ZoltÃ¡n KovÃ¡cs

List of Publications by Year
in descending order

85 papers	1,369 citations	393982 19 h-index	433756 31 g-index
87 all docs	87 docs citations	87 times ranked	1203 citing authors

#	Article	IF	Citations
1	Essentials of Aquaphotomics and Its Chemometrics Approaches. Frontiers in Chemistry, 2018, 6, 363.	1.8	99
2	Geographical origin identification of pure Sri Lanka tea infusions with electronic nose, electronic tongue and sensory profile analysis. Journal of Chemometrics, 2010, 24, 121-130.	0.7	70
3	Discrimination of mineral waters by electronic tongue, sensory evaluation and chemical analysis. Food Chemistry, 2012, 135, 2947-2953.	4.2	63
4	Synthesis of Lactose-Derived Nutraceuticals from Dairy Waste Whey—a Review. Food and Bioprocess Technology, 2016, 9, 16-48.	2.6	55
5	Water spectral pattern as holistic marker for water quality monitoring. Talanta, 2016, 147, 598-608.	2.9	55
6	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
7	Detection of UV-induced cyclobutane pyrimidine dimers by near-infrared spectroscopy and aquaphotomics. Scientific Reports, 2015, 5, 11808.	1.6	48
8	Historical Evolution and Food Control Achievements of Near Infrared Spectroscopy, Electronic Nose, and Electronic Tongue—Critical Overview. Sensors, 2020, 20, 5479.	2.1	47
9	Aquaphotomics: Near Infrared Spectroscopy and Water States in Biological Systems. Sub-Cellular Biochemistry, 2015, 71, 189-211.	1.0	38
10	Emerging trends of advanced sensor based instruments for meat, poultry and fish quality— a review. Critical Reviews in Food Science and Nutrition, 2020, 60, 3443-3460.	5.4	36
11	The recent advances of near-infrared spectroscopy in dairy production—a review. Critical Reviews in Food Science and Nutrition, 2022, 62, 810-831.	5.4	35
12	Authentication of Tokaj Wine (Hungaricum) with the Electronic Tongue and Near Infrared Spectroscopy. Journal of Food Science, 2019, 84, 3437-3444.	1.5	32
13	Monitoring of Water Spectral Pattern Reveals Differences in Probiotics Growth When Used for Rapid Bacteria Selection. PLoS ONE, 2015, 10, e0130698.	1.1	30
14	Recent Developments in Manufacturing Oligosaccharides with Prebiotic Functions. Advances in Biochemical Engineering/Biotechnology, 2013, 143, 257-295.	0.6	29
15	Factors Influencing the Long-Term Stability of Electronic Tongue and Application of Improved Drift Correction Methods. Biosensors, 2020, 10, 74.	2.3	26
16	Multistage filtration process for efficient treatment of oil-field produced water using ceramic membranes. Desalination and Water Treatment, 2012, 42, 17-23.	1.0	22
17	Smart Sensing System for the Prognostic Monitoring of Bone Health. Sensors, 2016, 16, 976.	2.1	22
18	Comparison of novel sensory panel performance evaluation techniques with e—nose analysis integration. Journal of Chemometrics, 2011, 25, 275-286.	0.7	21

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19	Methods for Improving Image Quality and Reducing Data Load of NIR Hyperspectral Images. Sensors, 2008, 8, 3287-3298.	2.1	20
20	Standard Analytical Methods, Sensory Evaluation, NIRS and Electronic Tongue for Sensing Taste Attributes of Different Melon Varieties. Sensors, 2019, 19, 5010.	2.1	20
21	Standardized Extraction Techniques for Meat Analysis with the Electronic Tongue: A Case Study of Poultry and Red Meat Adulteration. Sensors, 2021, 21, 481.	2.1	20
22	Detecting Low Concentrations of Nitrogen-Based Adulterants in Whey Protein Powder Using Benchtop and Handheld NIR Spectrometers and the Feasibility of Scanning through Plastic Bag. Molecules, 2020, 25, 2522.	1.7	19
23	Aquagrams of Raw Milk for Oestrus Detection in Dairy Cows. Reproduction in Domestic Animals, 2015, 50, 522-525.	0.6	18
24	Electronic Nose for Monitoring Odor Changes of Lactobacillus Species during Milk Fermentation and Rapid Selection of Probiotic Candidates. Foods, 2020, 9, 1539.	1.9	18
25	Trends in artificial aroma sensing by means of electronic nose technologies to advance dairy production â€" a review. Critical Reviews in Food Science and Nutrition, 2023, 63, 234-248.	5.4	18
26	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
27	Classification of Bee Pollen and Prediction of Sensory and Colorimetric Attributesâ€"A Sensometric Fusion Approach by e-Nose, e-Tongue and NIR. Sensors, 2020, 20, 6768.	2.1	17
28	Near infrared aquaphotomics study on common dietary fatty acids in cow's liquid, thawed milk. Food Control, 2021, 122, 107805.	2.8	17
29	Near-Infrared Spectroscopy and Aquaphotomics for Monitoring Mung Bean (Vigna radiata) Sprout Growth and Validation of Ascorbic Acid Content. Sensors, 2021, 21, 611.	2.1	17
30	Origin Identification of Hungarian Honey Using Melissopalynology, Physicochemical Analysis, and Near Infrared Spectroscopy. Molecules, 2021, 26, 7274.	1.7	16
31	Electronic Tongue and Sensory Evaluation for Sensing Apple Juice Taste Attributes. Sensor Letters, 2011, 9, 1273-1281.	0.4	15
32	Near infrared spectroscopy as a rapid method for detecting paprika powder adulteration with corn flour. Acta Periodica Technologica, 2019, , 346-352.	0.5	15
33	Near infrared spectroscopy as an alternative quick method for simultaneous detection of multiple adulterants in whey protein-based sports supplement. Food Control, 2018, 94, 331-340.	2.8	14
34	Detection and Quantification of Tomato Paste Adulteration Using Conventional and Rapid Analytical Methods. Sensors, 2020, 20, 6059.	2.1	14
35	Comparison of six multiclass classifiers by the use of different classification performance indicators. Journal of Chemometrics, 2012, 26, 76-84.	0.7	13
36	Membrane Supported Virus Separation from Biological Solutions. Chemie-Ingenieur-Technik, 2013, 85, 1183-1192.	0.4	13

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37	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
38	Agricultural Potentials of Molecular Spectroscopy and Advances for Food Authentication: An Overview. Processes, 2022, 10, 214.	1.3	13
39	Sweetener Recognition and Taste Prediction of Coke Drinks by Electronic Tongue. IEEE Sensors Journal, 2012, 12, 3119-3123.	2.4	12
40	Sensory Evaluation and Electronic Tongue for Sensing Flavored Mineral Water Taste Attributes. Journal of Food Science, 2013, 78, S1602-S1608.	1.5	12
41	Sensory and Physicochemical Evaluation of Acacia and Linden Honey Adulterated with Sugar Syrup. Sensors, 2020, 20, 4845.	2.1	12
42	Potential of Lactobacillus strains for the production of fermented functional beverages enriched in galacto-oligosaccharides. LWT - Food Science and Technology, 2021, 143, 111097.	2.5	12
43	The impact of membrane pretreatment on the enzymatic production of wheyâ€derived galactoâ€oligosaccharides. Journal of Food Process Engineering, 2018, 41, e12649.	1.5	11
44	Continuous Production of Galacto-Oligosaccharides by an Enzyme Membrane Reactor Utilizing Free Enzymes. Membranes, 2020, 10, 203.	1.4	11
45	Production of highâ€purity galactoâ€oligosaccharides by depleting glucose and lactose from galactoâ€oligosaccharide syrup with yeasts. Yeast, 2020, 37, 515-530.	0.8	11
46	Multicomponent blood lipid analysis by means of near infrared spectroscopy, in geese. Talanta, 2016, 155, 202-211.	2.9	10
47	Effect of sweeteners and storage on compositional and sensory properties of blackberry jams. European Food Research and Technology, 2020, 246, 2187-2204.	1.6	10
48	Electronic Tongue as a Correlative Technique for Modeling Cattle Meat Quality and Classification of Breeds. Foods, 2021, 10, 2283.	1.9	10
49	Artificial Neural Network-Assisted Spectrophotometric Method for Monitoring Fructo-oligosaccharides Production. Food and Bioprocess Technology, 2018, 11, 305-313.	2.6	9
50	Evaluating Spectral Signals to Identify Spectral Error. PLoS ONE, 2016, 11, e0146249.	1.1	9
51	Detection of Monilia Contamination in Plum and Plum Juice with NIR Spectroscopy and Electronic Tongue. Chemosensors, 2021, 9, 355.	1.8	9
52	Enzymatic production of fructo-oligosaccharides from inexpensive and abundant substrates using a membrane reactor system. Separation Science and Technology, 0, , .	1.3	8
53	Production of Liquid Milk Protein Concentrate with Antioxidant Capacity, Angiotensin Converting Enzyme Inhibitory Activity, Antibacterial Activity, and Hypoallergenic Property by Membrane Filtration and Enzymatic Modification of Proteins. Processes, 2020, 8, 871.	1.3	8
54	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

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55	Evaluating the Effect of a Brewery By-Product as Feed Supplementation on the Quality of Eggs by Means of a Human Panel and E-Tongue and E-Nose Analysis. Chemosensors, 2021, 9, 213.	1.8	8
56	Preliminary Study for Inspecting Moisture Content, Dry Matter Content, and Firmness Parameters of Two Date Cultivars Using an NIR Hyperspectral Imaging System. Frontiers in Bioengineering and Biotechnology, 2021, 9, 720630.	2.0	8
57	Recent developments in microbial production of high-purity galacto-oligosaccharides. World Journal of Microbiology and Biotechnology, 2022, 38, 95.	1.7	8
58	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
59	Detecting the Bitterness of Milk-Protein-Derived Peptides Using an Electronic Tongue. Chemosensors, 2022, 10, 215.	1.8	7
60	Formulation of Levocetirizine-Loaded Core–Shell Type Nanofibrous Orally Dissolving Webs as a Potential Alternative for Immediate Release Dosage Forms. Pharmaceutics, 2022, 14, 1442.	2.0	7
61	Bioactive Peptides from Liquid Milk Protein Concentrate by Sequential Tryptic and Microbial Hydrolysis. Processes, 2021, 9, 1688.	1.3	6
62	Revealing the Effect of Heat Treatment on the Spectral Pattern of Unifloral Honeys Using Aquaphotomics. Molecules, 2022, 27, 780.	1.7	6
63	Characterization and Viability Prediction of Commercial Probiotic Supplements under Temperature and Concentration Conditioning Factors by NIR Spectroscopy. Fermentation, 2022, 8, 66.	1.4	5
64	Multi-objective optimal control of ultrafiltration/diafiltration processes. , 2013, , .		4
65	Summary of the 2018 International Diffuse Reflectance Conference (IDRC) software shoot-out. NIR News, 2019, 30, 6-11.	1.6	4
66	Mineral Water Taste Attributes Evaluated By Sensory Panel And Electronic Tongue. , 2009, , .		3
67	NIRS and Aquaphotomics Trace Robusta-to-Arabica Ratio in Liquid Coffee Blends. Molecules, 2022, 27, 388.	1.7	3
68	Application of electronic tongue to soya drink discrimination. Progress in Agricultural Engineering Sciences, 2009, 5, 75-96.	0.5	2
69	Application of near infrared spectroscopy and classical analytical methods for the evaluation of Hungarian honey. Progress in Agricultural Engineering Sciences, 2018, 14, 11-23.	0.5	2
70	Water Spectral Patterns Reveals Similarities and Differences in Rice Germination and Induced Degenerated Callus Development. Plants, 2021, 10, 1832.	1.6	2
71	Effect of n-3 polyunsaturated fatty acid feeding on the fatty acid profile and odor of milk in danbred sows. Journal of Applied Animal Research, 2021, 49, 447-459.	0.4	2
72	Food quality attributes of melon (Cucumis melo L.) influenced by grafting. Progress in Agricultural Engineering Sciences, 2020, 16, 53-66.	0.5	2

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73	Sensory evaluation and electronic tongue analysis for sweetener recognition in coke drinks. , 2011, , .		1
74	Economically optimal control of batch diafiltration processes. , 2013, , .		1
75	New near Infrared Team in Hungary. NIR News, 2016, 27, 21-22.	1.6	1
76	Checking the laboratory reference values with NIR calibrations. NIR News, 2017, 28, 17-20.	1.6	1
77	Application of Visible Aquaphotomics for the Evaluation of Dissolved Chemical Concentrations in Aqueous Solutions. Photonics, 2021, 8, 391.	0.9	1
78	Steps to Visible Aquaphotomics. Lecture Notes in Computer Science, 2020, , 287-297.	1.0	1
79	Rapid bacteria selection using Aquaphotomics and near infrared spectroscopy. , 2019, , 65-69.		1
80	Kinetic behavior of soluble Pectinex Ultra SP-L converting sucrose into fructo-oligosaccharides in batch and continuous fashion. Progress in Agricultural Engineering Sciences, 2020, 16, 81-97.	0.5	1
81	Sensing Basic Tastes by Electronic Tongue Sensors. , 2011, , .		0
82	Közeli-infravörös spektroszkópia: gyors és hatékony eszköz a fruktóztartalom mérésére. Elelmiszervizsgalati Kozlemenyek, 2021, 67, 3249-3258.	0.1	0
83	Near-infrared spectroscopy: rapid and effective tool for measuring fructose content. Elelmiszervizsgalati Kozlemenyek, 2021, 67, 3259-3268.	0.1	0
84	Monitoring Lactobacillus Bulgaricus Growth in Yoghurt by Electrical Impedance. IFMBE Proceedings, 2020, , 158-165.	0.2	0
85	Examination of the effect of type and quantity of sugar on main sensory parameters of homemade oat-flakes biscuit. Progress in Agricultural Engineering Sciences, 2020, 16, 35-43.	0.5	0