Roumiana Tsenkova

List of Publications by Year
in descending order

95 papers	2,711 citations	196777 29 h-index	223390 49 g-index
108 all docs	108 docs citations	108 times ranked	1629 citing authors

#	Article	IF	Citations
1	Analysing the water spectral pattern by near-infrared spectroscopy and chemometrics as a dynamic multidimensional biomarker in preservation: rice germ storage monitoring. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 265, 120396.	2.0	21
2	Artificial Neural Network Applied to Near-Infrared Spectra of Raw Milk for Dairy Cow Feeding Management. , 2022, , 297-306.		0
3	Real-Time Near-Infrared Spectroscopy of Udder Tissue for Mastitis Diagnosis. , 2022, , 235-245.		0
4	Non-destructive Somatic Cell Count Measurement Using Near-Infrared Spectra of Milk in the 400â€"1,100Ânm Short Wavelength Region. , 2022, , 113-126.		0
5	Artificial Intelligence in Dairy Farming: The Near-Infrared Approach. , 2022, , 307-314.		0
6	Two-Dimensional Correlation Analysis of the Near-Infrared Spectra of Milk and Milk Constituents: Temporal Study of Postpartum Adaptation in Dairy Cows. , 2022, , 261-273.		0
7	Measurement of Somatic Cell Count in the 700â€"1,100Ânm Short Wavelength Region Using PLS Regression and Referenced Data. , 2022, , 127-136.		0
8	Two-Dimensional Near-Infrared Correlation Spectroscopy of an Individual Cowâ€™s Milk for Functional Study of Somatic Cell Count Changes in Milk. , 2022, , 277-288.		0
9	Estrus Detection in Dairy Cows Using Near-Infrared Spectroscopy and Aquaphotomics. , 2022, , 247-260.		0
10	Conclusion and Future Perspectives. , 2022, , 317-328.		0
11	Milk Fat Measurement. , 2022, , 21-33.		0
12	Near-Infrared Spectroscopy: A New Diagnostic Tool for Determination of Somatic Cell Count. , 2022, , 99-112.		0
13	Aquaphotomics for Bio-diagnostics: Advancing Beyond the State of the Art. , 2022, , 13-17.		0
14	Mastitis Influence on Milk Composition Measurement in the Spectral Region from 1,100 to 2,400Ânm. , 2022, , 183-190.		0
15	Influence of Individual Characteristics of Each Cow on Milk Composition Measurement in the Spectral Region from 1,100 to 2,400Ânm. , 2022, , 161-173.		0
16	Milk Fatty Acids Measurement. , 2022, , 69-95.		0
17	Near-Infrared Spectra of Udder Quarter Foremilk for Measurement of Both Somatic Cell Count and Absolute Electrical Conductivity and for Diagnosis of Mastitis. , 2022, , 223-234.		0
18	Interrelation Between the Composition and Near-Infrared Spectra of Milk, Blood Plasma and Rumen Juice of Lactating Cows. , 2022, , 191-199.		0

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19	Near-Infrared Spectra of Urine for Mastitis Diagnostics. , 2022, , 201-209.		0
20	Mastitis Influence on Protein Measurement in the Spectral Region from 700 to 1,100 nm. , 2022, , 175-182.		0
21	Aquaphotomics Research of Cold Stress in Soybean Cultivars with Different Stress Tolerance Ability: Early Detection of Cold Stress Response. Molecules, 2022, 27, 744.	1.7	8
22	Aquaphotomics for monitoring of groundwater using short-wavelength near-infrared spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 279, 121378.	2.0	8
23	Changes in Water Properties in Human Tissue after Double Filtration Plasmapheresisâ€"A Case Study. Molecules, 2022, 27, 3947.	1.7	2
24	Integration of near-infrared spectroscopy and aquaphotomics for discrimination of cultured cancerous cells using phenol red. Chemometrics and Intelligent Laboratory Systems, 2022, 227, 104611.	1.8	5
25	Near infrared aquaphotomics study on common dietary fatty acids in cow's liquid, thawed milk. Food Control, 2021, 122, 107805.	2.8	17
26	Details of glucose solution near-infrared band assignment revealed the anomer difference in the structure and the interaction with water molecules. Journal of Molecular Liquids, 2021, 324, 114764.	2.3	4
27	Relating Near-Infrared Light Path-Length Modifications to the Water Content of Scattering Media in Near-Infrared Spectroscopy: Toward a New Bouguerâ€"Beerâ€"Lambert Law. Analytical Chemistry, 2021, 93, 6817-6823.	3.2	12
28	Water Spectral Patterns Reveals Similarities and Differences in Rice Germination and Induced Degenerated Callus Development. Plants, 2021, 10, 1832.	1.6	2
29	Real-Time Monitoring of Yogurt Fermentation Process by Aquaphotomics Near-Infrared Spectroscopy. Sensors, 2021, 21, 177.	2.1	27
30	Aquaphotomics Reveals Subtle Differences between Natural Mineral, Processed and Aged Water Using Temperature Perturbation Near-Infrared Spectroscopy. Applied Sciences (Switzerland), 2021, 11, 9337.	1.3	6
31	Aquaphotomics approach for monitoring different steps of purification process in water treatment systems. Talanta, 2020, 206, 120253.	2.9	33
32	A Novel Tool for Visualization of Water Molecular Structure and Its Changes, Expressed on the Scale of Temperature Influence. Molecules, 2020, 25, 2234.	1.7	8
33	Nearâ€infrared multivariate model transfer for quantification of different hydrogen bonding species in aqueous systems. Journal of Chemometrics, 2020, 34, e3274.	0.7	6
34	Temperature dependence analysis of the NIR spectra of liquid water confirms the existence of two phases, one of which is in a coherent state. Journal of Molecular Liquids, 2019, 292, 111449.	2.3	17
35	Aquaphotomicsâ€"From Innovative Knowledge to Integrative Platform in Science and Technology. Molecules, 2019, 24, 2742.	1.7	87
36	Recent advancements in plant aquaphotomics â€" Towards understanding of â€œdrying without dyingâ€ phenomenon and its implications. NIR News, 2019, 30, 22-25.	1.6	2

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37	Water molecular structure underpins extreme desiccation tolerance of the resurrection plant Haberlea rhodopensis. Scientific Reports, 2019, 9, 3049.	1.6	56
38	Rapid bacteria selection using Aquaphotomics and near infrared spectroscopy. , 2019, , 65-69.		1
39	Quantification of anomeric structural changes of glucose solutions using near-infrared spectra. Carbohydrate Research, 2018, 463, 40-46.	1.1	12
40	Essentials of Aquaphotomics and Its Chemometrics Approaches. Frontiers in Chemistry, 2018, 6, 363.	1.8	99
41	Improving accuracy and reproducibility of vibrational spectra for diluted solutions. Analytica Chimica Acta, 2017, 955, 86-97.	2.6	10
42	Monitoring of water spectral patterns of lactobacilli development as a tool for rapid selection of probiotic candidates. Journal of Near Infrared Spectroscopy, 2017, 25, 423-431.	0.8	13
43	Aquaphotomics Tenth Anniversary. NIR News, 2016, 27, 45-47.	1.6	2
44	Detection of urinary estrogen conjugates and creatinine using near infrared spectroscopy in Bornean orangutans (Pongo Pygmaeus). Primates, 2016, 57, 51-59.	0.7	16
45	Water spectral pattern as holistic marker for water quality monitoring. Talanta, 2016, 147, 598-608.	2.9	55
46	NIR detection of honey adulteration reveals differences in water spectral pattern. Food Chemistry, 2016, 194, 873-880.	4.2	130
47	Evaluating Spectral Signals to Identify Spectral Error. PLoS ONE, 2016, 11, e0146249.	1.1	9
48	Near Infrared Spectra of Body Fluids Reveal the Relationship between Water Spectral Pattern and the Oestrous Cycle. NIR News, 2015, 26, 4-5.	1.6	3
49	Monitoring of Water Spectral Pattern Reveals Differences in Probiotics Growth When Used for Rapid Bacteria Selection. PLoS ONE, 2015, 10, e0130698.	1.1	30
50	Detection of UV-induced cyclobutane pyrimidine dimers by near-infrared spectroscopy and aquaphotomics. Scientific Reports, 2015, 5, 11808.	1.6	48
51	Water revealed as molecular mirror when measuring low concentrations of sugar with near infrared light. Analytica Chimica Acta, 2015, 896, 52-62.	2.6	53
52	Aquaphotomics: Near Infrared Spectroscopy and Water States in Biological Systems. Sub-Cellular Biochemistry, 2015, 71, 189-211.	1.0	38
53	Water Molecular System Dynamics Associated with Amyloidogenic Nucleation as Revealed by Real Time Near Infrared Spectroscopy and Aquaphotomics. PLoS ONE, 2014, 9, e101997.	1.1	57
54	Water Confined in the Local Field of Ions. ChemPhysChem, 2014, 15, 4077-4086.	1.0	40

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55	A new screening method for recombinant Saccharomyces cerevisiae strains based on their xylose fermentation ability measured by near infrared spectroscopy. Analytical Methods, 2014, 6, 6628.	1.3	9
56	Complex assessment of grain quality using image and spectra analyses. Journal of Food Measurement and Characterization, 2014, 8, 180-194.	1.6	1
57	Characterisation of hydrogen bond perturbations in aqueous systems using aquaphotomics and multivariate curve resolution-alternating least squares. Analytica Chimica Acta, 2013, 759, 8-20.	2.6	73
58	Real-Time near Infrared Spectral Monitoring of Mammary Gland for Inflammation Diagnosis in Dairy Cows. Journal of Near Infrared Spectroscopy, 2013, 21, 427-433.	0.8	12
59	Spectral pattern of urinary water as a biomarker of estrus in the giant panda. Scientific Reports, 2012, 2, 856.	1.6	57
60	Extracellular metabolites play a dominant role in near-infrared spectroscopic quantification of bacteria at food-safety level concentrations. Analytical Methods, 2012, 4, 1389.	1.3	13
61	Quality assessment of grain samples using spectra analysis. Biosystems Engineering, 2012, 111, 251-260.	1.9	3
62	Near Infrared Spectroscopy As High-Throughput Technology for Screening of Xylose-Fermenting Recombinant <i>Saccharomyces cerevisiae</i> Strains. Analytical Chemistry, 2011, 83, 4023-4029.	3.2	16
63	Near Infrared Spectroscopy for Mastitis Diagnosis. The Review of Laser Engineering, 2011, 39, 250-254.	0.0	0
64	Investigation of the Potential of Near Infrared Spectroscopy for the Detection and Quantification of Pesticides in Aqueous Solution. American Journal of Analytical Chemistry, 2011, 02, 53-62.	0.3	21
65	Detection of bacterial contamination in milk using NIR spectroscopy and two classification methods - SIMCA and Neuro â€" Fuzzy classifier. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 225-229.	0.4	6
66	Near infrared spectroscopy and aquaphotomics: Novel approach for rapid in vivo diagnosis of virus infected soybean. Biochemical and Biophysical Research Communications, 2010, 397, 685-690.	1.0	62
67	Near infrared spectroscopy of urine proves useful for estimating ovulation in giant panda (Ailuropoda melanoleuca). Analytical Methods, 2010, 2, 1671.	1.3	23
68	Double threshold method for mastitis diagnosis based on NIR spectra of raw milk and chemometrics. Biosystems Engineering, 2009, 104, 243-249.	1.9	25
69	Use of near Infrared Hyperspectral Imaging to Identify Water Matrix Co-Ordinates in Mushrooms (<i>Agaricus Bisporus</i>) Subjected to Mechanical Vibration. Journal of Near Infrared Spectroscopy, 2009, 17, 363-371.	0.8	53
70	Near Infrared Spectroscopy Using Short Wavelengths and Leave-One-Cow-Out Cross-Validation for Quantification of Somatic Cells in Milk. Journal of Near Infrared Spectroscopy, 2009, 17, 345-351.	0.8	32
71	Aquaphotomics: Dynamic Spectroscopy of Aqueous and Biological Systems Describes Peculiarities of Water. Journal of Near Infrared Spectroscopy, 2009, 17, 303-313.	0.8	198
72	NATIVE STATE OF METALS IN NON-DIGESTED TISSUES BY PARTIAL LEAST SQUARES REGRESSION ANALYSIS OF VISIBLE AND NEAR-INFRARED SPECTRA. Journal of Toxicological Sciences, 2007, 32, 135-141.	0.7	9

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73	Comparison of the Vibration Mode of Metals in HNO3by a Partial Least-Squares Regression Analysis of Near-Infrared Spectra. Bioscience, Biotechnology and Biochemistry, 2006, 70, 1578-1583.	0.6	18
74	New Method for Spectral Data Classification: Two-Way Moving Window Principal Component Analysis. Applied Spectroscopy, 2006, 60, 884-891.	1.2	21
75	Near Infrared Spectra of Cows' Milk for Milk Quality Evaluation: Disease Diagnosis and Pathogen Identification. Journal of Near Infrared Spectroscopy, 2006, 14, 363-370.	0.8	50
76	AquaPhotomics: Water Absorbance Pattern as a Biological Marker. NIR News, 2006, 17, 13-23.	1.6	15
77	Ex vivo Tissue Discrimination by Visible and Near-Infrared Spectra with Chemometrics. Journal of Veterinary Medical Science, 2006, 68, 1375-1378.	0.3	6
78	Computational simulations and a practical application of moving-window two-dimensional correlation spectroscopy. Journal of Molecular Structure, 2006, 799, 111-120.	1.8	68
79	Other Topics. , 2006, , 341-399.		0
80	A Novel Diagnostic Method for Human Immunodeficiency Virus Type‐1 in Plasma by Near‐Infrared Spectroscopy. Microbiology and Immunology, 2005, 49, 695-701.	0.7	39
81	Prion protein fate governed by metal binding. Biochemical and Biophysical Research Communications, 2004, 325, 1005-1012.	1.0	100
82	Temperature-Dependent Near-Infrared Spectra of Bovine Serum Albumin in Aqueous Solutions: Spectral Analysis by Principal Component Analysis and Evolving Factor Analysis. Applied Spectroscopy, 2003, 57, 1223-1229.	1.2	47
83	Principal Discriminant Variate Method for Classification of Multicollinear Data: Applications to Near-Infrared Spectra of Cow Blood Samples. Applied Spectroscopy, 2002, 56, 488-501.	1.2	14
84	Somatic cell count determination in cow's milk by near-infrared spectroscopy: a new diagnostic tool.. Journal of Animal Science, 2001, 79, 2550.	0.2	88
85	Near infrared spectroscopy for biomonitoring: cow milk composition measurement in a spectral region from 1,100 to 2,400 nanometers.. Journal of Animal Science, 2000, 78, 515.	0.2	115
86	A study of the unfolding process of human serum albumin in the acidic pH region by two-dimensional infrared correlation spectroscopy. AIP Conference Proceedings, 2000, , .	0.3	1
87	Comparison between Conventional Spectral Analysis Methods, Chemometrics, and Two-Dimensional Correlation Spectroscopy in the Analysis of Near-Infrared Spectra of Protein. Applied Spectroscopy, 2000, 54, 978-985.	1.2	56
88	Near-Infrared Spectroscopy for Dairy Management: Measurement of Unhomogenized Milk Composition. Journal of Dairy Science, 1999, 82, 2344-2351.	1.4	183
89	Analysis of Near-Infrared Spectra of Complicated Biological Fluids by Two-Dimensional Correlation Spectroscopy: Protein and Fat Concentration-Dependent Spectral Changes of Milk. Applied Spectroscopy, 1999, 53, 1582-1594.	1.2	82
90	Two-Dimensional Near-Infrared Correlation Spectroscopy Studies on Protein Denaturation.. Nippon Kagaku Kaishi / Chemical Society of Japan - Chemistry and Industrial Chemistry Journal, 1999, 1999, 637-647.	0.1	2

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91	Determination of human serum albumin and Î³-globulin in a control serum solution by near-infrared spectroscopy and partial least squares regression. Fresenius' Journal of Analytical Chemistry, 1998, 362, 155-161.	1.5	22
92	Two-Dimensional Fourier Transform Near-Infrared Spectroscopy Study of Heat Denaturation of Ovalbumin in Aqueous Solutions. Journal of Physical Chemistry B, 1998, 102, 6655-6662.	1.2	122
93	Measurement of Freezing Process of Agricultural Products by Impedance Spectroscopy. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 89-94.	0.4	3
94	Multivariate Determination of Human Serum Albumin and Î³-Globulin in a Phosphate Buffer Solution by near Infrared Spectroscopy. Journal of Near Infrared Spectroscopy, 1998, 6, 375-381.	0.8	11
95	Fullerene Based Nanomaterials for Biomedical Applications: Engineering, Functionalization and Characterization. Advanced Materials Research, 0, 633, 224-238.	0.3	18