

Joerg Hermann

List of Publications by Year in descending order

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papers

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citations

101543

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144013

57
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130
all docs

130
docs citations

130
times ranked

2330
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantification of surface contamination on optical glass via sensitivity-improved calibration-free laser-induced breakdown spectroscopy. Applied Surface Science, 2021, 537, 147984.	6.1	24
2	Echelle spectrometer calibration by means of laser plasma. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 178, 106144.	2.9	7
3	Three-dimensional luminescence microscopy for quantitative plasma characterization in bulk semiconductors. Applied Physics Letters, 2021, 119, .	3.3	9
4	Measurement error due to self-absorption in calibration-free laser-induced breakdown spectroscopy. Analytica Chimica Acta, 2021, 1185, 339070.	5.4	12
5	Laser-induced breakdown self-reversal isotopic spectrometry for isotopic analysis of lithium. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2020, 168, 105868.	2.9	10
6	Analysis of Multi-elemental Thin Films via Calibration-Free Laser-Induced Breakdown Spectroscopy. Analytical Chemistry, 2019, 91, 2544-2550.	6.5	36
7	Optical Detection of Deuterium in Heavy Water: Towards Remote Detection of Tritium. , 2019, , .		0
8	Evaluation of pressure in a plasma produced by laser ablation of steel. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 143, 63-70.	2.9	18
9	Local thermodynamic equilibrium in a laser-induced plasma evidenced by blackbody radiation. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 144, 82-86.	2.9	20
10	Two-step procedure for trace element analysis in food via calibration-free laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 150, 77-85.	2.9	31
11	Isotopic analysis of deuterated water via single- and double-pulse laser-induced breakdown spectroscopy. Physics of Plasmas, 2018, 25, .	1.9	12
12	Laser-induced plasma emission: from atomic to molecular spectra. Journal Physics D: Applied Physics, 2017, 50, 183002.	2.8	110
13	Compositional Analysis of Drugs by Laser-Induced Breakdown Spectroscopy. Journal of Applied Spectroscopy, 2017, 84, 472-477.	0.7	7
14	Ideal radiation source for plasma spectroscopy generated by laser ablation. Physical Review E, 2017, 96, 053210.	2.1	35
15	Investigation of nonuniform surface properties of classically manufactured fused silica windows. Applied Optics, 2017, 56, 7427.	1.8	14
16	Fs Laser-Induced Plasmas from Energetic Polymers: Towards Micro-Laser Plasma Thruster Application. Plasma Processes and Polymers, 2016, 13, 611-622.	3.0	8
17	Compositional Analysis of Aerosols Using Calibration-Free Laser-Induced Breakdown Spectroscopy. Analytical Chemistry, 2016, 88, 4029-4035.	6.5	27
18	Stark broadening measurements in plasmas produced by laser ablation of hydrogen containing compounds. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2016, 122, 118-126.	2.9	40

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19	Simulation of emission spectra from nonuniform reactive laser-induced plasmas. <i>Physical Review E</i> , 2015, 92, 053103.	2.1	52
20	Time-resolved spatial distribution of plasma in the ablation of a Ba _{0.6} Sr _{0.4} TiO ₃ target by 25-ns KrF ultraviolet laser. <i>Journal of Applied Physics</i> , 2014, 116, 133303.	2.5	3
21	Accurate analysis of indium-zinc oxide thin films via laser-induced breakdown spectroscopy based on plasma modeling. <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 553.	3.0	29
22	Stark broadening measurement of Al II lines in a laser-induced plasma. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014, 133, 652-662.	2.3	40
23	Comparative investigation of laser ablation plumes in air and argon by analysis of spectral line shapes: Insights on calibration-free laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 100, 189-196.	2.9	37
24	Quantitative analyses of glass via laser-induced breakdown spectroscopy in argon. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 101, 32-45.	2.9	56
25	Quantitative analysis of amorphous indium zinc oxide thin films synthesized by Combinatorial Pulsed Laser Deposition. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 117, 229-236.	2.3	5
26	Diagnostics of nonuniform plasmas for elemental analysis via laser-induced breakdown spectroscopy: demonstration on carbon-based materials. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 1446.	3.0	30
27	Accumulation of air in polymeric materials investigated by laser-induced breakdown spectroscopy. <i>Journal of Applied Physics</i> , 2012, 111, 063108.	2.5	5
28	Properties of plasmas produced by short double pulse laser ablation of metals. <i>Journal of Physics: Conference Series</i> , 2012, 399, 012006.	0.4	6
29	In Situ Tritium Measurements and Control by Laser Techniques. <i>Fusion Science and Technology</i> , 2011, 60, 1049-1052.	1.1	9
30	Analysis of deposited layers on plasma facing components by laser-induced breakdown spectroscopy: Towards ITER tritium inventory diagnostics. <i>Journal of Nuclear Materials</i> , 2011, 415, S1187-S1190.	2.7	30
31	Investigation of plasmas produced by laser ablation using single and double pulses for food analysis demonstrated by probing potato skins. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 400, 2173-2183.	3.7	31
32	In-depth analysis of ITER-like samples composition using laser-induced breakdown spectroscopy. <i>Journal of Nuclear Materials</i> , 2011, 414, 485-491.	2.7	40
33	Analysis of indium zinc oxide thin films by laser-induced breakdown spectroscopy. <i>Journal of Applied Physics</i> , 2011, 110, .	2.5	16
34	Probing electron-phonon coupling in metals via observations of ablation plumes produced by two delayed short laser pulses. <i>Applied Physics Letters</i> , 2011, 99, 081502.	3.3	14
35	On the stoichiometry of mass transfer from solid to plasma during pulsed laser ablation of brass. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2010, 65, 636-641.	2.9	29
36	Plume segregation observed in hydrogen and deuterium containing plasmas produced by laser ablation of carbon fiber tiles from a fusion reactor. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2010, 65, 715-720.	2.9	42

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37	Evaluation of minor element concentrations in potatoes using laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 727-733.	2.9	62
38	Dynamical plasma study during CaCu ₃ Ti ₄ O ₁₂ and Ba _{0.6} Sr _{0.4} TiO ₃ pulsed laser deposition by local thermodynamic equilibrium modelling. Journal Physics D: Applied Physics, 2010, 43, 285202.	2.8	4
39	Laser Applications for Nanotechnology : Insights From Numerical Modeling. AIP Conference Proceedings, 2010, , .	0.4	7
40	Reducing nanoparticles in metal ablation plumes produced by two delayed short laser pulses. Applied Physics Letters, 2009, 94, .	3.3	75
41	On the possibility of tritium measurement in a tokamak by a laser technique. , 2009, , .		0
42	Subpicosecond laser ablation of copper and fused silica: Initiation threshold and plasma expansion. Applied Surface Science, 2009, 255, 9734-9737.	6.1	29
43	Investigation of plumes produced by material ablation with two time-delayed femtosecond laser pulses. Applied Surface Science, 2009, 255, 9738-9741.	6.1	19
44	Correlation between ablation efficiency and nanoparticle generation during the short-pulse laser ablation of metals. Laser Physics, 2008, 18, 374-379.	1.2	60
45	Organic and inorganic materials analysis by laser-induced breakdown spectroscopy. Proceedings of SPIE, 2008, , .	0.8	0
46	Correlation between plasma expansion and damage threshold by femtosecond laser ablation of fused silica. Journal Physics D: Applied Physics, 2008, 41, 105216.	2.8	19
47	Formation of nanoparticles by short and ultra-short laser pulses. Proceedings of SPIE, 2008, , .	0.8	1
48	Mechanisms of nanoparticle formation by short laser pulses. , 2007, , .		2
49	<title>Influence of irradiation conditions on plume expansion induced by femtosecond laser ablation of gold and copper</title>. , 2007, , .		2
50	Mechanisms of small clusters production by short and ultra-short laser ablation. Applied Surface Science, 2007, 253, 7656-7661.	6.1	83
51	Investigation of nanoparticle generation during femtosecond laser ablation of metals. Applied Surface Science, 2007, 253, 6310-6315.	6.1	155
52	Micromachining of semiconductor by femtosecond laser for integrated circuit defect analysis. Applied Surface Science, 2007, 254, 911-915.	6.1	15
53	Comparative investigation of solar cell thin film processing using nanosecond and femtosecond lasers. Journal Physics D: Applied Physics, 2006, 39, 453-460.	2.8	118
54	<title>Laser-induced forward transfer of 40 nm Chromium film using ultrashort laser pulses</title>. , 2006, , .		2

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55	Experimental study of front and back ablation of metal thin film using ultrashort laser pulses. , 2006, , .		2
56	Selective ablation of thin films with short and ultrashort laser pulses. Applied Surface Science, 2006, 252, 4814-4818.	6.1	77
57	Ultra-fast laser ablation applied to deep-drilling of metals. Applied Surface Science, 2005, 248, 299-303.	6.1	50
58	Laser processing of hardmetals: Physical basics and applications. International Journal of Refractory Metals and Hard Materials, 2005, 23, 278-286.	3.8	70
59	Magnetic Carbon Cluster Formation Process: Optical Spectroscopy of Laser-Ablated Carbon Plume. AIP Conference Proceedings, 2005, , .	0.4	0
60	Investigation of nanoparticle formation in a plasma produced by femtosecond laser ablation of gold. AIP Conference Proceedings, 2005, , .	0.4	3
61	Plasma analyses during femtosecond laser ablation of Ti, Zr, and Hf. Journal of Applied Physics, 2005, 97, 063306.	2.5	81
62	CaractÃ©risation du plasma gÃ©nÃ©rÃ© lors de l'ablation laser de Ti, Zr et Hf en rÃ©gime femtoseconde. European Physical Journal Special Topics, 2005, 127, 199-204.	0.2	2
63	Generation of absorption waves by CO2 laser pulses at low power density. Journal of Applied Physics, 2004, 96, 3084-3094.	2.5	14
64	Modeling of metal ablation induced by ultrashort laser pulses. Thin Solid Films, 2004, 453-454, 513-517.	1.8	24
65	Spectroscopic analysis of femtosecond laser-induced gas breakdown. Thin Solid Films, 2004, 453-454, 377-382.	1.8	15
66	Femtosecond laser ablation of cemented carbides: properties and tribological applications. Applied Physics A: Materials Science and Processing, 2004, 79, 629-632.	2.3	35
67	Femtosecond laser ablation of diamond-like carbon films. Applied Surface Science, 2004, 222, 226-233.	6.1	60
68	<title>Analyses of femtosecond laser ablation of Ti, Zr, and Hf</title>. , 2004, , .		1
69	<title>Spectroscopic analyses during femtosecond laser ablation of hydroxyapatite</title>. , 2004, , .		0
70	Femtosecond ablation applied to deep-drilling of hard metals. , 2004, , .		0
71	Metallographical analysis of steel and hard metal substrates after deep-drilling with femtosecond laser pulses. Applied Surface Science, 2003, 208-209, 181-188.	6.1	18
72	Combined continuousâ€“microscopic modeling of laser plume expansion. Applied Surface Science, 2003, 208-209, 27-32.	6.1	40

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73	Laser treatment of tribological DLC films. Diamond and Related Materials, 2003, 12, 1034-1040.	3.9	87
74	<title>Structure changes in steels and hard metal induced by nanosecond and femtosecond laser processing</title>. , 2003, , .		0
75	Laser surface microstructuring to improve tribological systems. , 2003, , .		4
76	<title>Femtosecond laser ablation of materials</title>. , 2003, , .		5
77	Ablation de matÃ©riaux par laser femtoseconde. European Physical Journal Special Topics, 2003, 108, 41-44.	0.2	0
78	Ã©tude des processus physico-chimiques dans un plasma produit par ablation laser pour la croissance de couches minces. European Physical Journal Special Topics, 2003, 108, 59-59.	0.2	0
79	Ablation d'un film d'or par laser Ã©xcimer. European Physical Journal Special Topics, 2003, 108, 45-48.	0.2	0
80	<title>Analysis of gas-phase reactions during pulsed laser ablation using laser-induced fluorescence, absorption, and emission spectroscopy</title>. , 2002, , .		0
81	<title>Laser-induced explosive boiling during nanosecond laser ablation of silicon</title>. , 2002, , .		1
82	Local thermal equilibrium plasma modeling for analyses of gas-phase reactions during reactive-laser ablation. Journal of Applied Physics, 2002, 91, 10188.	2.5	48
83	Laser-generated plasma plume expansion: Combined continuous-microscopic modeling. Physical Review E, 2002, 66, 066406.	2.1	190
84	Laser-induced explosive boiling during nanosecond laser ablation of silicon. Applied Surface Science, 2002, 186, 288-292.	6.1	96
85	Laser-induced fluorescence probing during pulsed-laser ablation for three-dimensional number density mapping of plasma species. Journal Physics D: Applied Physics, 2002, 35, 1458-1458.	2.8	0
86	Laser-induced fluorescence probing during pulsed-laser ablation for three-dimensional number density mapping of plasma species. Journal Physics D: Applied Physics, 2001, 34, 3356-3363.	2.8	40
87	Analyses of the TiO- ⁺ system for temperature measurements in a laser-induced plasma. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 153-164.	1.5	17
88	Detection of boron nitride radicals by emission spectroscopy in a laser-induced plasma. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 629-635.	2.9	10
89	Investigation of silicon oxide emission spectra observed in a pulsed discharge and a laser-induced plasma. Journal of Physics B: Atomic, Molecular and Optical Physics, 2001, 34, 1917-1927.	1.5	17
90	A study of molecule formation during laser ablation of graphite in low-pressure ammonia. Journal Physics D: Applied Physics, 1999, 32, 518-528.	2.8	19

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91	Analyses of gas-phase reactions during reactive laser ablation using emission spectroscopy. Journal Physics D: Applied Physics, 1999, 32, 2707-2713.	2.8	39
92	Theoretical modelling of phenomena in the pulsed-laser deposition process: Application to Ti targets ablation in low-pressure N ₂ . Journal of Applied Physics, 1999, 86, 6096-6106.	2.5	31
93	Étude de la formation de molécules lors de l'ablation laser de graphite en présence d'ammoniac. European Physical Journal Special Topics, 1999, 09, Pr5-147-Pr5-148.	0.2	0
94	Excimer laser synthesis of thin AlN coatings. Applied Surface Science, 1998, 125, 137-148.	6.1	16
95	A spectroscopic study of laser ablation plasmas from Ti, Al and C targets. Applied Surface Science, 1998, 127-129, 645-649.	6.1	30
96	Diagnostics of the early phase of an ultraviolet laser induced plasma by spectral line analysis considering self-absorption. Journal of Applied Physics, 1998, 83, 691-696.	2.5	141
97	Subsurface boiling during pulsed laser ablation of Ge. Physical Review B, 1998, 58, 6787-6790.	3.2	39
98	A study of molecule formation during laser ablation of graphite in low-pressure nitrogen. Journal Physics D: Applied Physics, 1998, 31, 1263-1272.	2.8	129
99	<title>Plasma study in laser ablation process for deposition</title>. , 1998, , .		0
100	Surface nitriding of titanium and aluminium by laser-induced plasma. Surface and Coatings Technology, 1997, 97, 448-452.	4.8	46
101	Étude de la propagation du plasma produit par ablation laser pour différentes cibles, dans le vide et dans différents gaz ambiants. Annales De Physique, 1997, 22, C1-133-C1-134.	0.2	0
102	Metal surface nitriding by laser induced plasma. Journal of Applied Physics, 1996, 80, 4673-4684.	2.5	36
103	Growth of apatite films by laser ablation: Reduction of the droplet areal density. Journal of Applied Physics, 1996, 80, 1803-1808.	2.5	55
104	Laser ablation in a reactive atmosphere: application to the synthesis and deposition performance of titanium carbide thin films. Optical Engineering, 1996, 35, 1652.	1.0	2
105	The study of a crater forming on the surface of a Ti target submitted to multipulse excimer laser irradiation under low pressure N ₂ . Journal of Modern Optics, 1996, 43, 1773-1784.	1.3	8
106	Formation of dense submicronic clouds in low pressure Ar-SiH ₄ RF reactor: Diagnostics and growth processes from monomers to large size particulates. Pure and Applied Chemistry, 1996, 68, 1121-1126.	1.9	24
107	Direct Synthesis of Metal Nitride by Laser. , 1996, , 629-636.		0
108	Plasma diagnostics in pulsed laser TiN layer deposition. Journal of Applied Physics, 1995, 77, 2928-2936.	2.5	116

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109	Direct carbide synthesis by multipulse excimer laser treatment of Ti samples in ambient CH ₄ gas at superatmospheric pressure. Journal of Applied Physics, 1994, 75, 5286-5294.	2.5	33
110	TiN layer synthesis by laser-plasma. Thin Solid Films, 1994, 241, 39-43.	1.8	9
111	Spectroscopic studies of XeCl-laser-induced plasma on Ti targets in nitrogen containing atmospheres. Applied Physics A: Solids and Surfaces, 1994, 58, 595-599.	1.4	5
112	Study of initial dust formation in an Ar-SiH ₄ discharge by laser induced particle explosive evaporation. Journal of Applied Physics, 1994, 76, 148-153.	2.5	120
113	Direct synthesis of metal nitride by CO ₂ or XeCl laser plasma. , 1994, , .		1
114	Direct synthesis of titanium nitride on Ti sample surface by laser-plasma. Annales De Physique, 1994, 19, C1-277-C1-284.	0.2	1
115	Direct synthesis of titanium nitride by laser-plasma. European Physical Journal Special Topics, 1994, 04, C4-55-C4-58.	0.2	1
116	Basic study of plasma plume for film deposition by reactive laser ablation. European Physical Journal Special Topics, 1994, 04, C4-123-C4-126.	0.2	0
117	Etude de la synthèse de films produits par irradiation laser-UV directe. Annales De Physique, 1994, 19, C1-175-C1-176.	0.2	0
118	Detection in the nanometer scale of particles generated in an Ar-SiH ₄ radiofrequency low pressure discharge. Annales De Physique, 1994, 19, C1-185-C1-186.	0.2	0
119	Plasma formation resulting from the interaction of a laser beam with a solid metal target in an ambient gas. Plasma Sources Science and Technology, 1993, 2, 219-226.	3.1	34
120	Deposition of high quality TiN films by excimer laser ablation in reactive gas. Journal of Applied Physics, 1993, 74, 5781-5789.	2.5	54
121	Influence of irradiation conditions on plasma evolution in laser-surface interaction. Journal of Applied Physics, 1993, 74, 3071-3079.	2.5	33
122	Multistage plasma initiation process by pulsed CO ₂ laser irradiation of a Ti sample in an ambient gas (He, Ar, or N ₂). Journal of Applied Physics, 1993, 73, 1091-1099.	2.5	55
123	Comparative study of polymorphic phase transition by differential thermal analysis, high temperature x-ray diffraction and temperature programmed electrical conductivity measurements: case study of mixed iron and cobalt molybdate. The Journal of Physical Chemistry, 1992, 96, 9466-9469.	2.9	5
124	Investigation by laser-induced fluorescence of surface vaporization during the pulsed CO ₂ laser irradiation of a titanium sample in an ambient gas. Journal of Applied Physics, 1992, 71, 5629-5634.	2.5	10
125	Spectroscopic observation of the plasma produced by a CO ₂ laser beam interacting with titanium target under helium and/or argon atmosphere. Applied Physics A: Solids and Surfaces, 1992, 55, 340-346.	1.4	9
126	Direct carbidation of titanium as a result of multipulse UV-laser irradiation of titanium samples in an ambient methane gas. Applied Surface Science, 1992, 54, 349-352.	6.1	22

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127	ROLE OF GAS, SAMPLE AND LASER BEAM PARAMETERS IN LASER GENERATION OF A LOW THRESHOLD BREAKDOWN PLASMA IN A GAS IN FRONT OF A SOLID TARGET. European Physical Journal Special Topics, 1991, 01, C7-709-C7-710.	0.2	0
128	Spectroscopic study of the plasma created by interaction between a TEA CO2 laser beam and a Ti target in a cell containing helium gas. Applied Surface Science, 1990, 46, 315-320.	6.1	7
129	Nanoparticles and nanostructures formed by laser: What can we learn from the modeling?. Proceedings of SPIE, 1899, 8414, 30.	0.8	3
130	Analyses of Plasmas Produced by Laser Ablation of Fresh Aliments. Advanced Materials Research, 0, 227, 49-52.	0.3	3