

# Carsten Bundesmann

## List of Publications by Year in descending order

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61  
papers

2,879  
citations

331259

21  
h-index

168136

53  
g-index

63  
all docs

63  
docs citations

63  
times ranked

3374  
citing authors

#	ARTICLE	IF	CITATIONS
1	High electron mobility of epitaxial ZnO thin films on c-plane sapphire grown by multistep pulsed-laser deposition. Applied Physics Letters, 2003, 82, 3901-3903.	1.5	596
2	Raman scattering in ZnO thin films doped with Fe, Sb, Al, Ga, and Li. Applied Physics Letters, 2003, 83, 1974-1976.	1.5	595
3	Infrared dielectric functions and phonon modes of high-quality ZnO films. Journal of Applied Physics, 2003, 93, 126-133.	1.1	590
4	Optical and electrical properties of epitaxial (Mg,Cd) <sub>x</sub> Zn <sub>1-x</sub> O, ZnO, and ZnO:(Ga,Al) thin films on c-plane sapphire grown by pulsed laser deposition. Solid-State Electronics, 2003, 47, 2205-2209.	0.8	140
5	Infrared optical properties of Mg <sub>x</sub> Zn <sub>1-x</sub> O thin films (0 ≤ x ≤ 1): Long-wavelength optical phonons and dielectric constants. Journal of Applied Physics, 2006, 99, 113504.	1.1	82
6	Infrared dielectric functions and phonon modes of wurtzite Mg <sub>x</sub> Zn <sub>1-x</sub> O (x = 0.2). Applied Physics Letters, 2002, 81, 2376-2378.	1.5	65
7	Tutorial: The systematics of ion beam sputtering for deposition of thin films with tailored properties. Journal of Applied Physics, 2018, 124, .	1.1	60
8	Optical and Structural Characteristics of Virtually Unstrained Bulk-Like GaN. Japanese Journal of Applied Physics, 2004, 43, 1264-1268.	0.8	37
9	Systematic investigation of the properties of TiO <sub>2</sub> films grown by reactive ion beam sputter deposition. Applied Surface Science, 2017, 421, 331-340.	3.1	37
10	Optical Properties of ZnO and Related Compounds. Springer Series in Materials Science, 2008, , 79-124.	0.4	34
11	Ion beam sputtering of Ag – Angular and energetic distributions of sputtered and scattered particles. Nuclear Instruments & Methods in Physics Research B, 2013, 316, 198-204.	0.6	33
12	Infrared dielectric functions and crystal orientation of a-plane ZnO thin films on r-plane sapphire determined by generalized ellipsometry. Thin Solid Films, 2004, 455-456, 161-166.	0.8	32
13	Stress relaxation and optical characterization of TiO <sub>2</sub> and SiO <sub>2</sub> films grown by dual ion beam deposition. Thin Solid Films, 2008, 516, 8604-8608.	0.8	30
14	Infrared dielectric function and phonon modes of Mg-rich cubic Mg <sub>x</sub> Zn <sub>1-x</sub> O (x = 0.67) thin films on sapphire (0001). Applied Physics Letters, 2004, 85, 905-907.	1.5	29
15	Ion beam sputtering of germanium – Energy and angular distribution of sputtered and scattered particles. Nuclear Instruments & Methods in Physics Research B, 2014, 334, 88-95.	0.6	28
16	Systematic investigations of low energy Ar ion beam sputtering of Si and Ag. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 137-142.	0.6	26
17	Low temperature photoluminescence and infrared dielectric functions of pulsed laser deposited ZnO thin films on silicon. Thin Solid Films, 2006, 496, 234-239.	0.8	25
18	Energy Distribution of Secondary Particles in Ion Beam Deposition Process of Ag: Experiment, Calculation and Simulation. Contributions To Plasma Physics, 2015, 55, 737-746.	0.5	25

#	ARTICLE	IF	CITATIONS
19	Ion beam sputtering of Ti: Influence of process parameters on angular and energy distribution of sputtered and backscattered particles. Nuclear Instruments & Methods in Physics Research B, 2016, 385, 30-39.	0.6	23
20	Sputter yields of Mo, Ti, W, Al, Ag under xenon ion incidence. European Physical Journal D, 2011, 61, 587-592.	0.6	22
21	Ion beam sputter deposition of Ge films: Influence of process parameters on film properties. Thin Solid Films, 2015, 589, 487-492.	0.8	22
22	Infrared ellipsometry characterization of conducting thin organic films. Thin Solid Films, 2004, 455-456, 295-300.	0.8	21
23	Carrier redistribution in organic/inorganic (poly(3,4-ethylenedioxy) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 587 Td (thiophene/poly) Applied Physics Letters, 2004, 84, 1311-1313.	1.5	20
24	Ion beam sputter deposition of Ag films: Influence of process parameters on electrical and optical properties, and average grain sizes. Thin Solid Films, 2014, 551, 46-52.	0.8	19
25	Infrared dielectric function and vibrational modes of pentacene thin films. Applied Physics Letters, 2004, 84, 200-202.	1.5	18
26	Infrared ellipsometry and Raman studies of hexagonal InN films: correlation between strain and vibrational properties. Superlattices and Microstructures, 2004, 36, 573-580.	1.4	16
27	Electronic transitions and dielectric function tensor of a $\text{YMnO}_3$ single crystal in the NIR-VUV spectral range. RSC Advances, 2014, 4, 33549-33554.	1.7	15
28	Reactive ion beam sputtering of Ti: Influence of process parameters on angular and energy distribution of sputtered and backscattered particles. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, 041001.	0.9	15
29	Systematic investigation of the reactive ion beam sputter deposition process of $\text{SiO}_2$ . European Physical Journal B, 2018, 91, 1.	0.6	15
30	Ion beam sputtering of silicon: Energy distributions of sputtered and scattered ions. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	0.9	15
31	Reactive Ar ion beam sputter deposition of $\text{TiO}_2$ films: Influence of process parameters on film properties. Nuclear Instruments & Methods in Physics Research B, 2017, 395, 17-23.	0.6	14
32	Micro-Raman scattering profiling studies on HVPE-grown free-standing GaN. Physica Status Solidi A, 2004, 201, 2773-2776.	1.7	12
33	An advanced electric propulsion diagnostic (AEPD) platform for in-situ characterization of electric propulsion thrusters and ion beam sources. European Physical Journal D, 2016, 70, 1.	0.6	12
34	Correlation of process parameters and properties of $\text{TiO}_2$ films grown by ion beam sputter deposition from a ceramic target. European Physical Journal B, 2017, 90, 1.	0.6	12
35	In Situ Thermal Characterization of the Accelerator Grid of an Ion Thruster. Journal of Propulsion and Power, 2011, 27, 532-537.	1.3	10
36	Photochemical preparation of aluminium oxide layers via vacuum ultraviolet irradiation of a polymeric hexanoato aluminium complex. Materials Chemistry and Physics, 2013, 137, 1046-1052.	2.0	10

#	ARTICLE	IF	CITATIONS
37	Ion beam sputter deposition of TiO <sub>2</sub> films using oxygen ions. European Physical Journal B, 2018, 91, 1.	0.6	10
38	Secondary particle properties for the ion beam sputtering of TiO <sub>2</sub> in a reactive oxygen atmosphere. Applied Surface Science, 2019, 485, 391-401.	3.1	10
39	Titanium 3d ferromagnetism with perpendicular anisotropy in defective anatase. Physical Review B, 2020, 101, .	1.1	10
40	Note: An advanced in situ diagnostic system for characterization of electric propulsion thrusters and ion beam sources. Review of Scientific Instruments, 2010, 81, 046106.	0.6	9
41	An extended Drude model for the in-situ spectroscopic ellipsometry analysis of ZnO thin layers and surface modifications. Thin Solid Films, 2014, 571, 437-441.	0.8	9
42	Dielectric constants and phonon modes of amorphous hafnium aluminate deposited by metal organic chemical vapor deposition. Applied Physics Letters, 2007, 91, 121916.	1.5	8
43	Properties of secondary particles for the reactive ion beam sputtering of Ti and TiO <sub>2</sub> using oxygen ions. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	0.9	7
44	Properties of indium tin oxide thin films grown by Ar ion beam sputter deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 033406.	0.9	7
45	Modelling of a radio frequency plasma bridge neutralizer (RFPBN). Procedia Engineering, 2017, 185, 9-16.	1.2	6
46	Properties of secondary particles for ion beam sputtering of silicon using low-energy oxygen ions. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 033011.	0.9	6
47	Single- and two-photon absorption laser-induced fluorescence spectroscopy in rare gases for gridded ion thruster diagnostics. EPJ Techniques and Instrumentation, 2022, 9, .	0.5	6
48	Toward a systematic discovery of artificial functional magnetic materials. Physical Review B, 2021, 104, .	1.1	5
49	Roughness and damage of a GaAs surface after chemically assisted ion beam etching with Cl <sub>2</sub> /Ar <sup>+</sup> . Microelectronic Engineering, 2005, 78-79, 457-463.	1.1	4
50	Properties of secondary ions in ion beam sputtering of Ga <sub>2</sub> O <sub>3</sub> . Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	4
51	In situ erosion measurement tools for electric propulsion thrusters: triangular laser head and telemicroscope. EPJ Techniques and Instrumentation, 2022, 9, .	0.5	4
52	Advanced Electric Propulsion Diagnostic Tools at IOM. Procedia Engineering, 2017, 185, 1-8.	1.2	3
53	Energy distributions of secondary ions for the Ar ion beam sputtering of indium tin oxide. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2020, 38, 064002.	0.6	3
54	Ion beam sputter deposition of $\text{SiO}_2$ thin films using oxygen ions. European Physical Journal B, 2022, 95, 1.	0.6	3

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55	Combined Raman scattering, X-ray fluorescence and ellipsometry in-situ growth monitoring of CuInSe <sub>2</sub> -based photoabsorber layers on polyimide substrates. AIP Conference Proceedings, 2005, , .	0.3	2
56	Investigation of the free charge carrier properties at the ZnO/sapphire interface in a-plane ZnO films studied by generalized infrared ellipsometry. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1350-1353.	0.8	2
57	Properties of gallium oxide thin films grown by ion beam sputter deposition at room temperature. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	2
58	Large area precision optical coatings by pulse magnetron sputtering. Proceedings of SPIE, 2017, , .	0.8	1
59	Two-Photon Laser-Induced Fluorescence in a Radiofrequency Ion Thruster Plume in Krypton. Journal of Propulsion and Power, 2019, 35, 1175-1178.	1.3	1
60	Laser-Induced Fluorescence in the Plume of a Radiofrequency Ion Thruster: Measurements and Excitation Schemes. , 2019, , .		1
61	Automatic spike correction using UNIFIT 2020. Surface and Interface Analysis, 2019, 51, 1342-1350.	0.8	1