

Christian Matthäus

List of Publications by Year in descending order

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52
papers

3,030
citations

186265

28
h-index

197818

49
g-index

59
all docs

59
docs citations

59
times ranked

3816
citing authors

#	ARTICLE	IF	CITATIONS
1	A polyne toxin produced by an antagonistic bacterium blinds and lyses a Chlamydomonad alga. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	19
2	Raman Micro-spectral Imaging of Cells and Intracellular Drug Delivery Using Nanocarrier Systems. Springer Series in Surface Sciences, 2018, , 273-305.	0.3	4
3	Simultaneous isolation and detection of single breast cancer cells using surface-enhanced Raman spectroscopy. Talanta, 2018, 186, 44-52.	5.5	18
4	Analysis of basidiomycete pigments in situ by Raman spectroscopy. Journal of Biophotonics, 2018, 11, e201700369.	2.3	8
5	Raman and infrared spectroscopy reveal that proliferating and quiescent human fibroblast cells age by biochemically similar but not identical processes. PLoS ONE, 2018, 13, e0207380.	2.5	13
6	Surface enhanced Raman spectroscopyâ€ detection of the uptake of mannoseâ€ modified nanoparticles by macrophages in vitro: A model for detection of vulnerable atherosclerotic plaques. Journal of Biophotonics, 2018, 11, e201800013.	2.3	9
7	Detection and characterization of early plaque formations by Raman probe spectroscopy and optical coherence tomography: an in vivo study on a rabbit model. Journal of Biomedical Optics, 2018, 23, 1.	2.6	14
8	In-vivo Raman spectroscopy: from basics to applications. Journal of Biomedical Optics, 2018, 23, 1.	2.6	132
9	Raman imaging of macrophages incubated with triglyceride-enriched oxLDL visualizes translocation of lipids between endocytic vesicles and lipid droplets. Journal of Lipid Research, 2017, 58, 876-883.	4.2	24
10	Raman and Infrared Spectroscopy Distinguishing Replicative Senescent from Proliferating Primary Human Fibroblast Cells by Detecting Spectral Differences Mainly Due to Biomolecular Alterations. Analytical Chemistry, 2017, 89, 2937-2947.	6.5	38
11	Realâ€ time Raman and SRS imaging of living human macrophages reveals cellâ€ toâ€ cell heterogeneity and dynamics of lipid uptake. Journal of Biophotonics, 2017, 10, 1217-1226.	2.3	38
12	Bioactive secondary metabolites with multiple activities from a fungal endophyte. Microbial Biotechnology, 2017, 10, 175-188.	4.2	85
13	Uptake of Retinoic Acidâ€ Modified PMMA Nanoparticles in LXâ€ 2 and Liver Tissue by Raman Imaging and Intravital Microscopy. Macromolecular Bioscience, 2017, 17, 1700064.	4.1	12
14	Markerfreie molekulare Bildgebung biologischer Zellen und Gewebe durch lineare und nichtlineare Ramanâ€ spektroskopische Ansätze. Angewandte Chemie, 2017, 129, 4458-4500.	2.0	8
15	Labelâ€ Free Molecular Imaging of Biological Cells and Tissues by Linear and Nonlinear Raman Spectroscopic Approaches. Angewandte Chemie - International Edition, 2017, 56, 4392-4430.	13.8	177
16	Studies of silicon nanoparticles uptake and biodegradation in cancer cells by Raman spectroscopy. Nanomedicine: Nanotechnology, Biology, and Medicine, 2016, 12, 1931-1940.	3.3	70
17	Fiber probe for nonlinear imaging applications. Journal of Biophotonics, 2016, 9, 138-143.	2.3	23
18	Nonâ€ linear imaging and characterization of atherosclerotic arterial tissue using combined SHG and FLIM microscopy. Journal of Biophotonics, 2015, 8, 347-356.	2.3	17

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19	Monitoring metabolites from <i>Schizophyllum commune</i> interacting with <i>Hypholoma fasciculare</i> combining LESA- ² HR mass spectrometry and Raman microscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 2273-2282.	3.7	25
20	Advantages and limitations of Raman spectroscopy for molecular diagnostics: an update. <i>Expert Review of Molecular Diagnostics</i> , 2015, 15, 773-787.	3.1	176
21	Differentiation of MCF-7 tumor cells from leukocytes and fibroblast cells using epithelial cell adhesion molecule targeted multicore surface-enhanced Raman spectroscopy labels. <i>Journal of Biomedical Optics</i> , 2015, 20, 055002.	2.6	21
22	Chemo-spectroscopic sensor for carboxyl terminus overexpressed in carcinoma cell membrane. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2015, 11, 1831-1839.	3.3	7
23	Multimodal nonlinear imaging of atherosclerotic plaques differentiation of triglyceride and cholesterol deposits. <i>Journal of Innovative Optical Health Sciences</i> , 2014, 07, 1450027.	1.0	7
24	Characterization of collagen and cholesterol deposition in atherosclerotic arterial tissue using non-linear microscopy. <i>Journal of Biophotonics</i> , 2014, 7, 135-143.	2.3	36
25	Phenalenone-type phytoalexins mediate resistance of banana plants (<i>Musa</i> spp.) to the burrowing nematode <i>Radopholus similis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 105-110.	7.1	130
26	Complexity of fatty acid distribution inside human macrophages on single cell level using Raman micro-spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 7037-7046.	3.7	61
27	Expanding Multimodal Microscopy by High Spectral Resolution Coherent Anti-Stokes Raman Scattering Imaging for Clinical Disease Diagnostics. <i>Analytical Chemistry</i> , 2013, 85, 6703-6715.	6.5	55
28	A compact microscope setup for multimodal nonlinear imaging in clinics and its application to disease diagnostics. <i>Analyst</i> , The, 2013, 138, 4048.	3.5	44
29	Non-invasive depth profile imaging of the stratum corneum using confocal Raman microscopy: First insights into the method. <i>European Journal of Pharmaceutical Sciences</i> , 2013, 50, 601-608.	4.0	49
30	Resonance Raman Spectral Imaging of Intracellular Uptake of ¹² C- ¹³ C Carotene Loaded Poly(D,L-lactide-co-glycolide) Nanoparticles. <i>ChemPhysChem</i> , 2013, 14, 155-161.	2.1	19
31	Characterization of atherosclerotic plaque depositions by Raman and FTIR imaging. <i>Journal of Biophotonics</i> , 2013, 6, 110-121.	2.3	62
32	Etaloning, fluorescence and ambient light suppression by modulated wavelength Raman spectroscopy. <i>Biomedical Spectroscopy and Imaging</i> , 2012, 1, 383-389.	1.2	21
33	In Vivo Characterization of Atherosclerotic Plaque Depositions by Raman-Probe Spectroscopy and in Vitro Coherent Anti-Stokes Raman Scattering Microscopic Imaging on a Rabbit Model. <i>Analytical Chemistry</i> , 2012, 84, 7845-7851.	6.5	61
34	Noninvasive Imaging of Intracellular Lipid Metabolism in Macrophages by Raman Microscopy in Combination with Stable Isotopic Labeling. <i>Analytical Chemistry</i> , 2012, 84, 8549-8556.	6.5	114
35	Characterization of atherosclerotic plaque-depositions by infrared, Raman and CARS microscopy. <i>Proceedings of SPIE</i> , 2011, , .	0.8	4
36	Spectral unmixing and clustering algorithms for assessment of single cells by Raman microscopic imaging. <i>Theoretical Chemistry Accounts</i> , 2011, 130, 1249-1260.	1.4	139

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37	Fluorescence-based fixative and vital staining of lipid droplets in <i>Caenorhabditis elegans</i> reveal fat stores using microscopy and flow cytometry approaches. <i>Journal of Lipid Research</i> , 2011, 52, 1281-1293.	4.2	79
38	Raman Micro-spectral Imaging of Cells and Intracellular Drug Delivery Using Nanocarrier Systems. <i>Springer Series in Optical Sciences</i> , 2010, , 137-163.	0.7	0
39	Monitoring intra-cellular lipid metabolism in macrophages by Raman- and CARS-microscopy. , 2010, , .		7
40	Denosing of single scan Raman spectroscopy signals. , 2010, , .		3
41	Label-free imaging of human cells: algorithms for image reconstruction of Raman hyperspectral datasets. <i>Analyst</i> , The, 2010, 135, 2002.	3.5	161
42	Micro-Raman Detection of Nuclear Membrane Lipid Fluctuations in Senescent Epithelial Breast Cancer Cells. <i>Analytical Chemistry</i> , 2010, 82, 4259-4263.	6.5	39
43	Label-Free Raman Spectral Imaging of Intracellular Delivery and Degradation of Polymeric Nanoparticle Systems. <i>ACS Nano</i> , 2009, 3, 3552-3559.	14.6	119
44	New Ways of Imaging Uptake and Intracellular Fate of Liposomal Drug Carrier Systems inside Individual Cells, Based on Raman Microscopy. <i>Molecular Pharmaceutics</i> , 2008, 5, 287-293.	4.6	105
45	Chapter 10 Infrared and Raman Microscopy in Cell Biology. <i>Methods in Cell Biology</i> , 2008, 89, 275-308.	1.1	145
46	Shedding New Light on the Molecular Architecture of Oocytes Using a Combination of Synchrotron Fourier Transform-Infrared and Raman Spectroscopic Mapping. <i>Analytical Chemistry</i> , 2008, 80, 9065-9072.	6.5	70
47	Raman microscopic imaging of cells and applications monitoring the uptake of drug delivery systems. <i>Proceedings of SPIE</i> , 2008, , .	0.8	4
48	Label-Free Detection of Mitochondrial Distribution in Cells by Nonresonant Raman Microspectroscopy. <i>Biophysical Journal</i> , 2007, 93, 668-673.	0.5	227
49	Raman and Infrared Microspectral Imaging of Mitotic Cells. <i>Applied Spectroscopy</i> , 2006, 60, 1-8.	2.2	160
50	Microspectroscopy of single proliferating HeLa cells. <i>Vibrational Spectroscopy</i> , 2005, 38, 169-177.	2.2	53
51	Infrared microspectroscopy of individual human cervical cancer (HeLa) cells suspended in growth medium. <i>Biopolymers</i> , 2004, 74, 172-175.	2.4	28
52	Comparison of Fourier transform infrared (FTIR) spectra of individual cells acquired using synchrotron and conventional sources. <i>Infrared Physics and Technology</i> , 2004, 45, 331-338.	2.9	64