Peiqiang Yu

List of Publications by Year in descending order

284 papers	6,063 citations	76326 40 h-index	128289 60 g-index
285 all docs	285 docs citations	285 times ranked	3213 citing authors

#	Article	IF	Citations
1	Protein secondary structures (Î±-helix and Î²-sheet) at a cellular level and protein fractions in relation to rumen degradation behaviours of protein: a new approach. British Journal of Nutrition, 2005, 94, 655-665.	2.3	152
2	Nutrient variation and availability of wheat DDGS, corn DDGS and blend DDGS from bioethanol plants. Journal of the Science of Food and Agriculture, 2009, 89, 1754-1761.	3.5	144
3	Nutritive value of maize silage in relation to dairy cow performance and milk quality. Journal of the Science of Food and Agriculture, 2015, 95, 238-252.	3.5	138
4	Application of advanced synchrotron radiation-based Fourier transform infrared (SR-FTIR) microspectroscopy to animal nutrition and feed science: a novel approach. British Journal of Nutrition, 2004, 92, 869-885.	2.3	128
5	Applications of Hierarchical Cluster Analysis (CLA) and Principal Component Analysis (PCA) in Feed Structure and Feed Molecular Chemistry Research, Using Synchrotron-Based Fourier Transform Infrared (FTIR) Microspectroscopy. Journal of Agricultural and Food Chemistry, 2005, 53, 7115-7127.	5.2	116
6	Heat-induced protein structure and subfractions in relation to protein degradation kinetics and intestinal availability in dairy cattle. Journal of Dairy Science, 2009, 92, 3319-3330.	3.4	116
7	Using Synchrotron-Based FTIR Microspectroscopy To Reveal Chemical Features of Feather Protein Secondary Structure:Â Comparison with Other Feed Protein Sources. Journal of Agricultural and Food Chemistry, 2004, 52, 7353-7361.	5.2	97
8	Relationship of protein molecular structure to metabolisable proteins in different types of dried distillers grains with solubles: a novel approach. British Journal of Nutrition, 2010, 104, 1429-1437.	2.3	97
9	Release of Ferulic Acid from Oat Hulls byAspergillusFerulic Acid Esterase andTrichodermaXylanase. Journal of Agricultural and Food Chemistry, 2002, 50, 1625-1630.	5.2	93
10	Dry and moist heating-induced changes in protein molecular structure, protein subfraction, and nutrient profiles in soybeans. Journal of Dairy Science, 2011, 94, 6092-6102.	3.4	90
11	Comparison of grating-based near-infrared (NIR) and Fourier transform mid-infrared (ATR-FT/MIR) spectroscopy based on spectral preprocessing and wavelength selection for the determination of crude protein and moisture content in wheat. Food Control, 2017, 82, 57-65.	5.5	90
12	Using the NRC-2001 model and the DVE/OEB system to evaluate nutritive values of Harrington (malting-type) and Valier (feed-type) barley for ruminants. Animal Feed Science and Technology, 2003, 107, 45-60.	2.2	84
13	Chemical Imaging of Microstructures of Plant Tissues within Cellular Dimension Using Synchrotron Infrared Microspectroscopy. Journal of Agricultural and Food Chemistry, 2003, 51, 6062-6067.	5.2	79
14	Mycotoxin contamination of food and feed in China: Occurrence, detection techniques, toxicological effects and advances in mitigation technologies. Food Control, 2018, 91, 202-215.	5.5	78
15	Moist and dry heating-induced changes in protein molecular structure, protein subfractions, and nutrient profiles in camelina seeds. Journal of Dairy Science, 2014, 97, 446-457.	3.4	70
16	Effect of variety and maturity stage on chemical composition, carbohydrate and protein subfractions, in vitro rumen degradability and energy values of timothy and alfalfa. Canadian Journal of Animal Science, 2003, 83, 279-290.	1.5	69
17	Synchrotron IR microspectroscopy for protein structure analysis: Potential and questions. Spectroscopy, 2006, 20, 229-251.	0.8	69
18	Imaging Molecular Chemistry of Pioneer Corn. Journal of Agricultural and Food Chemistry, 2004, 52, 7345-7352.	5.2	68

#	Article	IF	Citations
19	Using the DVE/OEB model to determine optimal conditions of pressure toasting on horse beans (Vicia) Tj ETQq1 1 0.784314 rgBT /Over	2.2	67
20	Comparison of the National Research Council-2001 Model with the Dutch System (DVE/OEB) in the Prediction of Nutrient Supply to Dairy Cows from Forages. Journal of Dairy Science, 2003, 86, 2178-2192.	3.4	66
21	Estimation of ruminal and intestinal digestion profiles, hourly effective degradation ratio and potential N to energy synchronization of co-products from bioethanol processing. Journal of the Science of Food and Agriculture, 2010, 90, 2058-2067.	3.5	66
22	Application Potential of ATR-FT/IR Molecular Spectroscopy in Animal Nutrition: Revelation of Protein Molecular Structures of Canola Meal and Presscake, As Affected by Heat-Processing Methods, in Relationship with Their Protein Digestive Behavior and Utilization for Dairy Cattle. Journal of Agricultural and Food Chemistry, 2013, 61, 5449-5458.	5.2	64
23	An analysis of the nutritive value of heat processed legume seeds for animal production using the DVE/OEB model: a review. Animal Feed Science and Technology, 2002, 99, 141-176.	2.2	63
24	What makes protein indigestible from tissueâ€related, cellular, and molecular aspects?. Molecular Nutrition and Food Research, 2013, 57, 1695-1707.	3.3	62
25	Rapid characterization of molecular chemistry, nutrient make-up and microlocation of internal seed tissue. Journal of Synchrotron Radiation, 2007, 14, 382-390.	2.4	58
26	Using Synchrotron Transmission FTIR Microspectroscopy as a Rapid, Direct, and Nondestructive Analytical Technique To Reveal Molecular Microstructuralâ"Chemical Features within Tissue in Grain Barley. Journal of Agricultural and Food Chemistry, 2004, 52, 1484-1494.	5.2	56
27	Enzymic Release of Reducing Sugars from Oat Hulls by Cellulase, as Influenced byAspergillusFerulic Acid Esterase andTrichodermaXylanase. Journal of Agricultural and Food Chemistry, 2003, 51, 218-223.	5.2	54
28	Plantâ€based food and feed protein structure changes induced by geneâ€transformation, heating and bioâ€ethanol processing: A synchrotronâ€based molecular structure and nutrition research program. Molecular Nutrition and Food Research, 2010, 54, 1535-1545.	3.3	53
29	Detecting molecular changes in Vimy flaxseed protein structure using synchrotron FTIRM and DRIFT spectroscopic techniques: Structural and biochemical characterization. Spectroscopy, 2009, 23, 307-322.	0.8	52
30	Molecular basis of protein structure in proanthocyanidin and anthocyanin-enhanced Lc-transgenic alfalfa in relation to nutritive value using synchrotron-radiation FTIR microspectroscopy: A novel approach. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2009, 73, 846-853.	3.9	50
31	Evaluation of near-infrared (NIR) and Fourier transform mid-infrared (ATR-FT/MIR) spectroscopy techniques combined with chemometrics for the determination of crude protein and intestinal protein digestibility of wheat. Food Chemistry, 2019, 272, 507-513.	8.2	50
32	The Occurrence, Biosynthesis, and Molecular Structure of Proanthocyanidins and Their Effects on Legume Forage Protein Precipitation, Digestion and Absorption in the Ruminant Digestive Tract. International Journal of Molecular Sciences, 2017, 18, 1105.	4.1	46
33	Relationship of feeds protein structural makeup in common Prairie feeds with protein solubility, in situ ruminal degradation and intestinal digestibility. Animal Feed Science and Technology, 2014, 194, 58-70.	2.2	45
34	Characterization of the Microchemical Structure of Seed Endosperm within a Cellular Dimension among Six Barley Varieties with Distinct Degradation Kinetics, Using Ultraspatially Resolved Synchrotron-Based Infrared Microspectroscopy. Journal of Agricultural and Food Chemistry, 2010, 58, 7801-7810.	5.2	44
35	Effects of bioethanol plant and coproduct type on the metabolic characteristics of the proteins in dairy cattle. Journal of Dairy Science, 2010, 93, 3775-3783.	3.4	44
36	Use of synchrotron FTIR microspectroscopy to identify chemical differences in barley endosperm tissue in relation to rumen degradation characteristics. Canadian Journal of Animal Science, 2004, 84, 523-527.	1.5	43

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37	Ultrastructural-chemical makeup of yellow-seeded (Brassica rapa) and brown-seeded (Brassica napus) canola within cellular dimensions, explored with synchrotron reflection FTIR microspectroscopy. Canadian Journal of Plant Science, 2005, 85, 533-541.	0.9	43
38	Microwave Irradiation Induced Changes in Protein Molecular Structures of Barley Grains: Relationship to Changes in Protein Chemical Profile, Protein Subfractions, and Digestion in Dairy Cows. Journal of Agricultural and Food Chemistry, 2014, 62, 6546-6555.	5.2	43
39	Effect of Heating Method on Alteration of Protein Molecular Structure in Flaxseed: Relationship with Changes in Protein Subfraction Profile and Digestion in Dairy Cows. Journal of Agricultural and Food Chemistry, 2015, 63, 1057-1066.	5.2	43
40	The Use of Gene Modification and Advanced Molecular Structure Analyses towards Improving Alfalfa Forage. International Journal of Molecular Sciences, 2017, 18, 298.	4.1	43
41	Chemical Profile, Energy Values, and Protein Molecular Structure Characteristics of Biofuel/Bio-oil Co-products (Carinata Meal) in Comparison with Canola Meal. Journal of Agricultural and Food Chemistry, 2013, 61, 3926-3933.	5.2	42
42	Improving the nutritional value of oat hulls for ruminant animals with pretreatment of a multienzyme cocktail: In vitro studies1. Journal of Animal Science, 2005, 83, 1133-1141.	0.5	41
43	Molecular chemical structure of barley proteins revealed by ultra-spatially resolved synchrotron light sourced FTIR microspectroscopy: Comparison of barley varieties. Biopolymers, 2007, 85, 308-317.	2.4	41
44	Molecular chemistry imaging to reveal structural features of various plant feed tissues. Journal of Structural Biology, 2005, 150, 81-89.	2.8	40
45	Effect of processing conditions on the nutritive value of canola meal and presscake. Comparison of the yellow and brownâ€seeded canola meal with the brownâ€seeded canola presscake. Journal of the Science of Food and Agriculture, 2013, 93, 1986-1995.	3.5	40
46	Multicomponent Peak Modeling of Protein Secondary Structures: Comparison of Gaussian with Lorentzian Analytical Methods for Plant Feed and Seed Molecular Biology and Chemistry Research. Applied Spectroscopy, 2005, 59, 1372-1380.	2.2	39
47	Protein Molecular Structures, Protein SubFractions, and Protein Availability Affected by Heat Processing: A Review. American Journal of Biochemistry and Biotechnology, 2007, 3, 66-86.	0.4	39
48	X-ray fluorescence application in food, feed, and agricultural science: a critical review. Critical Reviews in Food Science and Nutrition, 2021, 61, 2340-2350.	10.3	39
49	Hydroxycinnamic acids and ferulic acid esterase in relation to biodegradation of complex plant cell walls. Canadian Journal of Animal Science, 2005, 85, 255-267.	1.5	38
50	Using ATR-FT/IR molecular spectroscopy to detect effects of blend DDGS inclusion level on the molecular structure spectral and metabolic characteristics of the proteins in hulless barley. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 95, 53-63.	3.9	37
51	Using DRIFT Molecular Spectroscopy with Uni- and Multivariate Spectral Techniques To Detect Protein Molecular Structure Differences among Different Genotypes of Barley. Journal of Agricultural and Food Chemistry, 2010, 58, 6264-6269.	5.2	36
52	Effect of altered carbohydrate traits in hulless barley (Hordeum vulgare L.) on nutrient profiles and availability and nitrogen to energy synchronization. Journal of Cereal Science, 2013, 58, 182-190.	3.7	36
53	Metabolic Characteristics of the Proteins in Yellow-Seeded and Brown-Seeded Canola Meal and Presscake in Dairy Cattle: Comparison of Three Systems (PDI, DVE, and NRC) in Nutrient Supply and Feed Milk Value (FMV). Journal of Agricultural and Food Chemistry, 2013, 61, 2820-2830.	5.2	36
54	Molecular basis of structural makeup of hulless barley in relation to rumen degradation kinetics and intestinal availability in dairy cattle: A novel approach. Journal of Dairy Science, 2011, 94, 5151-5159.	3.4	35

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55	Short communication: Relationship of carbohydrate molecular spectroscopic features to carbohydrate nutrient profiles in co-products from bioethanol production. Journal of Dairy Science, 2012, 95, 2091-2096.	3.4	35
56	Studies on Brassica carinata Seed. 2. Carbohydrate Molecular Structure in Relation to Carbohydrate Chemical Profile, Energy Values, and Biodegradation Characteristics. Journal of Agricultural and Food Chemistry, 2013, 61, 10127-10134.	5.2	35
57	Use of synchrotron-based FTIR microspectroscopy to determine protein secondary structures of raw and heat-treated brown and golden flaxseeds: A novel approach. Canadian Journal of Animal Science, 2005, 85, 437-448.	1.5	34
58	Detect the sensitivity and response of protein molecular structure of whole canola seed (yellow and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 ATR-FT/IR molecular spectroscopy with chemometrics. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2013, 105, 304-313.	3.9	34
59	Effect of fibrolytic enzymes on lactational performance, feeding behavior, and digestibility in high-producing dairy cows fed a barley silageâ€“based diet. Journal of Dairy Science, 2018, 101, 7971-7979.	3.4	34
60	In situ rumen degradation kinetics of timothy and alfalfa as affected by cultivar and stage of maturity. Canadian Journal of Animal Science, 2004, 84, 255-263.	1.5	33
61	Relationship of carbohydrate molecular spectroscopic features in combined feeds to carbohydrate utilization and availability in ruminants. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 92, 225-233.	3.9	32
62	Shining Light on the Differences in Molecular Structural Chemical Makeup and the Cause of Distinct Degradation Behavior between Malting- and Feed-Type Barley Using Synchrotron FTIR Microspectroscopy: A Novel Approach. Journal of Agricultural and Food Chemistry, 2008, 56, 3417-3426.	5.2	31
63	Chemical Profile, Rumen Degradation Kinetics, and Energy Value of Four Hull-less Barley Cultivars: Comparison of the Zero-Amylose Waxy, Waxy, High-Amylose, and Normal Starch Cultivars. Journal of Agricultural and Food Chemistry, 2010, 58, 10553-10559.	5.2	31
64	Botanical traits, protein and carbohydrate fractions, ruminal degradability and energy contents of alfalfa hay harvested at three stages of maturity and in the afternoon and morning. Animal Feed Science and Technology, 2012, 172, 162-170.	2.2	31
65	Transformation with TT8 and HB12 RNAi Constructs in Model Forage (Medicago) Tj ETQq1 1 0.784314 rgBT /Overlock Livestock Systems. Journal of Agricultural and Food Chemistry, 2015, 63, 9590-9600.	5.2	31
66	Application of Cluster Analysis (CLA) in Feed Chemical Imaging To Accurately Reveal Structuralâ˜Chemical Features of Feeds and Plants within Cellular Dimension. Journal of Agricultural and Food Chemistry, 2005, 53, 2872-2880.	5.2	28
67	Foam stability of leaves from anthocyanidinâ€accumulating Lcâ€alfalfa and relation to molecular structures detected by fourierâ€transformed infraredâ€vibration spectroscopy. Grass and Forage Science, 2012, 67, 369-381.	2.9	28
68	Characterization of Arabidopsis thaliana Lines with Altered Seed Storage Protein Profiles Using Synchrotron-Powered FT-IR Spectromicroscopy. Journal of Agricultural and Food Chemistry, 2013, 61, 901-912.	5.2	28
69	Protein Molecular Structures and Protein Fraction Profiles of New Coproducts from BioEthanol Production: A Novel Approach. Journal of Agricultural and Food Chemistry, 2010, 58, 3460-3464.	5.2	27
70	Detecting Molecular Features of Spectra Mainly Associated with Structural and Non-Structural Carbohydrates in Co-Products from BioEthanol Production Using DRIFT with Uni- and Multivariate Molecular Spectral Analyses. International Journal of Molecular Sciences, 2011, 12, 1921-1935.	4.1	27
71	Characterizing the molecular structure features of newly developed hulless barley cultivars with altered carbohydrate traits (Hordeum vulgare L.) by globar-sourced infrared spectroscopy in relation to nutrient utilization and availability. Journal of Cereal Science, 2014, 60, 48-59.	3.7	27
72	A nutritional evaluation of common barley varieties grown for silage by beef and dairy producers in western Canada. Canadian Journal of Animal Science, 2016, 96, 598-608.	1.5	27

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73	Physicochemical Characteristics, Hydroxycinnamic Acids (Ferulic Acid, p-Coumaric Acid) and Their Ratio, and in Situ Biodegradability: Comparison of Genotypic Differences among Six Barley Varieties. Journal of Agricultural and Food Chemistry, 2009, 57, 4777-4783.	5.2	26
74	Molecular basis of protein structure in combined feeds (hulless barley with bioethanol coproduct of) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 intestinal availability in dairy cattle. Journal of Dairy Science, 2012, 95, 3363-3379.	3.4	26
75	Molecular Structure and Metabolic Characteristics of the Proteins and Energy in Triticale Grains and Dried Distillers Grains with Solubles for Dairy Cattle. Journal of Agricultural and Food Chemistry, 2012, 60, 10064-10074.	5.2	26
76	Using ATRâ€“FT/IR to detect carbohydrate-related molecular structure features of carinata meal and their in situ residues of ruminal fermentation in comparison with canola meal. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2013, 114, 599-606.	3.9	26
77	Studies on Brassica carinata Seed. 1. Protein Molecular Structure in Relation to Protein Nutritive Values and Metabolic Characteristics. Journal of Agricultural and Food Chemistry, 2013, 61, 10118-10126.	5.2	26
78	Molecular clustering, interrelationships and carbohydrate conformation in hull and seeds among barley cultivars. Journal of Cereal Science, 2011, 53, 379-383.	3.7	25
79	Metabolic characteristics of proteins and biomolecular spectroscopic profiles in different batches of feedstock (wheat) and their co-products (wheat distillers dried grains with solubles) from the same bioethanol processing plant. Journal of Dairy Science, 2012, 95, 6695-6715.	3.4	25
80	Molecular structure, chemical and nutrient profiles, and metabolic characteristics of the proteins and energy in new cool-season corn varieties harvested as fresh forage for dairy cattle. Journal of Dairy Science, 2013, 96, 6631-6643.	3.4	25
81	Purine derivative excretion and ruminal microbial yield in growing lambs fed raw and dry roasted legume seeds as protein supplements. Animal Feed Science and Technology, 2002, 95, 33-48.	2.2	24
82	Molecular basis of processing-induced changes in protein structure in relation to intestinal digestion in yellow and green type pea (Pisum sativum L.): A molecular spectroscopic analysis. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2015, 151, 980-988.	3.9	24
83	Prediction of protein supply to ruminants from concentrates: comparison of the NRC-2001 model with the DVE/OEB system. Journal of the Science of Food and Agriculture, 2005, 85, 527-538.	3.5	23
84	Structural Makeup, Biopolymer Conformation, and Biodegradation Characteristics of a Newly Developed Super Genotype of Oats (CDC SO-I versus Conventional Varieties): A Novel Approach. Journal of Agricultural and Food Chemistry, 2010, 58, 2377-2387.	5.2	23
85	Inâ€depth study of the protein molecular structures of different types of dried distillers grains with solubles and their relationship to digestive characteristics. Journal of the Science of Food and Agriculture, 2013, 93, 1438-1448.	3.5	23
86	Detect changes in protein structure of carinata meal during rumen fermentation in relation to basic chemical profile and comparison with canola meal using ATRâ€“FT/IR molecular spectroscopy with chemometrics. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2013, 112, 318-325.	3.9	23
87	Molecular Structures and Metabolic Characteristics of Protein in Brown and Yellow Flaxseed with Altered Nutrient Traits. Journal of Agricultural and Food Chemistry, 2014, 62, 6556-6564.	5.2	23
88	Natural Occurrence and Co-Contamination of Twelve Mycotoxins in Industry-Submitted Cool-Season Cereal Grains Grown under a Low Heat Unit Climate Condition. Toxins, 2019, 11, 160.	3.4	23
89	The specificity and the ability ofAspergillus feruloyl esterase to releasep-coumaric acid from complex cell walls of oat hulls. Journal of Chemical Technology and Biotechnology, 2004, 79, 729-733.	3.2	22
90	Protein fractionation byproduct from canola meal for dairy cattle. Journal of Dairy Science, 2012, 95, 4488-4500.	3.4	22

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91	Using Synchrotron Radiation-Based Infrared Microspectroscopy to Reveal Microchemical Structure Characterization: Frost Damaged Wheat vs. Normal Wheat. International Journal of Molecular Sciences, 2013, 14, 16706-16718.	4.1	22
92	Rumen degradation, intestinal and total digestion characteristics and metabolizable protein supply of carinata meal (a non-conventional feed resource) in comparison with canola meal. Animal Feed Science and Technology, 2014, 191, 106-110.	2.2	22
93	Vibrational spectroscopic investigation of heat-induced changes in functional groups related to protein structural conformation in camelina seeds and their relationship to digestion in dairy cows. Animal Production Science, 2015, 55, 201.	1.3	22
94	Effects of canola meal pellet conditioning temperature and time on ruminal and intestinal digestion, hourly effective degradation ratio, and potential nitrogen to energy synchronization in dairy cows. Journal of Dairy Science, 2015, 98, 8836-8845.	3.4	22
95	The Role of Proanthocyanidins Complex in Structure and Nutrition Interaction in Alfalfa Forage. International Journal of Molecular Sciences, 2016, 17, 793.	4.1	22
96	Effects of heat processing methods on protein subfractions and protein degradation kinetics in dairy cattle in relation to protein molecular structure of barley grain using advanced molecular spectroscopy. Journal of Cereal Science, 2018, 80, 212-220.	3.7	22
97	Major ergot alkaloids in naturally contaminated cool-season barley grain grown under a cold climate condition in western Canada, explored with near-infrared (NIR) and fourier transform mid-infrared (ATR-FT/MIR) spectroscopy. Food Control, 2019, 102, 221-230.	5.5	22
98	Modeling degradation ratios and nutrient availability of anthocyanidin-accumulating Lc-alfalfa populations in dairy cows. Journal of Dairy Science, 2011, 94, 1430-1444.	3.4	21
99	Probing Equivocal Effects of Heat Processing of Legume Seeds on Performance of Ruminants - A Review -. Asian-Australasian Journal of Animal Sciences, 2004, 17, 869-876.	2.4	21
100	Response and sensitivity of lipid related molecular structure to wet and dry heating in Canola tissue. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2012, 90, 63-71.	3.9	20
101	Effect of Thermal Processing on Estimated Metabolizable Protein Supply to Dairy Cattle from Camelina Seeds: Relationship with Protein Molecular Structural Changes. Journal of Agricultural and Food Chemistry, 2014, 62, 8263-8273.	5.2	20
102	Explore protein molecular structure in endosperm tissues in newly developed black and yellow type canola seeds by using synchrotron-based Fourier transform infrared microspectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 120, 421-427.	3.9	20
103	Nutritional and Metabolic Characteristics of Brassica carinata Co-products from Biofuel Processing in Dairy Cows. Journal of Agricultural and Food Chemistry, 2017, 65, 5994-6001.	5.2	20
104	Nutrient composition and degradation profiles of anthocyanidin-accumulating Lc-alfalfa populations. Canadian Journal of Animal Science, 2010, 90, 401-412.	1.5	19
105	Differentiation of mixtures of co-product blend with barley grain based on Fourier transform infrared attenuated total reflection molecular spectroscopy: Carbohydrate molecular spectral profiles and nutritive characteristics in dairy cattle. Journal of Dairy Science, 2012, 95, 6624-6634.	3.4	19
106	Modeling nutrient availability of alfalfa hay harvested at three stages of maturity and in the afternoon and morning in dairy cows. Animal Feed Science and Technology, 2012, 178, 12-19.	2.2	19
107	Mid-Infrared Spectral Characteristics of Lipid Molecular Structures in Brassica carinata Seeds: Relationship to Oil Content, Fatty Acid and Glucosinolate Profiles, Polyphenols, and Condensed Tannins. Journal of Agricultural and Food Chemistry, 2014, 62, 7977-7988.	5.2	19
108	Molecular Structural Changes in Alfalfa Detected by ATR-FTIR Spectroscopy in Response to Silencing of TT8 and HB12 Genes. International Journal of Molecular Sciences, 2018, 19, 1046.	4.1	19

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109	Microprobing the molecular spatial distribution and structural architecture of feed-type sorghum seed tissue (Sorghum Bicolor L.) using the synchrotron radiation infrared microspectroscopy technique. Journal of Synchrotron Radiation, 2011, 18, 790-801.	2.4	18
110	Detecting carbohydrate molecular structural makeup in different types of cereal grains and different cultivars within each type of grain grown in semi-arid area using FTIR spectroscopy with uni- and multi-variate molecular spectral analyses. Animal Feed Science and Technology, 2014, 194, 136-144.	2.2	18
111	Effects of conditioning temperature and time during the pelleting process on feed molecular structure, pellet durability index, and metabolic features of co-products from bio-oil processing in dairy cows. Journal of Dairy Science, 2015, 98, 4869-4881.	3.4	18
112	Molecular spectroscopic features of protein in newly developed chickpea: Relationship with protein chemical profile and metabolism in the rumen and intestine of dairy cows. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 196, 168-177.	3.9	18
113	An investigation of carbohydrate and protein degradation ratios, nitrogen to energy synchronization and hourly effective rumen digestion of barley: effect of variety and growth year. Journal of Animal Physiology and Animal Nutrition, 2009, 93, 555-567.	2.2	17
114	Understanding the differences in molecular conformation of carbohydrate and protein in endosperm tissues of grains with different biodegradation kinetics using advanced synchrotron technology. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2009, 71, 1837-1844.	3.9	17
115	Relationship of physicochemical characteristics and hydrolyzed hydroxycinnamic acid profile of barley varieties and nutrient availability in ruminants. Journal of Cereal Science, 2011, 53, 178-187.	3.7	17
116	Effects of including alfalfa hay cut in the afternoon or morning at three stages of maturity in high concentrate rations on dairy cows performance, diet digestibility and feeding behavior. Animal Feed Science and Technology, 2014, 192, 62-72.	2.2	17
117	Recent Research and Progress in Food, Feed and Nutrition with Advanced Synchrotron-based SR-IMS and DRIFT Molecular Spectroscopy. Critical Reviews in Food Science and Nutrition, 2016, 56, 910-918.	10.3	17
118	Heat-induced changes to lipid molecular structure in Vimy flaxseed: Spectral intensity and molecular clustering. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2011, 79, 51-59.	3.9	16
119	Metabolic characteristics in ruminants of the proteins in newly developed hull-less barley varieties with altered starch traits. Journal of Cereal Science, 2012, 55, 351-360.	3.7	16
120	Thermal Stability and Molecular Microstructure of Heat-Induced Cereal Grains, Revealed with Raman Molecular Microspectroscopy and Differential Scanning Calorimetry. Journal of Agricultural and Food Chemistry, 2013, 61, 6495-6504.	5.2	16
121	Investigating the Molecular Structural Features of Hulless Barley (Hordeum vulgareL.) in Relation to Metabolic Characteristics Using Synchrotron-Based Fourier Transform Infrared Microspectroscopy. Journal of Agricultural and Food Chemistry, 2013, 61, 11250-11260.	5.2	16
122	Association of Bio-energy Processing-Induced Protein Molecular Structure Changes with CNCPS-Based Protein Degradation and Digestion of Co-products in Dairy Cows. Journal of Agricultural and Food Chemistry, 2016, 64, 4086-4094.	5.2	16
123	Physiochemical Characteristics and Molecular Structures for Digestible Carbohydrates of Silages. Journal of Agricultural and Food Chemistry, 2017, 65, 8979-8991.	5.2	16
124	Relationship of carbohydrates and lignin molecular structure spectral profiles to nutrient profile in newly developed oats cultivars and barley grain. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 188, 495-506.	3.9	16
125	An emerging method for rapid characterization of feed structures and feed component matrix at a cellular leveland relation to feed quality and nutritive value. Archives of Animal Nutrition, 2006, 60, 229-244.	1.8	15
126	Fourier Transform Infrared Microspectroscopic Analysis of the Effects of Cereal Type and Variety within a Type of Grain on Structural Makeup in Relation to Rumen Degradation Kinetics. Journal of Agricultural and Food Chemistry, 2009, 57, 6871-6878.	5.2	15

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127	Nutrient profile and availability of coâ€products from bioethanol processing. Journal of Animal Physiology and Animal Nutrition, 2012, 96, 450-458.	2.2	15
128	Detect unique molecular structure associated with physiochemical properties in CDC varieties of oat grain with unique nutrient traits [Feed Type vs. Milling Type] in comparison with barley grain using advanced molecular spectroscopy as a non-destructive biological tool. Journal of Cereal Science, 2017, 74, 37-45.	3.7	15
129	The ratios of degradation characteristics of forages in the rumen of dairy cows: effect of variety and stage of maturity. Journal of the Science of Food and Agriculture, 2004, 84, 179-189.	3.5	14
130	Using vibrational infrared biomolecular spectroscopy to detect heat-induced changes of molecular structure in relation to nutrient availability of prairie whole oat grains on a molecular basis. Journal of Animal Science and Biotechnology, 2016, 7, 52.	5.3	14
131	Exploring the potential of applying infrared vibrational (micro)spectroscopy in ergot alkaloids determination: Techniques, current status, and challenges. Applied Spectroscopy Reviews, 2018, 53, 395-419.	6.7	14
132	Effect of dietary protein variation in terms of net truly digested intestinal protein (DVE) and rumen degraded protein balance (OEB) on the concentrations and excretion of urinary creatinine, purine derivatives and microbial N supply in sheep: comparison with the prediction from the DVE/OEB model. Animal Feed Science and Technology, 2001, 93, 71-91.	2.2	13
133	Modelling the metabolic characteristics of proteins in dairy cattle from co-products of bioethanol processing: comparison of the NRC 2001 model with the DVE/OEB system. Journal of the Science of Food and Agriculture, 2011, 91, 405-411.	3.5	13
134	Short communication: Comparison of the newly developed DVE/OEB (2010) system and the National Research Council (2001) model in modeling metabolic characteristics of proteins in dairy cattle. Journal of Dairy Science, 2013, 96, 5908-5913.	3.4	13
135	Non-destructive analysis of the conformational differences among feedstock sources and their corresponding co-products from bioethanol production with molecular spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2014, 118, 407-421.	3.9	13
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