# Christian MatthÃ¤us

List of Publications by Year
in descending order



| 52 | 3,030 | 186265 | 197818 |
|---|---|---|---|
| papers | citations | 28 h-index | 49 g-index |

| 59 | 59 | 59 | 3816 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Label-Free Detection of Mitochondrial Distribution in Cells by Nonresonant Raman Microspectroscopy. Biophysical Journal, 2007, 93, 668-673. | 0.5 | 227 |
| 2 | 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 |
| 3 | Advantages and limitations of Raman spectroscopy for molecular diagnostics: an update. Expert Review of Molecular Diagnostics, 2015, 15, 773-787. | 3.1 | 176 |
| 4 | Label-free imaging of human cells: algorithms for image reconstruction of Raman hyperspectral datasets. Analyst, The, 2010, 135, 2002. | 3.5 | 161 |
| 5 | Raman and Infrared Microspectral Imaging of Mitotic Cells. Applied Spectroscopy, 2006, 60, 1-8. | 2.2 | 160 |
| 6 | Chapter 10 Infrared and Raman Microscopy in Cell Biology. Methods in Cell Biology, 2008, 89, 275-308. | 1.1 | 145 |
| 7 | Spectral unmixing and clustering algorithms for assessment of single cells by Raman microscopic imaging. Theoretical Chemistry Accounts, 2011, 130, 1249-1260. | 1.4 | 139 |
| 8 | In-vivo Raman spectroscopy: from basics to applications. Journal of Biomedical Optics, 2018, 23, 1. | 2.6 | 132 |
| 9 | Phenalenone-type phytoalexins mediate resistance of banana plants ( Musa spp.) to the burrowing nematode Radopholus similis. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 105-110. | 7.1 | 130 |
| 10 | Label-Free Raman Spectral Imaging of Intracellular Delivery and Degradation of Polymeric Nanoparticle Systems. ACS Nano, 2009, 3, 3552-3559. | 14.6 | 119 |
| 11 | Noninvasive Imaging of Intracellular Lipid Metabolism in Macrophages by Raman Microscopy in Combination with Stable Isotopic Labeling. Analytical Chemistry, 2012, 84, 8549-8556. | 6.5 | 114 |
| 12 | New Ways of Imaging Uptake and Intracellular Fate of Liposomal Drug Carrier Systems inside Individual Cells, Based on Raman Microscopy. Molecular Pharmaceutics, 2008, 5, 287-293. | 4.6 | 105 |
| 13 | Bioactive secondary metabolites with multiple activities from a fungal endophyte. Microbial Biotechnology, 2017, 10, 175-188. | 4.2 | 85 |
| 14 | Fluorescence-based fixative and vital staining of lipid droplets in Caenorhabditis elegans reveal fat stores using microscopy and flow cytometry approaches. Journal of Lipid Research, 2011, 52, 1281-1293. | 4.2 | 79 |
| 15 | Shedding New Light on the Molecular Architecture of Oocytes Using a Combination of Synchrotron Fourier Transform-Infrared and Raman Spectroscopic Mapping. Analytical Chemistry, 2008, 80, 9065-9072. | 6.5 | 70 |
| 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 | 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 |
| 18 | Characterization of atherosclerotic plaque depositions by Raman and FTIR imaging. Journal of Biophotonics, 2013, 6, 110-121. | 2.3 | 62 |

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|---|---|---|---|
| 19 | 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. Analytical Chemistry, 2012, 84, 7845-7851. | 6.5 | 61 |
| 20 | Complexity of fatty acid distribution inside human macrophages on single cell level using Raman micro-spectroscopy. Analytical and Bioanalytical Chemistry, 2014, 406, 7037-7046. | 3.7 | 61 |
| 21 | Expanding Multimodal Microscopy by High Spectral Resolution Coherent Anti-Stokes Raman Scattering Imaging for Clinical Disease Diagnostics. Analytical Chemistry, 2013, 85, 6703-6715. | 6.5 | 55 |
| 22 | Microspectroscopy of single proliferating HeLa cells. Vibrational Spectroscopy, 2005, 38, 169-177. | 2.2 | 53 |
| 23 | Non-invasive depth profile imaging of the stratum corneum using confocal Raman microscopy: First insights into the method. European Journal of Pharmaceutical Sciences, 2013, 50, 601-608. | 4.0 | 49 |
| 24 | A compact microscope setup for multimodal nonlinear imaging in clinics and its application to disease diagnostics. Analyst, The, 2013, 138, 4048. | 3.5 | 44 |
| 25 | Micro-Raman Detection of Nuclear Membrane Lipid Fluctuations in Senescent Epithelial Breast Cancer Cells. Analytical Chemistry, 2010, 82, 4259-4263. | 6.5 | 39 |
| 26 | 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 |
| 27 | 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 |
| 28 | Characterization of collagen and cholesterol deposition in atherosclerotic arterial tissue using nonâ€linear microscopy. Journal of Biophotonics, 2014, 7, 135-143. | 2.3 | 36 |
| 29 | Infrared microspectroscopy of individual human cervical cancer (HeLa) cells suspended in growth medium. Biopolymers, 2004, 74, 172-175. | 2.4 | 28 |
| 30 | Monitoring metabolites from Schizophyllum commune interacting with Hypholoma fasciculare combining LESAâ€“HR mass spectrometry and Raman microscopy. Analytical and Bioanalytical Chemistry, 2015, 407, 2273-2282. | 3.7 | 25 |
| 31 | 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 |
| 32 | Fiber probe for nonlinear imaging applications. Journal of Biophotonics, 2016, 9, 138-143. | 2.3 | 23 |
| 33 | Etaloning, fluorescence and ambient light suppression by modulated wavelength Raman spectroscopy. Biomedical Spectroscopy and Imaging, 2012, 1, 383-389. | 1.2 | 21 |
| 34 | Differentiation of MCF-7 tumor cells from leukocytes and fibroblast cells using epithelial cell adhesion molecule targeted multicore surface-enhanced Raman spectroscopy labels. Journal of Biomedical Optics, 2015, 20, 055002. | 2.6 | 21 |
| 35 | Resonance Raman Spectral Imaging of Intracellular Uptake of Î²â€Carotene Loaded Poly(D,<scp>L</scp>â€lactideâ€coâ€glycolide) Nanoparticles. ChemPhysChem, 2013, 14, 155-161. | 2.1 | 19 |
| 36 | A polyyne 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 |

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|---|---|---|---|
| 37 | Simultaneous isolation and detection of single breast cancer cells using surface-enhanced Raman spectroscopy. Talanta, 2018, 186, 44-52. | 5.5 | 18 |
| 38 | 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 |
| 39 | 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 |
| 40 | 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 |
| 41 | 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 |
| 42 | 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 |
| 43 | Markerfreie molekulare Bildgebung biologischer Zellen und Gewebe durch lineare und nichtlineare Ramanâ€spektroskopische ÃnsÃtze. Angewandte Chemie, 2017, 129, 4458-4500. | 2.0 | 8 |
| 44 | Analysis of basidiomycete pigments in situ by Raman spectroscopy. Journal of Biophotonics, 2018, 11, e201700369. | 2.3 | 8 |
| 45 | Monitoring intra-cellular lipid metabolism in macrophages by Raman- and CARS-microscopy. , 2010, , . | | 7 |
| 46 | Multimodal nonlinear imaging of atherosclerotic plaques differentiation of triglyceride and cholesterol deposits. Journal of Innovative Optical Health Sciences, 2014, 07, 1450027. | 1.0 | 7 |
| 47 | Chemo-spectroscopic sensor for carboxyl terminus overexpressed in carcinoma cell membrane. Nanomedicine: Nanotechnology, Biology, and Medicine, 2015, 11, 1831-1839. | 3.3 | 7 |
| 48 | Raman microscopic imaging of cells and applications monitoring the uptake of drug delivery systems. Proceedings of SPIE, 2008, , . | 0.8 | 4 |
| 49 | Characterization of atherosclerotic plaque-depositions by infrared, Raman and CARS microscopy. Proceedings of SPIE, 2011, , . | 0.8 | 4 |
| 50 | Raman Micro-spectral Imaging of Cells and Intracellular Drug Delivery Using Nanocarrier Systems. Springer Series in Surface Sciences, 2018, , 273-305. | 0.3 | 4 |
| 51 | Denoising of single scan Raman spectroscopy signals. , 2010, , . | | 3 |
| 52 | Raman Micro-spectral Imaging of Cells and Intracellular Drug Delivery Using Nanocarrier Systems. Springer Series in Optical Sciences, 2010, , 137-163. | 0.7 | 0 |