Peter Gardner

List of Publications by Year
in descending order

63 papers	4,934 citations	117571 34 h-index	123376 61 g-index
66 all docs	66 docs citations	66 times ranked	4933 citing authors

#	Article	IF	Citations
1	Using Fourier transform IR spectroscopy to analyze biological materials. Nature Protocols, 2014, 9, 1771-1791.	5.5	1,385
2	Resonant Mie Scattering (RMieS) correction of infrared spectra from highly scattering biological samples. Analyst, The, 2010, 135, 268-277.	1.7	332
3	Resonant Mie scattering in infrared spectroscopy of biological materials â€“ understanding the â€˜dispersion artefactâ€™. Analyst, The, 2009, 134, 1586.	1.7	276
4	Measurement of elastic properties of prostate cancer cells using AFM. Analyst, The, 2008, 133, 1498.	1.7	247
5	Clinical applications of infrared and Raman spectroscopy: state of play and future challenges. Analyst, The, 2018, 143, 1735-1757.	1.7	163
6	Direct evidence of lipid translocation between adipocytes and prostate cancer cells with imaging FTIR microspectroscopy. Journal of Lipid Research, 2007, 48, 1846-1856.	2.0	133
7	Fundamental developments in infrared spectroscopic imaging for biomedical applications. Chemical Society Reviews, 2016, 45, 1935-1957.	18.7	120
8	The inherent problem of transflection-mode infrared spectroscopic microscopy and the ramifications for biomedical single point and imaging applications. Analyst, The, 2013, 138, 144-157.	1.7	119
9	Reflection contributions to the dispersion artefact in FTIR spectra of single biological cells. Analyst, The, 2009, 134, 1171.	1.7	118
10	FTIR microscopy of biological cells and tissue: data analysis using resonant Mie scattering (RMieS) EMSC algorithm. Analyst, The, 2012, 137, 1370.	1.7	117
11	RMieSâ€EMSC correction for infrared spectra of biological cells: Extension using full Mie theory and GPU computing. Journal of Biophotonics, 2010, 3, 609-620.	1.1	116
12	Large scale infrared imaging of tissue micro arrays (TMAs) using a tunable Quantum Cascade Laser (QCL) based microscope. Analyst, The, 2014, 139, 3856-3859.	1.7	114
13	A Correlation of FTIR Spectra Derived from Prostate Cancer Biopsies with Gleason Grade and Tumour Stage. European Urology, 2006, 50, 750-761.	0.9	111
14	Infrared spectroscopic comparison of the chemisorbed species from ethene, propene, but-1-ene and cis- and trans-but-2-ene on Pt(111) and on a platinum/silica catalyst. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 2757.	1.7	101
15	Investigating FTIR based histopathology for the diagnosis of prostate cancer. Journal of Biophotonics, 2009, 2, 104-113.	1.1	97
16	Raman tweezers and their application to the study of singly trapped eukaryotic cells. Integrative Biology (United Kingdom), 2009, 1, 43-52.	0.6	85
17	The combined application of FTIR microspectroscopy and ToF-SIMS imaging in the study of prostate cancer. Faraday Discussions, 2004, 126, 41.	1.6	78
18	Spectral discrimination of live prostate and bladder cancer cell lines using Raman optical tweezers. Journal of Biomedical Optics, 2008, 13, 064004.	1.4	71

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19	Classification of fixed urological cells using Raman tweezers. Journal of Biophotonics, 2009, 2, 47-69.	1.1	58
20	SynchrotronFTIR analysis of drug treated ovarian A2780 cells: an ability to differentiate cell response to different drugs?. Analyst, The, 2011, 136, 498-507.	1.7	57
21	Assessing the challenges of Fourier transform infrared spectroscopic analysis of blood serum. Journal of Biophotonics, 2014, 7, 180-188.	1.1	57
22	Transmission FT-IR Chemical Imaging on Glass Substrates: Applications in Infrared Spectral Histopathology. Analytical Chemistry, 2014, 86, 1648-1653.	3.2	56
23	Quantum Cascade Laser Spectral Histopathology: Breast Cancer Diagnostics Using High Throughput Chemical Imaging. Analytical Chemistry, 2017, 89, 7348-7355.	3.2	54
24	The Dynamic Nature of Hypertrophic and Fibrotic Remodeling of the Fish Ventricle. Frontiers in Physiology, 2015, 6, 427.	1.3	50
25	Optical artefacts in transflection mode FTIR microspectroscopic images of single cells on a biological support: the effect of back-scattering into collection optics. Analyst, The, 2007, 132, 750.	1.7	48
26	High-throughput quantum cascade laser (QCL) spectral histopathology: a practical approach towards clinical translation. Faraday Discussions, 2016, 187, 135-154.	1.6	46
27	Comparability of Raman Spectroscopic Configurations: A Large Scale Cross-Laboratory Study. Analytical Chemistry, 2020, 92, 15745-15756.	3.2	46
28	Discrimination of prostate cancer cells by reflection mode FTIR photoacoustic spectroscopy. Analyst, The, 2007, 132, 292.	1.7	45
29	Assessment of paraffin removal from prostate FFPE sections using transmission mode FTIR-FPA imaging. Analytical Methods, 2014, 6, 1028-1035.	1.3	45
30	SR-FTIR spectroscopy of renal epithelial carcinoma side population cells displaying stem cell-like characteristics. Analyst, The, 2010, 135, 3133.	1.7	44
31	Analysis of Fixed and Live Single Cells Using Optical Photothermal Infrared with Concomitant Raman Spectroscopy. Analytical Chemistry, 2021, 93, 3938-3950.	3.2	44
32	FTIR microspectroscopy of selected rare diverse subâ€variants of carcinoma of the urinary bladder. Journal of Biophotonics, 2013, 6, 73-87.	1.1	38
33	Infrared spectral histopathology using haematoxylin and eosin (H&E) stained glass slides: a major step forward towards clinical translation. Analyst, The, 2017, 142, 1258-1268.	1.7	38
34	Single-cell analysis using Fourier transform infrared microspectroscopy. Applied Spectroscopy Reviews, 2017, 52, 560-587.	3.4	38
35	Exploiting CELLULOSE SYNTHASE (CESA) Class Specificity to Probe Cellulose Microfibril Biosynthesis. Plant Physiology, 2018, 177, 151-167.	2.3	31
36	Direct observation of surface isocyanate (NCO) formation during the CO+NO reaction on Pt{100}. Physical Chemistry Chemical Physics, 1999, 1, 4909-4912.	1.3	28

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37	Comparison of transmission and transflectance mode FTIR imaging of biological tissue. Analyst, The, 2015, 140, 2383-2392.	1.7	28
38	Anticancer drug impact on DNA â€“ a study by neutron spectroscopy coupled with synchrotron-based FTIR and EXAFS. Physical Chemistry Chemical Physics, 2019, 21, 4162-4175.	1.3	27
39	Substrate contributions in micro-ATR of thin samples: implications for analysis of cells, tissue and biological fluids. Analyst, The, 2013, 138, 4139.	1.7	25
40	The action of all-trans-retinoic acid (ATRA) and synthetic retinoid analogues (EC19 and EC23) on human pluripotent stem cells differentiation investigated using single cell infrared microspectroscopy. Molecular BioSystems, 2013, 9, 677.	2.9	25
41	Whole organ cross-section chemical imaging using label-free mega-mosaic FTIR microscopy. Analyst, The, 2013, 138, 7066.	1.7	24
42	Design and biological evaluation of synthetic retinoids: probing length vs. stability vs. activity. Molecular BioSystems, 2013, 9, 3124.	2.9	24
43	Chemotherapeutic Targets in Osteosarcoma: Insights from Synchrotron-MicroFTIR and Quasi-Elastic Neutron Scattering. Journal of Physical Chemistry B, 2019, 123, 6968-6979.	1.2	21
44	Live single cell analysis using synchrotron FTIR microspectroscopy: development of a simple dynamic flow system for prolonged sample viability. Analyst, The, 2019, 144, 997-1007.	1.7	20
45	Exploring AdaBoost and Random Forests machine learning approaches for infrared pathology on unbalanced data sets. Analyst, The, 2021, 146, 5880-5891.	1.7	20
46	FTIR imaging of the molecular burden around AÎ² deposits in an early-stage 3-Tg-APP-PSP1-TAU mouse model of Alzheimer's disease. Analyst, The, 2017, 142, 156-168.	1.7	19
47	Increased optical pathlength through aqueous media for the infrared microanalysis of live cells. Analytical and Bioanalytical Chemistry, 2018, 410, 5779-5789.	1.9	10
48	Optimization Synthesis and Biosensing Performance of an Acrylate-Based Hydrogel as an Optical Waveguiding Sensing Film. Analytical Chemistry, 2020, 92, 14907-14914.	3.2	10
49	Macro- and micromechanical remodelling in the fish atrium is associated with regulation of collagen 1 alpha 3 chain expression. Pflugers Archiv European Journal of Physiology, 2018, 470, 1205-1219.	1.3	9
50	Automated high-throughput assessment of prostate biopsy tissue using infrared spectroscopic chemical imaging. Proceedings of SPIE, 2014, , .	0.8	8
51	A novel FTIR analysis method for rapid high-confidence discrimination of esophageal cancer. Infrared Physics and Technology, 2019, 102, 103007.	1.3	8
52	Fatty-Acid Uptake in Prostate Cancer Cells Using Dynamic Microfluidic Raman Technology. Molecules, 2020, 25, 1652.	1.7	8
53	Breast cancer detection using infrared spectral pathology from H&E stained tissue on glass slides. Clinical Spectroscopy, 2021, 3, 100008.	0.6	6
54	A de-waxing methodology for scanning probe microscopy. Analytical Methods, 2020, 12, 3397-3403.	1.3	5

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55	Insight into metastatic oral cancer tissue from novel analyses using FTIR spectroscopy and aperture IR-SNOM. Analyst, The, 2021, 146, 4895-4904.	1.7	5
56	Image fusion of IR and optical microscopy for mapping of biomolecules in tissue. Analyst, The, 2021, 146, 5848-5854.	1.7	5
57	Prediction of malignant transformation in oral epithelial dysplasia using infrared absorbance spectra. PLoS ONE, 2022, 17, e0266043.	1.1	5
58	Unveiling the composition of historical plastics through non-invasive reflection FT-IR spectroscopy in the extended near- and mid-Infrared spectral range. Analytica Chimica Acta, 2021, 1169, 338602.	2.6	3
59	Compliance of the fish outflow tract is altered by thermal acclimation through connective tissue remodelling. Journal of the Royal Society Interface, 2021, 18, 20210492.	1.5	3
60	Vibrational Spectroscopy from Surfaces. , 0, , 333-390.		2
61	Analysis of Single Eukaryotic Cells Using Raman Tweezers. Methods in Molecular Biology, 2012, 853, 151-167.	0.4	2
62	Agarose-Chitosan Based Hydrogel Waveguide Matrix: Comparison Synthesis and Performance for Optical Leaky Waveguide (OLW) Biosensor. Solid State Phenomena, 0, 301, 87-96.	0.3	2
63	Renal cell carcinoma: A prognostic target for spectral pathology.. Journal of Clinical Oncology, 2013, 31, 459-459.	0.8	0