering: The role of the sputtering atmosphere. Journal of Applied Physics, 2014, 115, .	2.5	7
41	Toward efficient Cu(In,Ga)Se₂ solar cells prepared by reactive magnetron coâ€sputtering from metallic targets in an Ar:H₂Se atmosphere. Progress in Photovoltaics: Research and Applications, 2015, 23, 1793-1805.	8.1	5
42	Energy-Dependent RBS Channelling Analysis of Epitaxial ZnO Layers Grown on ZnO by RF-Magnetron Sputtering. Crystals, 2019, 9, 290.	2.2	5
43	Nucleation and phase formation during reactive magnetron co-sputtering of Cu(In,Ga)S2 films, investigated by in situ EDXRD. Journal of Crystal Growth, 2013, 384, 114-121.	1.5	4
44	Reactive magnetron co-sputtering of Cu(In,Ga)Se 2 absorber layers by a 2-stage process: Role of substrate type and Na-doping. Thin Solid Films, 2015, 582, 95-99.	1.8	4
45	A multifunctional plasma and deposition sensor for the characterization of plasma sources for film deposition and etching. Journal of Applied Physics, 2017, 122, 044503.	2.5	4
46	An energy-dispersive X-ray diffraction study of the nickel-sulfide assisted growth of RuS2 thin films by reactive magnetron sputtering. Journal of Crystal Growth, 2013, 363, 277-281.	1.5	3
47	Morphology and structure evolution of Cu(In,Ga)S2 films deposited by reactive magnetron co-sputtering with electron cyclotron resonance plasma assistance. Journal of Applied Physics, 2014, 115, 084902.	2.5	3
48	Analysis of the early stages of the rapid, nickel-assisted crystallization of WS2 films. Journal of Applied Physics, 2016, 120, 165307.	2.5	3
49	Preface: phys. stat. sol. (b) 245/9. Physica Status Solidi (B): Basic Research, 2008, 245, 1741-1742.	1.5	1
50	Laudatio for Professor Helmut Tributsch. Physica Status Solidi (B): Basic Research, 2008, 245, 1743-1744.	1.5	1
51	Observation of the Magnetic Separatrix Between a Magnetron and an Electron-Cyclotron Resonance Discharge. IEEE Transactions on Plasma Science, 2011, 39, 2464-2465.	1.3	0
52	Voltage-controlled reactive magnetron sputtering of Nb-doped TiO2 films: electrical and optical properties. MRS Advances, 2016, 1, 3139-3144.	0.9	0