

Artur Zdunek

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100
papers

2,629
citations

31
h-index

47
g-index

106
ext. papers

3,254
ext. citations

6.1
avg, IF

5.81
L-index

#	Paper	IF	Citations
100	Use of FT-IR Spectra and PCA to the Bulk Characterization of Cell Wall Residues of Fruits and Vegetables Along a Fraction Process. <i>Food Biophysics</i> , 2013 , 8, 29-42	3.2	210
99	Structure-Related Gelling of Pectins and Linking with Other Natural Compounds: A Review. <i>Polymers</i> , 2018 , 10,	4.5	122
98	Sensing the structural differences in cellulose from apple and bacterial cell wall materials by Raman and FT-IR spectroscopy. <i>Sensors</i> , 2011 , 11, 5543-60	3.8	118
97	Isolation and Characterization of Cellulose from Different Fruit and Vegetable Pomaces. <i>Polymers</i> , 2017 , 9,	4.5	112
96	FT-IR and FT-Raman characterization of non-cellulosic polysaccharides fractions isolated from plant cell wall. <i>Carbohydrate Polymers</i> , 2016 , 154, 48-54	10.3	97
95	The self-assembled network and physiological degradation of pectins in carrot cell walls. <i>Food Hydrocolloids</i> , 2015 , 43, 41-50	10.6	78
94	Raman imaging of changes in the polysaccharides distribution in the cell wall during apple fruit development and senescence. <i>Planta</i> , 2016 , 243, 935-45	4.7	76
93	The biospeckle method for the investigation of agricultural crops: A review. <i>Optics and Lasers in Engineering</i> , 2014 , 52, 276-285	4.6	74
92	Imaging of polysaccharides in the tomato cell wall with Raman microspectroscopy. <i>Plant Methods</i> , 2014 , 10, 14	5.8	68
91	Evaluation of the Nanostructure of Pectin, Hemicellulose and Cellulose in the Cell Walls of Pears of Different Texture and Firmness. <i>Food and Bioprocess Technology</i> , 2014 , 7, 3525-3535	5.1	67
90	Combining FT-IR spectroscopy and multivariate analysis for qualitative and quantitative analysis of the cell wall composition changes during apples development. <i>Carbohydrate Polymers</i> , 2015 , 115, 93-103	10.3	56
89	The relation of apple texture with cell wall nanostructure studied using an atomic force microscope. <i>Carbohydrate Polymers</i> , 2013 , 92, 128-37	10.3	54
88	INFLUENCE OF CELL SIZE AND CELL WALL VOLUME FRACTION ON FAILURE PROPERTIES OF POTATO AND CARROT TISSUE. <i>Journal of Texture Studies</i> , 2005 , 36, 25-43	3.6	48
87	Determination of the elastic properties of tomato fruit cells with an atomic force microscope. <i>Sensors</i> , 2013 , 13, 12175-91	3.8	47
86	CRISPNESS AND CRUNCHINESS JUDGMENT OF APPLES BASED ON CONTACT ACOUSTIC EMISSION. <i>Journal of Texture Studies</i> , 2010 , 41, 75-91	3.6	46
85	Calcium effect on mechanical properties of model cell walls and apple tissue. <i>Journal of Food Engineering</i> , 2011 , 102, 217-223	6	44
84	Study on dietary fibre by Fourier transform-infrared spectroscopy and chemometric methods. <i>Food Chemistry</i> , 2016 , 196, 114-22	8.5	43

83	Relation of biospeckle activity with quality attributes of apples. <i>Sensors</i> , 2011 , 11, 6317-27	3.8	43
82	Evaluation of Structure and Assembly of Xyloglucan from Tamarind Seed (L.) with Atomic Force Microscopy. <i>Food Biophysics</i> , 2015 , 10, 396-402	3.2	41
81	The stiffening of the cell walls observed during physiological softening of pears. <i>Planta</i> , 2016 , 243, 519-297	4.9	41
80	Mechanical characteristics of artificial cell walls. <i>Journal of Food Engineering</i> , 2010 , 96, 287-294	6	41
79	Changes of pectin nanostructure and cell wall stiffness induced in vitro by pectinase. <i>Carbohydrate Polymers</i> , 2017 , 161, 197-207	10.3	40
78	New contact acoustic emission detector for texture evaluation of apples. <i>Journal of Food Engineering</i> , 2010 , 99, 83-91	6	36
77	Changes in cell wall stiffness and microstructure in ultrasonically treated apple. <i>Journal of Food Engineering</i> , 2017 , 197, 1-8	6	34
76	The primary, secondary, and structures of higher levels of pectin polysaccharides. <i>Comprehensive Reviews in Food Science and Food Safety</i> , 2021 , 20, 1101-1117	16.4	34
75	Effect of Ca(2+), Fe(2+) and Mg(2+) on rheological properties of new food matrix made of modified cell wall polysaccharides from apple. <i>Carbohydrate Polymers</i> , 2015 , 133, 547-55	10.3	33
74	EFFECT OF MANNITOL TREATMENT ON ULTRASOUND EMISSION DURING TEXTURE PROFILE ANALYSIS OF POTATO AND APPLE TISSUE. <i>Journal of Texture Studies</i> , 2006 , 37, 339-359	3.6	33
73	Rheological and chemical properties of pectin enriched fractions from different sources extracted with citric acid. <i>Carbohydrate Polymers</i> , 2017 , 156, 443-451	10.3	32
72	Effect of Storage on Rheology of Water-Soluble, Chelate-Soluble and Diluted Alkali-Soluble Pectin in Carrot Cell Walls. <i>Food and Bioprocess Technology</i> , 2015 , 8, 171-180	5.1	31
71	Relation of biospeckle activity with chlorophyll content in apples. <i>Postharvest Biology and Technology</i> , 2012 , 64, 58-63	6.2	31
70	Evaluation of apple texture with contact acoustic emission detector: A study on performance of calibration models. <i>Journal of Food Engineering</i> , 2011 , 106, 80-87	6	31
69	Temperature effect on apple biospeckle activity evaluated with different indices. <i>Postharvest Biology and Technology</i> , 2012 , 67, 118-123	6.2	30
68	Prediction of the nanomechanical properties of apple tissue during its ripening process from its firmness, color and microstructural parameters. <i>Innovative Food Science and Emerging Technologies</i> , 2017 , 39, 79-87	6.8	30
67	Application of the biospeckle method for monitoring bull's eye rot development and quality changes of apples subjected to various storage methods-preliminary studies. <i>Sensors</i> , 2012 , 12, 3215-27	3.8	29
66	Finite element modelling of the mechanical behaviour of onion epidermis with incorporation of nonlinear properties of cell walls and real tissue geometry. <i>Journal of Food Engineering</i> , 2014 , 123, 50-59	6	28

65	Influence of chitosan addition on the mechanical and antibacterial properties of carrot cellulose nanofibre film. <i>Cellulose</i> , 2019 , 26, 9613-9629	5.5	27
64	The effect of Ca ²⁺ and cellular structure on apple firmness and acoustic emission. <i>European Food Research and Technology</i> , 2012 , 235, 119-128	3.4	27
63	Structural, mechanical and enzymatic study of pectin and cellulose during mango ripening. <i>Carbohydrate Polymers</i> , 2018 , 196, 313-321	10.3	27
62	Pre-harvest monitoring of apple fruits development with the use of biospeckle method. <i>Scientia Horticulturae</i> , 2012 , 145, 23-28	4.1	26
61	Effect of ultrasonication on physicochemical properties of apple based nanocellulose-calcium carbonate composites. <i>Cellulose</i> , 2018 , 25, 4603-4621	5.5	24
60	Evaluation of pectin nanostructure by atomic force microscopy in blanched carrot. <i>LWT - Food Science and Technology</i> , 2017 , 84, 658-667	5.4	23
59	Determination of the Optimum Harvest Window for Apples Using the Non-Destructive Biospeckle Method. <i>Sensors</i> , 2016 , 16,	3.8	23
58	Early detection of fungal infection of stored apple fruit with optical sensors [Comparison of biospeckle, hyperspectral imaging and chlorophyll fluorescence. <i>Food Control</i> , 2018 , 85, 327-338	6.2	22
57	Automatic classification of cells and intercellular spaces of apple tissue. <i>Computers and Electronics in Agriculture</i> , 2012 , 81, 72-78	6.5	21
56	Tailored nanocellulose structure depending on the origin. Example of apple parenchyma and carrot root celluloses. <i>Carbohydrate Polymers</i> , 2019 , 210, 186-195	10.3	20
55	Simultaneous influence of pectin and xyloglucan on structure and mechanical properties of bacterial cellulose composites. <i>Carbohydrate Polymers</i> , 2017 , 174, 970-979	10.3	19
54	Three-point bending and acoustic emission study of adult rat femora after immobilization and free remobilization. <i>Journal of Biomechanics</i> , 2006 , 39, 237-45	2.9	19
53	Effect of Cytochalasin B, Lantrunculin B, Colchicine, Cycloheximid, Dimethyl Sulfoxide and Ion Channel Inhibitors on Biospeckle Activity in Apple Tissue. <i>Food Biophysics</i> , 2013 , 8, 290-296	3.2	18
52	Changing of biochemical parameters and cell wall polysaccharides distribution during physiological development of tomato fruit. <i>Plant Physiology and Biochemistry</i> , 2017 , 119, 328-337	5.4	18
51	Cross-linking of sodium carbonate-soluble pectins from apple by zinc ions. <i>Carbohydrate Polymers</i> , 2018 , 196, 1-7	10.3	17
50	VIS/NIR spectroscopy, chlorophyll fluorescence, biospeckle and backscattering to evaluate changes in apples subjected to hydrostatic pressures. <i>Postharvest Biology and Technology</i> , 2014 , 96, 88-98	6.2	17
49	Resolving the nanostructure of sodium carbonate extracted pectins (DASP) from apple cell walls with atomic force microscopy and molecular dynamics. <i>Food Hydrocolloids</i> , 2020 , 104, 105726	10.6	17
48	Cross-linking of diluted alkali-soluble pectin from apple (<i>Malus domestica</i> fruit) in different acid-base conditions. <i>Food Hydrocolloids</i> , 2019 , 92, 285-292	10.6	17

47	Analysis of AGP contribution to the dynamic assembly and mechanical properties of cell wall during pollen tube growth. <i>Plant Science</i> , 2019 , 281, 9-18	5.3	16
46	Simulation of force spectroscopy experiments on galacturonic acid oligomers. <i>PLoS ONE</i> , 2014 , 9, e107896	3.6	14
45	The combined effect of ultrasound and enzymatic treatment on the nanostructure, carotenoid retention and sensory properties of ready-to-eat carrot chips. <i>LWT - Food Science and Technology</i> , 2017 , 85, 427-433	5.4	13
44	Study on parameterisation of plant tissue microstructure by confocal microscopy for finite elements modelling. <i>Computers and Electronics in Agriculture</i> , 2011 , 78, 98-105	6.5	13
43	Compression simulations of plant tissue in 3D using a mass-spring system approach and discrete element method. <i>Soft Matter</i> , 2017 , 13, 7318-7331	3.6	12
42	The role of arabinogalactan proteins (AGPs) in fruit ripening-a review. <i>Horticulture Research</i> , 2020 , 7, 176	7.7	12
41	Changes in arabinogalactan proteins (AGPs) distribution in apple (<i>Malus x domestica</i>) fruit during senescence. <i>Postharvest Biology and Technology</i> , 2018 , 138, 99-106	6.2	11
40	Hyperspectral image analysis of Raman maps of plant cell walls for blind spectra characterization by nonnegative matrix factorization algorithm. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2016 , 151, 136-145	3.8	11
39	Extension and Fracture of Cell Walls after Parenchyma Tissue Deformation. <i>Biosystems Engineering</i> , 2006 , 93, 269-278	4.8	11
38	Arabinogalactan proteins: Distribution during the development of male and female gametophytes. <i>Plant Physiology and Biochemistry</i> , 2019 , 135, 9-18	5.4	11
37	Structural network of arabinogalactan proteins (AGPs) and pectins in apple fruit during ripening and senescence processes. <i>Plant Science</i> , 2018 , 275, 36-48	5.3	10
36	Revision of adsorption models of xyloglucan on microcrystalline cellulose. <i>Cellulose</i> , 2016 , 23, 2819-2829	5.5	10
35	Postharvest Monitoring of Tomato Ripening Using the Dynamic Laser Speckle. <i>Sensors</i> , 2018 , 18,	3.8	9
34	Dissipative particle dynamics model of homogalacturonan based on molecular dynamics simulations. <i>Scientific Reports</i> , 2020 , 10, 14691	4.9	8
33	Evaluation of Nanocomposite Made of Polylactic Acid and Nanocellulose from Carrot Pomace Modified with Silver Nanoparticles. <i>Polymers</i> , 2020 , 12,	4.5	8
32	The Effect of Concentration on the Cross-Linking and Gelling of Sodium Carbonate-Soluble Apple Pectins. <i>Molecules</i> , 2019 , 24,	4.8	7
31	The Effect of Cultivation Method of Strawberry (Duch.) cv. Honeoye on Structure and Degradation Dynamics of Pectin during Cold Storage. <i>Molecules</i> , 2020 , 25,	4.8	7
30	Effect of different conditions of synthesis on properties of silver nanoparticles stabilized by nanocellulose from carrot pomace. <i>Carbohydrate Polymers</i> , 2020 , 245, 116513	10.3	7

29	Distribution of arabinogalactan proteins and pectins in the cells of apple (<i>Malus domestica</i>) fruit during post-harvest storage. <i>Annals of Botany</i> , 2019 , 123, 47-55	4.1	7
28	Recent advances in interactions between polyphenols and plant cell wall polysaccharides as studied using an adsorption technique. <i>Food Chemistry</i> , 2021 , 373, 131487	8.5	7
27	Aggregation and weak gel formation by pectic polysaccharide homogalacturonan. <i>Carbohydrate Polymers</i> , 2021 , 256, 117566	10.3	6
26	Electrical potential oscillations--movement relations in circumnutating sunflower stem and effect of ion channel and proton pump inhibitors on circumnutation. <i>Physiologia Plantarum</i> , 2015 , 153, 307-17	4.6	5
25	Effects of fatigue on microstructure and mechanical properties of bone organic matrix under compression. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2013 , 36, 43-54	1.9	5
24	Exponentially smoothed Fujii index for online imaging of biospeckle spatial activity. <i>Computers and Electronics in Agriculture</i> , 2017 , 142, 70-78	6.5	5
23	Structure and functionality of Rhamnogalacturonan I in the cell wall and in solution: A review.. <i>Carbohydrate Polymers</i> , 2022 , 278, 118909	10.3	5
22	Properties of Arabinogalactan Proteins (AGPs) in Apple () Fruit at Different Stages of Ripening. <i>Biology</i> , 2020 , 9,	4.9	5
21	Immunocytochemical studies on the distribution of arabinogalactan proteins (AGPs) as a response to fungal infection in <i>Malus x domestica</i> fruit. <i>Scientific Reports</i> , 2019 , 9, 17428	4.9	5
20	Enzymes and vitamin C as factors influencing the presence of arabinogalactan proteins (AGPs) in <i>Solanum lycopersicum</i> fruit. <i>Plant Physiology and Biochemistry</i> , 2019 , 139, 681-690	5.4	3
19	Application of Acoustic Emission for Quality Evaluation of Fruits and Vegetables 2013 ,		3
18	Effects of nonenzymatic glycation on mechanical properties of demineralized bone matrix under compression. <i>Journal of Applied Biomaterials and Biomechanics</i> , 2011 , 9, 144-9		3
17	The concentration-modified physicochemical surface properties of sodium carbonate-soluble pectin from pears (<i>Pyrus communis</i> L.). <i>Food Hydrocolloids</i> , 2021 , 113, 106524	10.6	3
16	Biospeckle Technique for Assessing Quality of Fruits and Vegetables. <i>Contemporary Food Engineering</i> , 2016 , 361-385		2
15	Changes of pectin structure and microbial community composition in strawberry fruit (<i>Fragaria ananassa</i> Duch.) during cold storage.. <i>Food Chemistry</i> , 2022 , 132151	8.5	2
14	Effect of Low Temperature on Changes in AGP Distribution during Development of Ovules and Anthers. <i>Cells</i> , 2021 , 10,	7.9	2
13	New image analysis method for the estimation of global and spatial changes in fruit microstructure. <i>International Agrophysics</i> , 2016 , 30, 219-229	2	2
12	An Atomic Force Microscopy Study on the Effect of β -Galactosidase, β -Rhamnosidase and β -Arabinofuranosidase on the Structure of Pectin Extracted from Apple Fruit Using Sodium Carbonate. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	1

11	The Use of Interactions Between Microorganisms in Strawberry Cultivation (Duch.).. <i>Frontiers in Plant Science</i> , 2021 , 12, 780099	6.2	1
10	Investigations of changes in the arabinogalactan proteins (AGPs) structure, size and composition during the fruit ripening process. <i>Scientific Reports</i> , 2020 , 10, 20621	4.9	1
9	-Triggered Cell Enlargement and Loss of Cellular Integrity in Root Systems Are Mediated by Pectin Demethylation. <i>Frontiers in Plant Science</i> , 2021 , 12, 711838	6.2	1
8	Structural properties of diluted alkali-soluble pectin from <i>Pyrus communis</i> L. in water and salt solutions. <i>Carbohydrate Polymers</i> , 2021 , 273, 118598	10.3	1
7	Anisotropy of demineralized bone matrix under compressive load. <i>Acta of Bioengineering and Biomechanics</i> , 2011 , 13, 71-6	0.6	1
6	Structural Morphology and Rheological Properties of Pectin Fractions Extracted from Okra Pods Subjected to Cold Plasma Treatment. <i>Food and Bioprocess Technology</i> , 2022 , 15, 1168	5.1	1
5	Modification of the cell wall polysaccharides and phytochemicals of okra pods by cold plasma treatment. <i>Food Hydrocolloids</i> , 2022 , 107763	10.6	1
4	The effect of high humidity hot air impingement blanching on the changes in molecular and rheological characteristics of pectin fractions extracted from okra pods. <i>Food Hydrocolloids</i> , 2022 , 123, 107199	10.6	0
3	Tailor-Made Biosystems - Bacterial Cellulose-Based Films with Plant Cell Wall Polysaccharides. <i>Polymer Reviews</i> , 1-27	14	0
2	Microencapsulated Red Powders from Cornflower Extract Spectral (FT-IR and FT-Raman) and Antioxidant Characteristics. <i>Molecules</i> , 2022 , 27, 3094	4.8	0
1	Effect of glucose on fatigue-induced changes in the microstructure and mechanical properties of demineralized bovine cortical bone. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2015 , 13, e220-7	1.8	