Peter Lasch

List of Publications by Year
in descending order

95 papers	6,593 citations	66343 42 h-index	64796 79 g-index
110 all docs	110 docs citations	110 times ranked	7041 citing authors

#	Article	IF	Citations
1	Using Fourier transform IR spectroscopy to analyze biological materials. Nature Protocols, 2014, 9, 1771-1791.	12.0	1,385
2	Imaging of colorectal adenocarcinoma using FT-IR microspectroscopy and cluster analysis. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2004, 1688, 176-186.	3.8	346
3	Spectral pre-processing for biomedical vibrational spectroscopy and microspectroscopic imaging. Chemometrics and Intelligent Laboratory Systems, 2012, 117, 100-114.	3.5	260
4	Analytical applications of Fourier transform-infrared (FT-IR) spectroscopy in microbiology and prion research. Veterinary Microbiology, 2007, 123, 305-319.	1.9	235
5	Spatial resolution in infrared microspectroscopic imaging of tissues. Biochimica Et Biophysica Acta - Biomembranes, 2006, 1758, 814-829.	2.6	212
6	Amylocyclicin, a Novel Circular Bacteriocin Produced by Bacillus amyloliquefaciens FZB42. Journal of Bacteriology, 2014, 196, 1842-1852.	2.2	189
7	FT-IR spectroscopic investigations of single cells on the subcellular level. Vibrational Spectroscopy, 2002, 28, 147-157.	2.2	176
8	Hyperspectral infrared nanoimaging of organic samples based on Fourier transform infrared nanospectroscopy. Nature Communications, 2017, 8, 14402.	12.8	133
9	Spatially resolved IR microspectroscopy of single cells. Biopolymers, 2002, 67, 335-338.	2.4	121
10	MALDI-TOF Mass Spectrometry Compatible Inactivation Method for Highly Pathogenic Microbial Cells and Spores. Analytical Chemistry, 2008, 80, 2026-2034.	6.5	120
11	Identification of Bacillus anthracis by Using Matrix-Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry and Artificial Neural Networks. Applied and Environmental Microbiology, 2009, 75, 7229-7242.	3.1	120
12	Sample Preparation by Easy Extraction and Digestion (SPEED) - A Universal, Rapid, and Detergent-free Protocol for Proteomics Based on Acid Extraction. Molecular and Cellular Proteomics, 2020, 19, 209-222.	3.8	113
13	Diagnosing benign and malignant lesions in breast tissue sections by using IR-microspectroscopy. Biochimica Et Biophysica Acta - Biomembranes, 2006, 1758, 874-882.	2.6	111
14	Limits of Life and the Habitability of Mars: The ESA Space Experiment BIOMEX on the ISS. Astrobiology, 2019, 19, 145-157.	3.0	111
15	Two-Dimensional Correlation Spectroscopy (2D-COS) for Analysis of Spatially Resolved Vibrational Spectra. Applied Spectroscopy, 2019, 73, 359-379.	2.2	110
16	Spectropathology for the next generation: Quo vadis?. Analyst, The, 2015, 140, 2066-2073.	3.5	106
17	Detection of pathological molecular alterations in scrapie-infected hamster brain by Fourier transform infrared (FT-IR) spectroscopy. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2000, 1501, 189-199.	3.8	103
18	FT-IR microspectroscopic imaging of human carcinoma thin sections based on pattern recognition techniques. Cellular and Molecular Biology, 1998, 44, 189-202.	0.9	102

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19	Insufficient discriminatory power of MALDI-TOF mass spectrometry for typing of Enterococcus faecium and Staphylococcus aureus isolates. Journal of Microbiological Methods, 2014, 100, 58-69.	1.6	98
20	Characterization of Colorectal Adenocarcinoma Sections by Spatially Resolved FT-IR Microspectroscopy. Applied Spectroscopy, 2002, 56, 1-9.	2.2	97
21	Early alterations in myocardia and vessels of the diabetic rat heart: an FTIR microspectroscopic study. Biochemical Journal, 2006, 397, 427-436.	3.7	96
22	Hydrogen Peroxide-induced Structural Alterations of RNase A. Journal of Biological Chemistry, 2001, 276, 9492-9502.	3.4	90
23	Artificial neural networks as supervised techniques for FT-IR microspectroscopic imaging. Journal of Chemometrics, 2006, 20, 209-220.	1.3	84
24	IR spectra and IR spectral maps of individual normal and cancerous cells. Biopolymers, 2002, 67, 349-353.	2.4	82
25	FT-IR Hyperspectral Imaging and Artificial Neural Network Analysis for Identification of Pathogenic Bacteria. Analytical Chemistry, 2018, 90, 8896-8904.	6.5	78
26	FTIR-microspectroscopy of prion-infected nervous tissue. Biochimica Et Biophysica Acta - Biomembranes, 2006, 1758, 948-959.	2.6	77
27	In situ identification of protein structural changes in prion-infected tissue. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2003, 1639, 152-158.	3.8	72
28	Identification of Scrapie Infection from Blood Serum by Fourier Transform Infrared Spectroscopy. Analytical Chemistry, 2002, 74, 3865-3868.	6.5	71
29	Identification of Highly Pathogenic Microorganisms by Matrix-Assisted Laser Desorption Ionizationâ€“Time of Flight Mass Spectrometry: Results of an Interlaboratory Ring Trial. Journal of Clinical Microbiology, 2015, 53, 2632-2640.	3.9	71
30	Molecular Changes of Preclinical Scrapie Can Be Detected by Infrared Spectroscopy. Journal of Neuroscience, 2002, 22, 2989-2997.	3.6	70
31	Multiplex Detection of Microbial and Plant Toxins by Immunoaffinity Enrichment and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry. Analytical Chemistry, 2010, 82, 2916-2924.	6.5	70
32	Antemortem Identification of Bovine Spongiform Encephalopathy from Serum Using Infrared Spectroscopy. Analytical Chemistry, 2003, 75, 6673-6678.	6.5	68
33	Burkholderia puraquae sp. nov., a novel species of the Burkholderia cepacia complex isolated from hospital settings and agricultural soils. International Journal of Systematic and Evolutionary Microbiology, 2018, 68, 14-20.	1.7	66
34	Comparison of Fourier transform infrared (FTIR) spectra of individual cells acquired using synchrotron and conventional sources. Infrared Physics and Technology, 2004, 45, 331-338.	2.9	64
35	Two-Dimensional Correlation Spectroscopy for Multimodal Analysis of FT-IR, Raman, and MALDI-TOF MS Hyperspectral Images with Hamster Brain Tissue. Analytical Chemistry, 2017, 89, 5008-5016.	6.5	62
36	Characterization of Yersinia Using MALDI-TOF Mass Spectrometry and Chemometrics. Analytical Chemistry, 2010, 82, 8464-8475.	6.5	60

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37	Resonance Raman microscopy in combination with partial dark-field microscopy lights up a new path in malaria diagnostics. Analyst, The, 2009, 134, 1119.	3.5	59
38	Rapid identification of Burkholderia cepacia complex species including strains of the novel Taxon K, recovered from cystic fibrosis patients by intact cell MALDI-ToF mass spectrometry. Analyst, The, 2009, 134, 1138.	3.5	53
39	Infrared Spectroscopy of Human Cells and Tissue: Detection of Disease. Technology in Cancer Research and Treatment, 2002, 1, 1-7.	1.9	51
40	Minimising contributions from scattering in infrared spectra by means of an integrating sphere. Analyst, The, 2013, 138, 4191.	3.5	48
41	ATR-FTIR spectroscopy reveals genomic loci regulating the tissue response in high fat diet fed BXD recombinant inbred mouse strains. BMC Genomics, 2013, 14, 386.	2.8	47
42	Mid-IR microspectroscopic imaging of breast tumor tissue sections. Biopolymers, 2002, 67, 354-357.	2.4	46
43	Analysis of biofluids in aqueous environment based on mid-infrared spectroscopy. Journal of Biomedical Optics, 2005, 10, 031103.	2.6	44
44	Coldâ€adapted Bacilli isolated from the Qinghaiâ€“Tibetan Plateau are able to promote plant growth in extreme environments. Environmental Microbiology, 2019, 21, 3505-3526.	3.8	42
45	Phenotypic heterogeneity within microbial populations at the single-cell level investigated by confocal Raman microspectroscopy. Analyst, The, 2009, 134, 1149.	3.5	41
46	Infrared spectroscopy of cultured cells. Vibrational Spectroscopy, 2003, 32, 107-115.	2.2	37
47	Sialylation Controls Prion Fate in Vivo. Journal of Biological Chemistry, 2017, 292, 2359-2368.	3.4	32
48	Infrared microspectroscopic imaging of benign breast tumor tissue sections. Journal of Molecular Structure, 2003, 661-662, 411-417.	3.6	30
49	Detection of preclinical scrapie from serum by infrared spectroscopy and chemometrics. Analytical and Bioanalytical Chemistry, 2007, 387, 1791-1800.	3.7	30
50	Growth-related Metabolism of the Carbon Storage Poly-3-hydroxybutyrate in Legionella pneumophila. Journal of Biological Chemistry, 2016, 291, 6471-6482.	3.4	30
51	Fusaricidins from Paenibacillus polymyxa Mâ€1, a family of lipohexapeptides of unusual complexityâ€”a mass spectrometric study. Journal of Mass Spectrometry, 2017, 52, 7-15.	1.6	30
52	Genome Mining of the Lipopeptide Biosynthesis of Paenibacillus polymyxa E681 in Combination with Mass Spectrometry: Discovery of the Lipoheptapeptide Paenilipoheptin. ChemBioChem, 2018, 19, 744-753.	2.6	30
53	Rapid characterisation of Klebsiella oxytoca isolates from contaminated liquid hand soap using mass spectrometry, FTIR and Raman spectroscopy. Faraday Discussions, 2016, 187, 353-375.	3.2	29
54	The Influence of Poly-(l-Lysine) and Porin on the Domain Structure of Mixed Vesicles Composed of Lipopolysaccharide and Phospholipid: An Infrared Spectroscopic Study. Biophysical Journal, 1998, 75, 840-852.	0.5	27

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55	Reversible off and on switching of prion infectivity via removing and reinstalling prion sialylation. Scientific Reports, 2016, 6, 33119.	3.3	27
56	Isolation Window Optimization of Data-Independent Acquisition Using Predicted Libraries for Deep and Accurate Proteome Profiling. Analytical Chemistry, 2020, 92, 12185-12192.	6.5	27
57	Matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry (MS) for the identification of highly pathogenic bacteria. TrAC - Trends in Analytical Chemistry, 2016, 85, 103-111.	11.4	25
58	Identification of Microorganisms by Liquid Chromatography-Mass Spectrometry (LC-MS1) and in Silico Peptide Mass Libraries. Molecular and Cellular Proteomics, 2020, 19, 2125-2139.	3.8	24
59	Profiling for Bioactive Peptides and Volatiles of Plant Growth Promoting Strains of the Bacillus subtilis Complex of Industrial Relevance. Frontiers in Microbiology, 2020, 11, 1432.	3.5	22
60	Scrapie-infected cells, isolated prions, and recombinant prion protein: A comparative study. Biopolymers, 2004, 74, 163-167.	2.4	19
61	Correction of axial chromatic aberrations in confocal Raman microspectroscopic measurements of a single microbial spore. Analyst, The, 2009, 134, 1162.	3.5	18
62	Single-cell analysis of the methanogenic archaeon Methanosarcina soligelidi from Siberian permafrost by means of confocal Raman microspectrocopy for astrobiological research. Planetary and Space Science, 2014, 98, 191-197.	1.7	18
63	Electric Field-Induced Changes in Lipids Investigated by Modulated Excitation FTIR Spectroscopy. Biophysical Journal, 2004, 86, 285-295.	0.5	17
64	Infrared Microspectroscopy Detects Protein Misfolding Cyclic Amplification (PMCA)-induced Conformational Alterations in Hamster Scrapie Progeny Seeds. Journal of Biological Chemistry, 2013, 288, 35068-35080.	3.4	14
65	Evaluation of MALDI-ToF Mass Spectrometry for Rapid Detection of Cereulide From Bacillus cereus Cultures. Frontiers in Microbiology, 2020, 11, 511674.	3.5	14
66	Fusaricidins, Polymyxins and Volatiles Produced by Paenibacillus polymyxa Strains DSM 32871 and M1. Pathogens, 2021, 10, 1485.	2.8	14
67	<title>Imaging of human colon carcinoma thin sections by FT-IR microspectrometry</title>. , 1998, 3257, 187.		13
68	Towards a correlative approach for characterising single virus particles by transmission electron microscopy and nanoscale Raman spectroscopy. Analyst, The, 2017, 142, 1342-1349.	3.5	13
69	<title>IR spectroscopy and IR microscopy of human breast tumors, xenografted breast tumors, and breast tumor cell lines</title>. , 1998, 3257, 13.		11
70	Confocal Raman microspectroscopy reveals a convergence of the chemical composition in methanogenic archaea from a Siberian permafrost-affected soil. FEMS Microbiology Ecology, 2015, 91, fiv126.	2.7	10
71	Inactivation techniques for MALDI-TOF MS analysis of highly pathogenic bacteria â€“ A critical review. TrAC - Trends in Analytical Chemistry, 2016, 85, 112-119.	11.4	10
72	FT-IR microspectroscopic imaging of prostate tissue sections. , 2004, 5321, 1.		9

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73	Segmentation of Confocal Raman Microspectroscopic Imaging Data Using Edge-Preserving Denoising and Clustering. Analytical Chemistry, 2013, 85, 5676-5683.	6.5	9
74	Draft Genome Sequences of 59 Endospore-Forming Gram-Positive Bacteria Associated with Crop Plants Grown in Vietnam. Microbiology Resource Announcements, 2020, 9, .	0.6	9
75	Preserving prion strain identity upon replication of prions in vitro using recombinant prion protein. Acta Neuropathologica Communications, 2018, 6, 92.	5.2	7
76	A robust metabolomics approach for the evaluation of human embryos fromin vitrofertilization. Analyst, The, 2021, 146, 6156-6169.	3.5	7
77	Clinical Spectroscopy: general discussion. Faraday Discussions, 2016, 187, 429-460.	3.2	6
78	Draft Genome Sequence of Burkholderia puraquae Type Strain CAMPA 1040, Isolated from Hospital Settings in CÃ³rdoba, Argentina. Genome Announcements, 2017, 5, .	0.8	6
79	Unbiased Antimicrobial Resistance Detection from Clinical Bacterial Isolates Using Proteomics. Analytical Chemistry, 2021, 93, 14599-14608.	6.5	6
80	Spectral Pathology: general discussion. Faraday Discussions, 2016, 187, 155-186.	3.2	5
81	Infrared Spectroscopy of Biofluids in Clinical Chemistry and Medical Diagnostics. , 0, , 79-103.		4
82	<scp>DMSO</scp> as a mobile phase additive enhances detection of ubiquitination sites by nanoâ€<scp>LCâ€ESIâ€MS/MS</scp>. Journal of Mass Spectrometry, 2018, 53, 183-187.	1.6	4
83	Genome sequence data of Bacillus velezensis BP1.2A and BT2.4. Data in Brief, 2022, 41, 107978.	1.0	4
84	Biomedical Applications of Infrared Microspectroscopy and Imaging by Various Means. , 0, , 39-78.		3
85	Draft Genome Sequences of Klebsiella oxytoca Isolates Originating from a Highly Contaminated Liquid Hand Soap Product. Genome Announcements, 2015, 3, .	0.8	3
86	<title>FTIR microspectroscopic imaging of human carcinoma thin tissue sections</title>. , 1997, , .		2
87	First Report: Application of MALDI-TOF MS within an External Quality Assurance Exercise for the Discrimination of Highly Pathogenic Bacteria from Contaminant Flora. Applied Biosafety, 2012, 17, 59-63.	0.5	2
88	Draft Genome Sequences of Plant-Associated Bacillus Strains Isolated from the Qinghai-Tibetan Plateau. Genome Announcements, 2018, 6, .	0.8	2
89	<title>FT-IR spectroscopic imaging of tissue thin sections</title>. , 2001, 4432, 10.		1
90	Prion structure investigated in situ , ex vivo , and in vitro by FTIR spectroscopy. , 2004, , .		1

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91	Ante mortem identification of BSE from serum using infrared spectroscopy. , 2004, , .		1
92	Cells and biofluids analyzed in aqueous environment by infrared spectroscopy. , 2006, , .		1
93	Discriminatory Power of MALDI-TOF Mass Spectrometry for Phylogenetically Closely Related Microbial Strains. , 2016, , 203-234.		1
94	<title>In-situ spectroscopic investigation of transmissible spongiform encephalopathies: application of Fourier-transform infrared spectroscopy to a scrapie-hamster model</title>. , 2002, , .		0
95	Infrared imaging: An emerging tool for tissue diagnostics?. , 1999, , 509-510.		0