Peter Gardner

List of Publications by Citations

63 papers	3,878 citations	32 h-index	62 g-index
66 ext. papers	4,450 ext. citations	5.9 avg, IF	5.07 L-index

#	Paper	IF	Citations
63	Using Fourier transform IR spectroscopy to analyze biological materials. *Nature Protocols*, **2014**, 9, 1771-91	28.8	977
62	Resonant Mie scattering (RMieS) correction of infrared spectra from highly scattering biological samples. *Analyst, The*, **2010**, 135, 268-77	5	283
61	Resonant Mie scattering in infrared spectroscopy of biological materials--understanding the dispersion artefact. *Analyst, The*, **2009**, 134, 1586-93	5	242
60	Measurement of elastic properties of prostate cancer cells using AFM. *Analyst, The*, **2008**, 133, 1498-500	5	189
59	Clinical applications of infrared and Raman spectroscopy: state of play and future challenges. *Analyst, The*, **2018**, 143, 1735-1757	5	114
58	The inherent problem of transflection-mode infrared spectroscopic microscopy and the ramifications for biomedical single point and imaging applications. *Analyst, The*, **2013**, 138, 144-57	5	114
57	Direct evidence of lipid translocation between adipocytes and prostate cancer cells with imaging FTIR microspectroscopy. *Journal of Lipid Research*, **2007**, 48, 1846-56	6.3	111
56	Reflection contributions to the dispersion artefact in FTIR spectra of single biological cells. *Analyst, The*, **2009**, 134, 1171-5	5	109
55	FTIR microscopy of biological cells and tissue: data analysis using resonant Mie scattering (RMieS) EMSC algorithm. *Analyst, The*, **2012**, 137, 1370-7	5	108
54	RMieS-EMSC correction for infrared spectra of biological cells: extension using full Mie theory and GPU computing. *Journal of Biophotonics*, **2010**, 3, 609-20	3.1	105
53	Large scale infrared imaging of tissue micro arrays (TMAs) using a tunable Quantum Cascade Laser (QCL) based microscope. *Analyst, The*, **2014**, 139, 3856-9	5	99
52	A correlation of FTIR spectra derived from prostate cancer biopsies with gleason grade and tumour stage. *European Urology*, **2006**, 50, 750-60; discussion 760-1	10.2	99
51	Investigating FTIR based histopathology for the diagnosis of prostate cancer. *Journal of Biophotonics*, **2009**, 2, 104-13	3.1	85
50	Fundamental developments in infrared spectroscopic imaging for biomedical applications. *Chemical Society Reviews*, **2016**, 45, 1935-57	58.5	83
49	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		82
48	The combined application of FTIR microspectroscopy and ToF-SIMS imaging in the study of prostate cancer. *Faraday Discussions*, **2004**, 126, 41-59; discussion 77-92	3.6	73
47	Raman tweezers and their application to the study of singly trapped eukaryotic cells. *Integrative Biology (United Kingdom)*, **2009**, 1, 43-52	3.7	72

46	Spectral discrimination of live prostate and bladder cancer cell lines using Raman optical tweezers. *Journal of Biomedical Optics*, **2008**, 13, 064004	3.5	65
45	Classification of fixed urological cells using Raman tweezers. *Journal of Biophotonics*, **2009**, 2, 47-69	3.1	51
44	Synchrotron FTIR analysis of drug treated ovarian A2780 cells: an ability to differentiate cell response to different drugs?. *Analyst, The*, **2011**, 136, 498-507	5	50
43	Assessing the challenges of Fourier transform infrared spectroscopic analysis of blood serum. *Journal of Biophotonics*, **2014**, 7, 180-8	3.1	47
42	Quantum Cascade Laser Spectral Histopathology: Breast Cancer Diagnostics Using High Throughput Chemical Imaging. *Analytical Chemistry*, **2017**, 89, 7348-7355	7.8	45
41	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, 750-5	5	45
40	Transmission FT-IR chemical imaging on glass substrates: applications in infrared spectral histopathology. *Analytical Chemistry*, **2014**, 86, 1648-53	7.8	42
39	Discrimination of prostate cancer cells by reflection mode FTIR photoacoustic spectroscopy. *Analyst, The*, **2007**, 132, 292-5	5	41
38	High-throughput quantum cascade laser (QCL) spectral histopathology: a practical approach towards clinical translation. *Faraday Discussions*, **2016**, 187, 135-54	3.6	40
37	SR-FTIR spectroscopy of renal epithelial carcinoma side population cells displaying stem cell-like characteristics. *Analyst, The*, **2010**, 135, 3133-41	5	39
36	Assessment of paraffin removal from prostate FFPE sections using transmission mode FTIR-FPA imaging. *Analytical Methods*, **2014**, 6, 1028-1035	3.2	37
35	The Dynamic Nature of Hypertrophic and Fibrotic Remodeling of the Fish Ventricle. *Frontiers in Physiology*, **2015**, 6, 427	4.6	35
34	FTIR microspectroscopy of selected rare diverse sub-variants of carcinoma of the urinary bladder. *Journal of Biophotonics*, **2013**, 6, 73-87	3.1	33
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	5	32
32	Single-cell analysis using Fourier transform infrared microspectroscopy. *Applied Spectroscopy Reviews*, **2017**, 52, 560-587	4.5	32
31	Direct observation of surface isocyanate (NCO) formation during the CO+NO reaction on Pt{100}. *Physical Chemistry Chemical Physics*, **1999**, 1, 4909-4912	3.6	26
30	Comparison of transmission and transflectance mode FTIR imaging of biological tissue. *Analyst, The* , **2015**, 140, 2383-92	5	24
29	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, 677-92		22

28	Whole organ cross-section chemical imaging using label-free mega-mosaic FTIR microscopy. *Analyst, The*, **2013**, 138, 7066-9	5	22
27	Design and biological evaluation of synthetic retinoids: probing length vs. stability vs. activity. *Molecular BioSystems*, **2013**, 9, 3124-34		22
26	Comparability of Raman Spectroscopic Configurations: A Large Scale Cross-Laboratory Study. *Analytical Chemistry*, **2020**, 92, 15745-15756	7.8	22
25	Substrate contributions in micro-ATR of thin samples: implications for analysis of cells, tissue and biological fluids. *Analyst, The*, **2013**, 138, 4139-46	5	21
24	Anticancer drug impact on DNA - a study by neutron spectroscopy coupled with synchrotron-based FTIR and EXAFS. *Physical Chemistry Chemical Physics*, **2019**, 21, 4162-4175	3.6	20
23	Exploiting CELLULOSE SYNTHASE (CESA) Class Specificity to Probe Cellulose Microfibril Biosynthesis. *Plant Physiology*, **2018**, 177, 151-167	6.6	17
22	Analysis of Fixed and Live Single Cells Using Optical Photothermal Infrared with Concomitant Raman Spectroscopy. *Analytical Chemistry*, **2021**, 93, 3938-3950	7.8	15
21	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	5	14
20	Chemotherapeutic Targets in Osteosarcoma: Insights from Synchrotron-MicroFTIR and Quasi-Elastic Neutron Scattering. *Journal of Physical Chemistry B*, **2019**, 123, 6968-6979	3.4	14
19	FTIR imaging of the molecular burden around A□deposits in an early-stage 3-Tg-APP-PSP1-TAU mouse model of Alzheimer□s disease. *Analyst, The*, **2016**, 142, 156-168	5	13
18	Increased optical pathlength through aqueous media for the infrared microanalysis of live cells. *Analytical and Bioanalytical Chemistry*, **2018**, 410, 5779-5789	4.4	10
17	Automated high-throughput assessment of prostate biopsy tissue using infrared spectroscopic chemical imaging **2014**,		7
16	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	4.6	6
15	Fatty-Acid Uptake in Prostate Cancer Cells Using Dynamic Microfluidic Raman Technology. *Molecules*, **2020**, 25,	4.8	4
14	A novel FTIR analysis method for rapid high-confidence discrimination of esophageal cancer. *Infrared Physics and Technology*, **2019**, 102, 103007	2.7	3
13	Analysis of single eukaryotic cells using Raman Tweezers. *Methods in Molecular Biology*, **2012**, 853, 151-67	1.4	2
12	A de-waxing methodology for scanning probe microscopy. *Analytical Methods*, **2020**, 12, 3397-3403	3.2	2
11	Exploring AdaBoost and Random Forests machine learning approaches for infrared pathology on unbalanced data sets. *Analyst, The*, **2021**, 146, 5880-5891	5	2

List of Publications

10	Breast cancer detection using infrared spectral pathology from H&E stained tissue on glass slides. *Clinical Spectroscopy*, **2021**, 3, 100008	16	2
9	Optimization Synthesis and Biosensing Performance of an Acrylate-Based Hydrogel as an Optical Waveguiding Sensing Film. *Analytical Chemistry*, **2020**, 92, 14907-14914	7.8	1
8	Vibrational Spectroscopy from Surfaces333-390		1
7	Compliance of the fish outflow tract is altered by thermal acclimation through connective tissue remodelling. *Journal of the Royal Society Interface*, **2021**, 18, 20210492	4.1	1
6	Insight into metastatic oral cancer tissue from novel analyses using FTIR spectroscopy and aperture IR-SNOM. *Analyst, The*, **2021**, 146, 4895-4904	5	1
5	Image fusion of IR and optical microscopy for mapping of biomolecules in tissue. *Analyst, The*, **2021**, 146, 5848-5854	5	1
4	Agarose-Chitosan Based Hydrogel Waveguide Matrix: Comparison Synthesis and Performance for Optical Leaky Waveguide (OLW) Biosensor. *Solid State Phenomena*,301, 87-96	0.4	0
3	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	6.6	0
2	Prediction of malignant transformation in oral epithelial dysplasia using infrared absorbance spectra.. *PLoS ONE*, **2022**, 17, e0266043	3.7	0
1	Renal cell carcinoma: A prognostic target for spectral pathology.. *Journal of Clinical Oncology*, **2013**, 31, 459-459	2.2	