Koo Hendrik Kurniawan

List of Publications by Year
in descending order

118 papers	1,662 citations	236925 25 h-index	377865 34 g-index
118 all docs	118 docs citations	118 times ranked	633 citing authors

#	Article	IF	Citations
1	Measurement of Concrete Strength Using the Emission Intensity Ratio between Ca(II) 396.8 nm and Ca(I) 422.6 nm in a Nd:YAG Laser-Induced Plasma. Applied Spectroscopy, 2006, 60, 61-64.	2.2	83
2	Hydrogen and Deuterium Analysis Using Laserâ€Induced Plasma Spectroscopy. Applied Spectroscopy Reviews, 2006, 41, 99-130.	6.7	78
3	Review of Laser-Induced Plasma, Its Mechanism, and Application to Quantitative Analysis of Hydrogen and Deuterium. Applied Spectroscopy Reviews, 2014, 49, 323-434.	6.7	73
4	Direct analysis of powder samples using transversely excited atmospheric CO2 laser-induced gas plasma at 1 atm. Analytical and Bioanalytical Chemistry, 2011, 400, 3279-3287.	3.7	41
5	Quantitative Hydrogen Analysis of Zircaloy-4 Using Low-Pressure Laser Plasma Technique. Analytical Chemistry, 2007, 79, 2703-2707.	6.5	38
6	Characteristics of a laser plasma induced by irradiation of a normal-oscillation YAG laser at low pressures. Journal Physics D: Applied Physics, 1997, 30, 3335-3345.	2.8	36
7	Spectrochemical Analysis of Metal Elements Electrodeposited from Water Samples by Laser-Induced Shock Wave Plasma Spectroscopy. Applied Spectroscopy, 2001, 55, 1229-1236.	2.2	36
8	New Technique for the Direct Analysis of Food Powders Confined in a Small Hole Using Transversely Excited Atmospheric CO₂ Laser-Induced Gas Plasma. Applied Spectroscopy, 2008, 62, 1344-1348.	2.2	36
9	Hydrogen emission by Nd-YAG laser-induced shock wave plasma and its application to the quantitative analysis of zircalloy. Journal of Applied Physics, 2004, 96, 1301-1309.	2.5	35
10	Carbon Analysis for Inspecting Carbonation of Concrete Using a TEA CO2Laser-Induced Plasma. Applied Spectroscopy, 2004, 58, 887-896.	2.2	33
11	An improved approach for hydrogen analysis in metal samples using single laser-induced gas plasma and target plasma at helium atmospheric pressure. Applied Physics B: Lasers and Optics, 2006, 82, 161-166.	2.2	33
12	Quantitative Analysis of Deuterium in Zircaloy Using Double-Pulse Laser-Induced Breakdown Spectrometry (LIBS) and Helium Gas Plasma without a Sample Chamber. Analytical Chemistry, 2012, 84, 2224-2231.	6.5	33
13	A time-resolved spectroscopic study on the shock wave plasma induced by the bombardment of a TEA CO2laser. Journal Physics D: Applied Physics, 1995, 28, 879-883.	2.8	32
14	Detection of Density Jump in Laser-Induced Shock Wave Plasma Using a Rainbow Refractometer. Applied Spectroscopy, 2001, 55, 92-97.	2.2	32
15	Hydrogen analysis in solid samples by utilizing He metastable atoms induced by TEA CO2 laser plasma in He gas at 1Âatm. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1379-1389.	2.9	32
16	Hydrogen analysis of zircaloy tube used in nuclear power station using laser plasma technique. Journal of Applied Physics, 2004, 96, 6859-6862.	2.5	30
17	Characteristics of Hydrogen Emission in Laser Plasma Induced by Focusing Fundamental Q-sw YAG Laser on Solid Samples. Japanese Journal of Applied Physics, 2004, 43, 4221-4228.	1.5	30
18	Atomic Hydrogen Emission Induced by TEA CO2 Laser Bombardment on Solid Samples at Low Pressure and its Analytical Application. Applied Spectroscopy, 2005, 59, 115-120.	2.2	29

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19	Shock wave plasma induced by TEA CO2 laser bombardment on glass samples at high pressures. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2000, 55, 1591-1599.	2.9	28
20	The role of He in enhancing the intensity and lifetime of H and D emissions from laser-induced atmospheric-pressure plasma. Journal of Applied Physics, 2009, 105, .	2.5	27
21	Preliminary analysis of C and H in a â€œSangiranâ€•fossil using laser-induced plasma at reduced pressure. Journal of Applied Physics, 2005, 98, 093307.	2.5	26
22	Hâ€“D Analysis Employing Energy Transfer from Metastable Excited-State He in Double-Pulse LIBS with Low-Pressure He Gas. Analytical Chemistry, 2019, 91, 1571-1577.	6.5	26
23	Comprehensive study on the pressure dependence of shock wave plasma generation under TEA CO2laser bombardment on metal sample. Journal Physics D: Applied Physics, 2001, 34, 758-771.	2.8	25
24	Detection of deuterium and hydrogen using laser-induced helium gas plasma at atmospheric pressure. Journal of Applied Physics, 2005, 98, 093302.	2.5	25
25	Some notes on the role of meta-stable excited state of helium atom in laser-induced helium gas breakdown spectroscopy. Applied Physics B: Lasers and Optics, 2007, 86, 729-734.	2.2	25
26	Atomic emission spectrometric analysis of steel and glass using a TEA CO2 laser-induced shock wave plasma. Analytica Chimica Acta, 1995, 299, 393-399.	5.4	23
27	Filler-Modified Castor Oil-Based Polyurethane Foam for the Removal of Aqueous Heavy Metals Detected Using Laser-Induced Breakdown Spectroscopy (LIBS) Technique. Polymers, 2020, 12, 903.	4.5	23
28	Quantitative hydrogen analysis of zircaloy-4 in laser-induced breakdown spectroscopy with ambient helium gas. Applied Optics, 2007, 46, 8298.	2.1	22
29	Formation and emission characteristics of CN molecules in laser induced low pressure He plasma and its applications to N analysis in coal and fossilization study. Applied Optics, 2016, 55, 1731.	2.1	21
30	Hydrogen analysis in solid samples using laser-induced helium plasma at atmospheric pressure. Journal of Applied Physics, 2005, 98, 043105.	2.5	20
31	Quantitative Analysis of Deuterium Using Laser-Induced Plasma at Low Pressure of Helium. Analytical Chemistry, 2006, 78, 5768-5773.	6.5	20
32	Application of picosecond laser-induced breakdown spectroscopy to quantitative analysis of boron in meatballs and other biological samples. Applied Optics, 2016, 55, 8986.	2.1	20
33	Food analysis employing high energy nanosecond laser and low pressure He ambient gas. Microchemical Journal, 2019, 147, 356-364.	4.5	19
34	Double pulse spectrochemical analysis using orthogonal geometry with very low ablation energy and He ambient gas. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2012, 69, 56-60.	2.9	18
35	Application of primary plasma standardization to Nd-YAG laser-induced shock wave plasma spectrometry for quantitative analysis of high concentration Auâ€“Agâ€“Cu alloy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 1407-1417.	2.9	16
36	Practical soil analysis by laser induced breakdown spectroscopy employing subtarget supported micro mesh as a powder sample holder. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 137, 59-63.	2.9	16

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37	Suppression of self-absorption in laser-induced breakdown spectroscopy using a double pulse orthogonal configuration to create vacuum-like conditions in atmospheric air pressure. Scientific Reports, 2020, 10, 13278.	3.3	16
38	Evidence of feasible hardness test on Mars using ratio of ionic/neutral emission intensities measured with laser-induced breakdown spectroscopy in low pressure CO2 ambient gas. Journal of Applied Physics, 2016, 119, .	2.5	16
39	Spectrochemical analysis of Cs in water and soil using low pressure laser induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2017, 132, 8-12.	2.9	15
40	Spectrochemical analysis of powder using 355 nm Nd-YAG laser-induced low-pressure plasma. Analytical and Bioanalytical Chemistry, 2008, 390, 1781-1787.	3.7	14
41	Monitoring of laser processing using induced current under applied electric field on laser produced-plasma. Journal of Materials Processing Technology, 2009, 209, 3009-3021.	6.3	14
42	Spectral and Dynamic Characteristics of Helium Plasma Emission and its Effect on a Laser-Ablated Target Emission in a Double-Pulse Laser-Induced Breakdown Spectroscopy (LIBS) Experiment. Applied Spectroscopy, 2015, 69, 115-123.	2.2	14
43	Sensitive analysis of carbon, chromium and silicon in steel using picosecond laser induced low pressure helium plasma. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2015, 114, 1-6.	2.9	14
44	H-D Analysis Employing Low-Pressure microjoule Picosecond Laser-Induced Breakdown Spectroscopy. Analytical Chemistry, 2017, 89, 4951-4957.	6.5	14
45	Confinement effect in enhancing shock wave plasma generation at low pressure by TEA CO2 laser bombardment on quartz sample. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2003, 58, 531-542.	2.9	13
46	Comparative study of laser-induced plasma emission of hydrogen from zircaloy-2 samples in atmospheric and low pressure ambient helium gas. Applied Physics B: Lasers and Optics, 2007, 89, 291-298.	2.2	13
47	Excitation Mechanism of H, He, C, and F Atoms in Metal-Assisted Atmospheric Helium Gas Plasma Induced by Transversely Excited Atmospheric-Pressure CO₂ Laser Bombardment. Japanese Journal of Applied Physics, 2011, 50, 122701.	1.5	13
48	Plasma emission induced by an Nd-YAG laser at low pressure on solid organic sample, its mechanism, and analytical application. Journal of Applied Physics, 2005, 97, 053305.	2.5	12
49	Study of Hydrogen and Deuterium Emission Characteristics in Laser-Induced Low-Pressure Helium Plasma for the Suppression of Surface Water Contamination. Analytical Chemistry, 2008, 80, 1240-1246.	6.5	12
50	New Method of Laser Plasma Spectroscopy for Metal Samples Using Metastable He Atoms Induced by Transversely Excited Atmospheric-Pressure CO2Laser in He Gas at 1 atm. Japanese Journal of Applied Physics, 2008, 47, 1595-1601.	1.5	12
51	Intensity distributions of enhanced H emission from laser-induced low-pressure He plasma and a suggested He-assisted excitation mechanism. Journal of Applied Physics, 2009, 106, 043303.	2.5	12
52	Crater effects on H and D emission from laser induced low-pressure helium plasma. Journal of Applied Physics, 2009, 106, .	2.5	12
53	Suppression of self-absorption effect in laser-induced breakdown spectroscopy by employing a Penning-like energy transfer process in helium ambient gas. Optics Express, 2020, 28, 9259.	3.4	12
54	Elemental analysis of bead samples using a laser-induced plasma at low pressure. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2006, 61, 104-112.	2.9	11

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55	Sub-target effect in film analysis using TEA CO2 laser-induced plasma. Current Applied Physics, 2007, 7, 540-546.	2.4	11
56	Observation of exclusively He-induced H emission in cooled laser plasma. Journal of Applied Physics, 2011, 109, 103305.	2.5	11
57	Deuterium analysis in zircaloy using ps laser-induced low pressure plasma. Journal of Applied Physics, 2011, 110, 063301.	2.5	11
58	Direct Measurement of Charge Current by Employing a Mesh Electrode in the Laser Plasma Induced by a Nd:YAG Laser (I). Applied Spectroscopy, 2002, 56, 994-999.	2.2	10
59	Toward quantitative deuterium analysis with laser-induced breakdown spectroscopy using atmospheric-pressure helium gas. Journal of Applied Physics, 2010, 107, 023301.	2.5	10
60	Quantitative Deuterium Analysis of Titanium Samples in Ultraviolet Laser-Induced Low-Pressure Helium Plasma. Applied Spectroscopy, 2010, 64, 365-369.	2.2	10
61	Practical and highly sensitive elemental analysis for aqueous samples containing metal impurities employing electrodeposition on indium-tin oxide film samples and laser-induced shock wave plasma in low-pressure helium gas. Applied Optics, 2015, 54, 7592.	2.1	10
62	Preliminary study on detection sediment contamination in soil affected by the Indian Ocean giant tsunami 2004 in Aceh, Indonesia using laser-induced breakdown spectroscopy (LIBS). AIP Conference Proceedings, 2016, , .	0.4	10
63	Low Pressure Plasma Confined in a Miniature Cylindrical Chamber and Its Application forIn-SituElemental Analysis. Japanese Journal of Applied Physics, 2005, 44, 202-209.	1.5	9
64	Film analysis employing subtarget effect using 355Ânm Nd-YAG laser-induced plasma at low pressure. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2006, 61, 1285-1293.	2.9	9
65	Quenching of He-induced intensity enhancement effect in H and D emission produced by Nd-doped yttrium aluminum garnet laser irradiation on solid targets in low pressure helium gas. Journal of Applied Physics, 2009, 105, .	2.5	9
66	Direct Powder Analysis by Laser-Induced Breakdown Spectroscopy Utilizing Laser-controlled Dust Production in a Small Chamber. Journal of the Korean Physical Society, 2011, 58, 1129-1134.	0.7	9
67	Direct evidence of mismatching effect on H emission in laser-induced atmospheric helium gas plasma. Journal of Applied Physics, 2013, 113, 053301.	2.5	8
68	Rapid Detection of Oil Pollution in Soil by Using Laser-Induced Breakdown Spectroscopy. Plasma Science and Technology, 2016, 18, 1186-1191.	1.5	8
69	Shock wave plasma generation in low pressure ambient gas from powder sample using subtarget supported micro mesh as a sample holder and its potential applications for sensitive analysis of powder samples. Microchemical Journal, 2018, 142, 108-116.	4.5	8
70	Pulsed CO₂ laser-induced gas plasma spectroscopy based on single beam splitting for trace metal analysis on a material surface. Journal of Modern Optics, 2018, 65, 2195-2199.	1.3	7
71	Underlying Physical Process for the Unusual Spectral Quality of Double Pulse Laser Spectroscopy in He Gas. Analytical Chemistry, 2019, 91, 7864-7870.	6.5	7
72	Application of laser plasma confinement and bending effect for direct analysis of powder sample. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2002, 57, 1325-1332.	2.9	6

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73	Excitation mechanisms in 1â€‰mJ picosecond laser induced low pressure He plasma and the resulting spectral quality enhancement. Journal of Applied Physics, 2015, 117, .	2.5	6
74	Determination of Micronutrients and Toxic Elements in Moringa Oleifera Leaves by Calibration Free Laser-Induced Breakdown Spectroscopy (LIBS). Analytical Letters, 2022, 55, 755-769.	1.8	6
75	Excitation Mechanism of H, He, C, and F Atoms in Metal-Assisted Atmospheric Helium Gas Plasma Induced by Transversely Excited Atmospheric-Pressure CO₂Laser Bombardment. Japanese Journal of Applied Physics, 2011, 50, 122701.	1.5	6
76	A compact TEA CO2 laser for field-based spectrochemical analysis of geological samples. Optics and Laser Technology, 1992, 24, 273-277.	4.6	5
77	TEA-CO2 Laser-Induced Shock Wave Plasma Modulated by Wires and Needles Placed in Front of the Target at Low Pressure. Applied Spectroscopy, 2003, 57, 874-877.	2.2	5
78	Quantitative and sensitive analysis of CN molecules using laser induced low pressure He plasma. Journal of Applied Physics, 2015, 117, .	2.5	5
79	Low pressure micro-Joule picosecond laser-induced breakdown spectroscopy and its prospective applications to minimally destructive and high resolution analysis. Japanese Journal of Applied Physics, 2017, 56, 096201.	1.5	5
80	Sensitive in-situ Cr analysis with high resolution and minimal destructive effect using micro-joule picosecond laser generated plasma emission in open ambient air. Microchemical Journal, 2018, 139, 327-332.	4.5	5
81	Unusual parallel laser irradiation for suppressing self-absorption in single pulse laser-induced breakdown spectroscopy. Optics Express, 2021, 29, 22593.	3.4	5
82	Deuterium Emission in Laser Plasma Induced by Transversely Excited Atmospheric Pressure CO2Laser in Low-Pressure of Helium Surrounding Gas. Japanese Journal of Applied Physics, 2004, 43, 7531-7535.	1.5	4
83	Emission Characteristics of Ca and Mg Atoms in Gas Plasma Induced by the Bombardment of Transversely Excited Atmospheric CO₂ Laser at 1 atm. Japanese Journal of Applied Physics, 2012, 51, 082403.	1.5	4
84	Nanosecond Nd-YAG laser induced plasma emission characteristics in low pressure CO2 ambient gas for spectrochemical application on Mars. Journal of Applied Physics, 2015, 118, 083304.	2.5	4
85	Signal enhancement of neutral He emission lines by fast electron bombardment of laser-induced He plasma. AIP Advances, 2016, 6, 085105.	1.3	4
86	Elemental detection of arabica and robusta green bean coffee using laser-induced plasma spectroscopy. AIP Conference Proceedings, 2017, , .	0.4	4
87	Direct evidence of laser-induced shock wave plasma from organic targets in low pressure He ambient gas, showing the effect of target hardness on its propagation speed and the resulted spectral performance. Applied Optics, 2017, 56, 9876.	1.8	4
88	Quantification of rare earth elements with low pressure laser induced breakdown spectroscopy employing subtarget supported micro mesh sample holder. Journal of Laser Applications, 2019, 31, .	1.7	4
89	Dependence of Charge Current Induced by Nd-YAG Laser Bombardment on Surrounding Gas Pressure and Laser Pulse Energy. Japanese Journal of Applied Physics, 2004, 43, 7524-7530.	1.5	3
90	Demonstrations of the action and reaction law and the energy conservation law using fine spherical plastic beads. Physics Education, 2008, 43, 637-643.	0.5	3

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91	A comprehensive study of H emission in a TEA CO2 laser-induced helium gas plasma for highly sensitive analysis of hydrogen in metal samples. Journal of the Korean Physical Society, 2012, 61, 49-54.	0.7	3
92	A comparative study of emission efficiencies in low-pressure argon plasmas induced by picosecond and nanosecond Nd:YAG lasers. Japanese Journal of Applied Physics, 2016, 55, 116101.	1.5	3
93	Emission Spectrochemical Analysis of Soft Samples Including Raw Fish by Employing Laser-Induced Breakdown Spectroscopy with a Subtarget at Low-Pressure Helium Gas. ACS Omega, 2020, 5, 16811-16818.	3.5	3
94	High sensitivity hydrogen analysis in zircaloy-4 using helium-assisted excitation laser-induced breakdown spectroscopy. Scientific Reports, 2021, 11, 21999.	3.3	3
95	Compact N2 laser oscillator- amplifier system for laser microbeam application. Optics and Laser Technology, 1991, 23, 115-117.	4.6	2
96	A Comparative Study of Pressure-Dependent Emission Characteristics in Different Gas Plasmas Induced by Nanosecond and Picosecond Neodymium-Doped Yttrium Aluminum Garnet (Nd:YAG) Lasers. Applied Spectroscopy, 2013, 67, 1285-1295.	2.2	2
97	Examination of the capability of the laser-induced breakdown spectroscopy (LIBS) technique as the emerging laser-based analytical tool for analyzing trace elements in coal. AIP Conference Proceedings, 2014, , .	0.4	2
98	Food powder analysis by using transversely excited atmospheric CO2 laser-induced plasma spectroscopy. Journal of Physics: Conference Series, 2015, 622, 012057.	0.4	2
99	Preferential triplet over singlet emission of Zn in laser-induced plasmas. Japanese Journal of Applied Physics, 2017, 56, 066101.	1.5	2
100	Underlying physical processes for time dependent variations of He triplet and singlet intensities in laser-induced He plasma. Journal of Applied Physics, 2020, 127, 243303.	2.5	2
101	Rapid powder analysis with laser-induced breakdown spectroscopy at low pressure ambient helium gas employing bamboo charcoal as a sample holder. Journal of Laser Applications, 2020, 32, .	1.7	2
102	Comparison of excitation mechanisms and the corresponding emission spectra in femto second and nano second laser-induced breakdown spectroscopy in reduced ambient air and their performances in surface analysis. Journal of Laser Applications, 2020, 32, 012014.	1.7	2
103	New Electrode Configuration for Measurements of the Induced Current from a Laser Plasma and Its Application to Monitoring Laser Processing. Journal of the Korean Physical Society, 2007, 51, 515-521.	0.7	2
104	Effects of mass difference on pressure-dependent emission characteristics in laser-induced plasma spectroscopy. Applied Physics B: Lasers and Optics, 2006, 85, 631-636.	2.2	1
105	Rapid Quantitative Analyses of Elements on Herb Medicine and Food Powder Using TEA CO[sub 2] Laser-Induced Plasma. , 2009, , .		1
106	Qualitative analysis of Pb liquid sample using laser-induced breakdown spectroscopy (LIBS). , 2013, , .		1
107	The role of Helium plasma in improving the sensitivity of Hydrogen detection in laser induced plasma spectroscopy. International Journal of Modern Physics Conference Series, 2014, 32, 1460338.	0.7	1
108	Reply to Comments on "Sensitive analysis of carbon, chromium and silicon in steel using picosecond laser induced low pressure helium plasma" by Zaytsev et al., Spectrochim. Acta Part B 118 (2016) 37-39. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2016, 123, 184-185.	2.9	1

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109	Shock wave plasma induced emission generated by low energy nanosecond Nd:YAG laser in open air and its application to quantitative Cr analysis of low alloy steel. AIP Advances, 2018, 8, .	1.3	1
110	Characteristics of laser induced breakdown investigated by a compact, nongated optical multichannel analyzer system and its potential application. Heliyon, 2020, 6, e05711.	3.2	1
111	Metal powder-assisted laser induced breakdown spectroscopy (LIBS) using pulse CO2 laser for liquid analysis. Journal of King Saud University - Science, 2022, 34, 101901.	3.5	1
112	Twin N2 laser for time-resolved absorption spectroscopy and dye laser oscillator-amplifier pumping. Optics and Laser Technology, 1991, 23, 233-236.	4.6	0
113	<title>Excitation mechanism of hydrogen emission in the laser-induced atmospheric plasma in water sample</title>. , 2004, 5482, 68.		0
114	Frictionless Demonstration Using Fine Plastic Beads For Teaching Mechanics. , 2010, , .		0
115	Induced Current Characteristics Due to Laser Induced Plasma and Its Application to Laser Processing Monitoring. , 2011, , .		0
116	Study of thin film production of ceramic ZrO[sub 2] on silicon wafer using second harmonic Nd-Yag laser with pulsed laser deposition technique. , 2012, , .		0
117	Quantification of sodium contaminant on steel surfaces using pulse CO2 laser-induced breakdown spectroscopy. Arabian Journal of Chemistry, 2022, 15, 103474.	4.9	0
118	Emission Characteristics of Ca and Mg Atoms in Gas Plasma Induced by the Bombardment of Transversely Excited Atmospheric CO₂Laser at 1 atm. Japanese Journal of Applied Physics, 2012, 51, 082403.	1.5	0