Ishan Barman

List of Publications by Year
in descending order

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117	4,813	94269	106150
papers	citations	37 h-index	65 g-index

125	125	125	5382
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Vibrational spectroscopy for decoding cancer microbiota interactions: Current evidence and future perspective. Seminars in Cancer Biology, 2022, 86, 743-752.	4.3	11
2	Label-Free Spectroscopic SARS-CoV-2 Detection on Versatile Nanoimprinted Substrates. Nano Letters, 2022, 22, 3620-3627.	4.5	46
3	A Dualâ€Modal Singleâ€Antibody Plasmonic Spectroâ€Immunoassay for Detection of Small Molecules. Small, 2022, 18, e2200090.	5.2	14
4	Surfaceâ€enhanced Raman scattering: An emerging tool for sensing cellular function. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2022, 14, e1802.	3.3	12
5	Label-Free Vibrational and Quantitative Phase Microscopy Reveals Remarkable Pathogen-Induced Morphomolecular Divergence in Tumor-Derived Cells. ACS Sensors, 2022, 7, 1495-1505.	4.0	5
6	Label-Free Morpho-Molecular Imaging for Studying the Differential Interaction of Black Phosphorus with Tumor Cells. Nanomaterials, 2022, 12, 1994.	1.9	1
7	Laser induced breakdown spectroscopy with machine learning reveals lithium-induced electrolyte imbalance in the kidneys. Journal of Pharmaceutical and Biomedical Analysis, 2021, 194, 113805.	1.4	7
8	Silverâ€Coated Disordered Silicon Nanowires Provide Highly Sensitive Labelâ€Free Glycated Albumin Detection through Molecular Trapping and Plasmonic Hotspot Formation. Advanced Healthcare Materials, 2021, 10, e2001110.	3.9	23
9	Furinâ€Mediated Selfâ€Assembly of Olsalazine Nanoparticles for Targeted Raman Imaging of Tumors. Angewandte Chemie - International Edition, 2021, 60, 3923-3927.	7.2	32
10	Coarse Raman and optical diffraction tomographic imaging enable label-free phenotyping of isogenic breast cancer cells of varying metastatic potential. Biosensors and Bioelectronics, 2021, 175, 112863.	5.3	24
11	Molecular Radiative Energy Shifts under Strong Oscillating Fields. Small, 2021, 17, 2007244.	5.2	2
12	Controlled Nanoscale Cracking of Graphene Ribbons by Polymer Shrinkage. ACS Applied Nano Materials, 2021, 4, 1529-1539.	2.4	0
13	Furinâ€Mediated Selfâ€Assembly of Olsalazine Nanoparticles for Targeted Raman Imaging of Tumors. Angewandte Chemie, 2021, 133, 3969-3973.	1.6	4
14	A Programmable DNAâ€Silicificationâ€Based Nanocavity for Singleâ€Molecule Plasmonic Sensing. Advanced Materials, 2021, 33, e2005133.	11.1	27
15	Titelbild: Furinâ€Mediated Selfâ€Assembly of Olsalazine Nanoparticles for Targeted Raman Imaging of Tumors (Angew. Chem. 8/2021). Angewandte Chemie, 2021, 133, 3869-3869.	1.6	2
16	Lithium from breastâ€milk inhibits thyroid iodine uptake and hormone production, which are remedied by maternal iodine supplementation. Bipolar Disorders, 2021, 23, 615-625.	1.1	5
17	Silver-coated silicon nanowire platform discriminates genomic DNA from normal and malignant human epithelial cells using label-free Raman spectroscopy. Materials Science and Engineering C, 2021, 122, 111951.	3.8	10
18	Spectroscopyâ€Assisted Labelâ€free Molecular Analysis of Live Cell Surface with Vertically Aligned Plasmonic Nanopillars. Small, 2021, 17, 2100161.	5.2	10

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19	Nanowire Assisted Mechanotyping of Cellular Metastatic Potential. Advanced Functional Materials, 2021, 31, 2101638.	7.8	3
20	Utilizing pulse dynamics for non-invasive Raman spectroscopy of blood analytes. Biosensors and Bioelectronics, 2021, 180, 113115.	5.3	11
21	Role of Aqueous-Phase Calcination in Synthesis of Ultra-Stable Dye-Embedded Fluorescent Nanoparticles for Cellular Probing. Applied Spectroscopy, 2021, 75, 1012-1021.	1.2	2
22	Plexcitonic Quasiâ€Bound States in the Continuum. Small, 2021, 17, 2102596.	5.2	6
23	Raman and quantitative phase imaging allow morpho-molecular recognition of malignancy and stages of B-cell acute lymphoblastic leukemia. Biosensors and Bioelectronics, 2021, 190, 113403.	5.3	19
24	Advancing Raman spectroscopy from research to clinic: Translational potential and challenges. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 260, 119957.	2.0	43
25	Raman Spectroscopy and Machine Learning Reveals Early Tumor Microenvironmental Changes Induced by Immunotherapy. Cancer Research, 2021, 81, 5745-5755.	0.4	13
26	Nanotheranostic Probe Built on Methylene Blue Loaded Cucurbituril [8] and Gold Nanorod: Targeted Phototherapy in Combination with SERS Imaging on Breast Cancer Cells. Journal of Physical Chemistry B, 2021, 125, 13415-13424.	1.2	15
27	Optical properties of symmetry-breaking tetrahedral nanoparticles. Nanoscale, 2020, 12, 832-842.	2.8	13
28	Identification and Staging of B-Cell Acute Lymphoblastic Leukemia Using Quantitative Phase Imaging and Machine Learning. ACS Sensors, 2020, 5, 3281-3289.	4.0	21
29	Emerging trends in biomedical imaging and disease diagnosis using Raman spectroscopy. , 2020, , 623-652.		4
30	Cancer cells display increased migration and deformability in pace with metastatic progression. FASEB Journal, 2020, 34, 9307-9315.	0.2	33
31	Rapid, Labelâ€free Optical Spectroscopy Platform for Diagnosis of Heparinâ€Induced Thrombocytopenia. Angewandte Chemie, 2020, 132, 6028-6034.	1.6	3
32	Rapid, Labelâ€free Optical Spectroscopy Platform for Diagnosis of Heparinâ€Induced Thrombocytopenia. Angewandte Chemie - International Edition, 2020, 59, 5972-5978.	7.2	27
33	A Fluorescence and Surface-Enhanced Raman Spectroscopic Dual-Modal Aptasensor for Sensitive Detection of Cyanotoxins. ACS Sensors, 2020, 5, 1419-1426.	4.0	72
34	Compositeâ€Scattering Plasmonic Nanoprobes for Labelâ€Free, Quantitative Biomolecular Sensing. Small, 2019, 15, e1901165.	5.2	21
35	Rapid, quantitative determination of aggregation and particle formation for antibody drug conjugate therapeutics with label-free Raman spectroscopy. Analytica Chimica Acta, 2019, 1081, 138-145.	2.6	24
36	Shedding Light on the Trehaloseâ€Enabled Mucopermeation of Nanoparticles with Labelâ€Free Raman Spectroscopy. Small, 2019, 15, e1901679.	5.2	10

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37	Decoding Live Cell Interactions with Multi-Nanoparticle Systems: Differential Implications for Uptake, Trafficking, and Gene Regulation. ACS Applied Materials & Interfaces, 2019, 11, 33659-33666.	4.0	3
38	Ultrasensitive Detection of Hepatotoxic Microcystin Production from Cyanobacteria Using Surface-Enhanced Raman Scattering Immunosensor. ACS Sensors, 2019, 4, 1203-1210.	4.0	44
39	Identification of post-consumer plastics using laser-induced breakdown spectroscopy. Polymer Testing, 2019, 76, 101-108.	2.3	42
40	Label-Free Raman Spectroscopy Reveals Signatures of Radiation Resistance in the Tumor Microenvironment. Cancer Research, 2019, 79, 2054-2064.	0.4	53
41	Reagent-Free and Rapid Assessment of T Cell Activation State Using Diffraction Phase Microscopy and Deep Learning. Analytical Chemistry, 2019, 91, 3405-3411.	3.2	22
42	Towards rational design and optimization of near-field enhancement and spectral tunability of hybrid core-shell plasmonic nanoprobes. Scientific Reports, 2019, 9, 16071.	1.6	11
43	Furin-mediated intracellular self-assembly of olsalazine nanoparticles for enhanced magnetic resonance imaging and tumour therapy. Nature Materials, 2019, 18, 1376-1383.	13.3	164
44	Integration of diffraction phase microscopy and Raman imaging for labelâ€free morphoâ€molecular assessment of live cells. Journal of Biophotonics, 2019, 12, e201800291.	1.1	15
45	Self-Folding Hybrid Graphene Skin for 3D Biosensing. Nano Letters, 2019, 19, 1409-1417.	4.5	49
46	Drop-coating deposition surface-enhanced Raman spectroscopy on silver substrates for biofluid analysis. , 2019, , .		1
47	Polyindole/cadmium sulphide nanocomposite based turn-on, multi-ion fluorescence sensor for detection of Cr3+, Fe3+ and Sn2+ ions. Sensors and Actuators B: Chemical, 2018, 269, 195-202.	4.0	72
48	Labelâ€free spectrochemical probe for determination of hemoglobin glycation in clinical blood samples. Journal of Biophotonics, 2018, 11, e201700397.	1.1	7
49	Differential diagnosis of otitis media with effusion using labelâ€free Raman spectroscopy: A pilot study. Journal of Biophotonics, 2018, 11, e201700259.	1.1	14
50	Label-free Raman spectroscopy provides early determination and precise localization of breast cancer-colonized bone alterations. Chemical Science, 2018, 9, 743-753.	3.7	25
51	Leveraging coffeeâ€ring effect on plasmonic paper substrate for sensitive analyte detection using Raman spectroscopy. Journal of Raman Spectroscopy, 2018, 49, 1552-1558.	1.2	15
52	Raman Spectroscopy for the Diagnosis ofÂIntratubular Triamterene Crystallization. Kidney International Reports, 2018, 3, 997-1003.	0.4	5
53	Mapping the genetic basis of breast microcalcifications and their role in metastasis. Scientific Reports, 2018, 8, 11067.	1.6	22
54	Raman Enhancement of Blood Constituent Proteins Using Graphene. ACS Photonics, 2018, 5, 2978-2982.	3.2	29

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55	Raman spectroscopy with a 1064-nm wavelength laser as a potential molecular tool for prostate cancer diagnosis: a pilot study. Journal of Biomedical Optics, 2018, 23, 1.	1.4	12
56	Noninvasive Monitoring of Blood Glucose with Raman Spectroscopy. Accounts of Chemical Research, 2017, 50, 264-272.	7.6	180
57	Mechanical Trap Surfaceâ€Enhanced Raman Spectroscopy for Threeâ€Dimensional Surface Molecular Imaging of Single Live Cells. Angewandte Chemie, 2017, 129, 3880-3884.	1.6	19
58	Feasibility study of a Raman spectroscopic route to drug detection. , 2017, , .		1
59	Mechanical Trap Surfaceâ€Enhanced Raman Spectroscopy for Threeâ€Dimensional Surface Molecular Imaging of Single Live Cells. Angewandte Chemie - International Edition, 2017, 56, 3822-3826.	7.2	71
60	Label-Free Raman Spectroscopy Detects Stromal Adaptations in Premetastatic Lungs Primed by Breast Cancer. Cancer Research, 2017, 77, 247-256.	0.4	52
61	Frontispiece: Mechanical Trap Surfaceâ€Enhanced Raman Spectroscopy for Threeâ€Dimensional Surface Molecular Imaging of Single Live Cells. Angewandte Chemie - International Edition, 2017, 56, .	7.2	1
62	Frontispiz: Mechanical Trap Surfaceâ€Enhanced Raman Spectroscopy for Threeâ€Dimensional Surface Molecular Imaging of Single Live Cells. Angewandte Chemie, 2017, 129, .	1.6	0
63	Objective identification of dental abnormalities with multispectral fluorescence imaging. Journal of Biophotonics, 2017, 10, 1279-1286.	1.1	12
64	Painting and heating: A nonconventional, scalable route to sensitive biomolecular analysis with plasmonâ€enhanced spectroscopy. Journal of Raman Spectroscopy, 2017, 48, 1365-1374.	1.2	8
65	Label-free characterization of ultra violet-radiation-induced changes in skin fibroblasts with Raman spectroscopy and quantitative phase microscopy. Scientific Reports, 2017, 7, 10829.	1.6	15
66	Exploring Morphological and Biochemical Linkages in Fungal Growth with Labelâ€Free Light Sheet Microscopy and Raman Spectroscopy. ChemPhysChem, 2017, 18, 72-78.	1.0	26
67	Organ-specific isogenic metastatic breast cancer cell lines exhibit distinct Raman spectral signatures and metabolomes. Oncotarget, 2017, 8, 20266-20287.	0.8	41
68	Leveraging the Attributes of Mucor hiemalis-Derived Silver Nanoparticles for a Synergistic Broad-Spectrum Antimicrobial Platform. Frontiers in Microbiology, 2016, 7, 1984.	1.5	269
69	Rapid Identification of Biotherapeutics with Label-Free Raman Spectroscopy. Analytical Chemistry, 2016, 88, 4361-4368.	3.2	31
70	Real-time fingerprinting of structural isomers using laser induced breakdown spectroscopy. Analyst, The, 2016, 141, 3077-3083.	1.7	14
71	Ultrahigh affinity Raman probe for targeted live cell imaging of prostate cancer. Chemical Science, 2016, 7, 6779-6785.	3.7	42
72	Engineering tailored nanoparticles with microbes: quo vadis?. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2016, 8, 316-330.	3.3	389

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73	Noninvasive Detection of Inflammatory Changes in White Adipose Tissue by Label-Free Raman Spectroscopy. Analytical Chemistry, 2016, 88, 2140-2148.	3.2	22
74	An impediment to random walk: trehalose microenvironment drives preferential endocytic uptake of plasmonic nanoparticles. Chemical Science, 2016, 7, 3730-3736.	3.7	14
75	Integration of protein tethering in a rapid and label-free SERS screening platform for drugs of abuse. Chemical Communications, 2016, 52, 9016-9019.	2.2	26
76	Less is more: Avoiding the LIBS dimensionality curse through judicious feature selection for explosive detection. Scientific Reports, 2015, 5, 13169.	1.6	53
77	Raman spectroscopic sensing of carbonate intercalation in breast microcalcifications at stereotactic biopsy. Scientific Reports, 2015, 5, 9907.	1.6	31
78	Discerning the differential molecular pathology of proliferative middle ear lesions using Raman spectroscopy. Scientific Reports, 2015, 5, 13305.	1.6	30
79	Multiplexed detection of serological cancer markers with plasmon-enhanced Raman spectro-immunoassay. Chemical Science, 2015, 6, 3906-3914.	3.7	96
80	Noise in biological Raman spectroscopy. , 2015, , .		7
81	Multi-color reflectance imaging of middle ear pathology in vivo. Analytical and Bioanalytical Chemistry, 2015, 407, 3277-3283.	1.9	21
82	Pursuing shell-isolated nanoparticle-enhanced Raman spectroscopy (SHINERS) for concomitant detection of breast lesions and microcalcifications. Nanoscale, 2015, 7, 16960-16968.	2.8	38
83	Revealing the trehalose mediated inhibition of protein aggregation through lysozymeâ€“silver nanoparticle interaction. Soft Matter, 2015, 11, 7241-7249.	1.2	28
84	Facile Algae-Derived Route to Biogenic Silver Nanoparticles: Synthesis, Antibacterial, and Photocatalytic Properties. Langmuir, 2015, 31, 11605-11612.	1.6	479
85	Emerging trends in optical sensing of glycemic markers for diabetes monitoring. TrAC - Trends in Analytical Chemistry, 2015, 64, 100-108.	5.8	44
86	Non-Gated Laser Induced Breakdown Spectroscopy Provides a Powerful Segmentation Tool on Concomitant Treatment of Characteristic and Continuum Emission. PLoS ONE, 2014, 9, e103546.	1.1	16
87	Shedding Light on the Extinctionâ€Enhancement Duality in Gold Nanostarâ€Enhanced Raman Spectroscopy. Angewandte Chemie - International Edition, 2014, 53, 14115-14119.	7.2	74
88	Anatomy of noise in quantitative biological Raman spectroscopy. Bioanalysis, 2014, 6, 411-421.	0.6	26
89	Multiwavelength Fluorescence Otoscope for Video-Rate Chemical Imaging of Middle Ear Pathology. Analytical Chemistry, 2014, 86, 10454-10460.	3.2	22
90	Spectroscopic approach for dynamic bioanalyte tracking with minimal concentration information. Scientific Reports, 2014, 4, 7013.	1.6	38

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91	Development and comparative assessment of Raman spectroscopic classification algorithms for lesion discrimination in stereotactic breast biopsies with microcalcifications. Journal of Biophotonics, 2013, 6, 371-381.	1.1	31
92	Toward the Development of Raman Spectroscopy as a Nonperturbative Online Monitoring Tool for Gasoline Adulteration. Analytical Chemistry, 2013, 85, 1846-1851.	3.2	21
93	Raman spectroscopy provides a powerful, rapid diagnostic tool for the detection of tuberculous meningitis in ex vivo cerebrospinal fluid samples. Journal of Biophotonics, 2013, 6, 567-572.	1.1	25
94	Diagnostic power of diffuse reflectance spectroscopy for targeted detection of breast lesions with microcalcifications. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 471-476.	3.3	43
95	Application of Raman Spectroscopy to Identify Microcalcifications and Underlying Breast Lesions at Stereotactic Core Needle Biopsy. Cancer Research, 2013, 73, 3206-3215.	0.4	82
96	A facile and real-time spectroscopic method for biofluid analysis in point-of-care diagnostics. Bioanalysis, 2013, 5, 1853-1861.	0.6	6
97	Precision of Raman Spectroscopy Measurements in Detection of Microcalcifications in Breast Needle Biopsies. Analytical Chemistry, 2012, 84, 6715-6722.	3.2	16
98	Incorporation of Support Vector Machines in the LIBS Toolbox for Sensitive and Robust Classification Amidst Unexpected Sample and System Variability. Analytical Chemistry, 2012, 84, 2686-2694.	3.2	116
99	Raman Spectroscopy Provides a Powerful Diagnostic Tool for Accurate Determination of Albumin Glycation. PLoS ONE, 2012, 7, e32406.	1.1	141
100	Raman Spectroscopy-Based Sensitive and Specific Detection of Glycated Hemoglobin. Analytical Chemistry, 2012, 84, 2474-2482.	3.2	118
101	Investigation of Noise-Induced Instabilities in Quantitative Biological Spectroscopy and Its Implications for Noninvasive Glucose Monitoring. Analytical Chemistry, 2012, 84, 8149-8156.	3.2	44
102	Selective sampling using confocal Raman spectroscopy provides enhanced specificity for urinary bladder cancer diagnosis. Analytical and Bioanalytical Chemistry, 2012, 404, 3091-3099.	1.9	50
103	Portable Optical Fiber Probe-Based Spectroscopic Scanner for Rapid Cancer Diagnosis: A New Tool for Intraoperative Margin Assessment. PLoS ONE, 2012, 7, e30887.	1.1	52
104	Effect of photobleaching on calibration model development in biological Raman spectroscopy. Journal of Biomedical Optics, 2011, 16, 011004.	1.4	30
105	Rapid and accurate determination of tissue optical properties using least-squares support vector machines. Biomedical Optics Express, 2011, 2, 592.	1.5	33
106	Combined confocal Raman and quantitative phase microscopy system for biomedical diagnosis. Biomedical Optics Express, 2011, 2, 2484.	1.5	85
107	Laser-induced breakdown spectroscopy-based investigation and classification of pharmaceutical tablets using multivariate chemometric analysis. Talanta, 2011, 87, 53-59.	2.9	112
108	A novel non-imaging optics based Raman spectroscopy device for transdermal blood analyte measurement. AIP Advances, 2011, 1, 32175.	0.6	34

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109	Investigation of the specificity of Raman spectroscopy in non-invasive blood glucose measurements. Analytical and Bioanalytical Chemistry, 2011, 400, 2871-2880.	1.9	69
110	Wavelength selection-based nonlinear calibration for transcutaneous blood glucose sensing using Raman spectroscopy. Journal of Biomedical Optics, 2011, 16, 087009.	1.4	42
111	Optical sectioning using singleâ€planeâ€illumination Raman imaging. Journal of Raman Spectroscopy, 2010, 41, 1099-1101.	1.2	19
112	Robust Spectroscopic Calibration for Transcutaneous Glucose Monitoring by Modeling of Diffusion Kinetics. , 2010, , .		1
113	Development of Robust Calibration Models Using Support Vector Machines for Spectroscopic Monitoring of Blood Glucose. Analytical Chemistry, 2010, 82, 9719-9726.	3.2	76
114	Accurate Spectroscopic Calibration for Noninvasive Glucose Monitoring by Modeling the Physiological Glucose Dynamics. Analytical Chemistry, 2010, 82, 6104-6114.	3.2	57
115	Turbidity-Corrected Raman Spectroscopy for Blood Analyte Detection. Analytical Chemistry, 2009, 81, 4233-4240.	3.2	53
116	Transcutaneous Measurement of Blood Analyte Concentration Using Raman Spectroscopy. , 2008, , .		0
117	Analysis of a new combined stretch and pressure sensor for internal nodule palpation. Sensors and Actuators A: Physical, 2006, 125, 210-216.	2.0	20