

Peiqiang Yu

List of Publications by Year in Descending Order

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Version: 2024-04-28

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

279
papers

4,891
citations

36
h-index

54
g-index

285
ext. papers

5,435
ext. citations

4.4
avg, IF

6.28
L-index

#	Paper	IF	Citations
279	Utilization of exogenous fibrolytic enzymes in fiber fermentation, degradation, and digestions and characteristics of whole legume faba bean and its plant silage.. <i>Critical Reviews in Food Science and Nutrition</i> , 2022 , 1-12	11.5	
278	Research progress and future study on physicochemical, nutritional, and structural characteristics of canola and rapeseed feedstocks and co-products from bio-oil processing and nutrient modeling evaluation methods.. <i>Critical Reviews in Food Science and Nutrition</i> , 2022 , 1-7	11.5	0
277	Combined molecular spectroscopic techniques (SR-FTIR, XRF, ATR-FTIR) to study physiochemical and nutrient profiles of <i>Avena sativa</i> grain and nutrition and structure interactive association properties.. <i>Critical Reviews in Food Science and Nutrition</i> , 2022 , 1-13	11.5	0
276	Using Mid-IR spectroscopy (ATR-FTIR) as a fast analytical tool to reveal association between protein spectral profiles and metabolizable protein supply, protein rumen degradation characteristics and estimated intestinal protein digestion before and after rumen incubation of faba bean partitions and faba bean silage.. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2022 , 13, 121027	4.4	
275	Effects of Exogenous Fibrolytic Enzyme Derived from <i>Trichoderma reesei</i> on Rumen Degradation Characteristics and Degradability of Low-Tannin Whole Plant Faba Bean Silage in Dairy Cows. <i>Dairy</i> , 2022 , 3, 303-313	2.6	0
274	X-ray fluorescence application in food, feed, and agricultural science: a critical review. <i>Critical Reviews in Food Science and Nutrition</i> , 2021 , 61, 2340-2350	11.5	12
273	Application of advanced molecular spectroscopy and modern evaluation techniques in canola molecular structure and nutrition property research. <i>Critical Reviews in Food Science and Nutrition</i> , 2021 , 61, 3256-3266	11.5	3
272	Carbohydrates molecular structure profiles in relation to nutritional characteristics of newly developed low and normal tannin faba bean varieties in dairy cows analysed by using standard methods and the vibrational molecular spectroscopy (Ft/IR-ATR). <i>Journal of Animal Physiology and Animal Nutrition</i> , 2021 , 105, 816-831	2.6	
271	Effect of extrusion of soybean meal on feed spectroscopic molecular structures and on performance, blood metabolites and nutrient digestibility of Holstein dairy calves. <i>Animal Bioscience</i> , 2021 , 34, 855-866	0	4
270	Crude protein fractionation, in situ ruminal degradability and FTIR protein molecular structures of different cultivars within barley, corn and sorghum cereal grains. <i>Animal Feed Science and Technology</i> , 2021 , 275, 114855	3	2
269	Effects of feeding blend-pelleted co-products on nutrient intake, digestibility, and production performance of high producing dairy cows. <i>Canadian Journal of Animal Science</i> , 2021 , 101, 234-241	0.9	
268	Steam pressure induced changes in carbohydrate molecular structures, chemical profile and in vitro fermentation characteristics of seeds from new Brassica carinata lines. <i>Animal Feed Science and Technology</i> , 2021 , 276, 114903	3	0
267	Research progress on faba bean and faba forage in food and feed types, physiochemical, nutritional, and molecular structural characteristics with molecular spectroscopy. <i>Critical Reviews in Food Science and Nutrition</i> , 2021 , 1-11	11.5	2
266	Processing induced changes in physicochemical structure properties and nutrient metabolism and their association in cool-season faba (CSF:), revealed by vibrational FTIR spectroscopy with chemometrics and nutrition modeling techniques. <i>Critical Reviews in Food Science and Nutrition</i> , 2021 , 61, 1099-1107	11.5	0
265	Nutrient profiles and pelleting effect of different blended co-products for dairy cows. <i>Animal Feed Science and Technology</i> , 2021 , 272, 114740	3	
264	Novel Use of Ultra-Resolution Synchrotron Vibrational Microspectroscopy (SR-FT/vIMS) to Assess Carinata and Canola oilseed tissues within Cellular and Subcellular Dimensions. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021 , 246, 118934	4.4	1
263	Exploration of biodegradation traits in dairy cows and protein spectroscopic features in microwaved and moist heated tannin and non-tannin Faba bean. <i>Animal</i> , 2021 , 15, 100046	3.1	1

262	Research progress in structural and nutritional characterization and technologically processing impact on cool-season adapted oat and barley cereal kernels with wet chemistry and advanced vibrational molecular spectroscopy. <i>Critical Reviews in Food Science and Nutrition</i> , 2021 , 1-10	11.5	0
261	Overexpression of miR156 and Silencing and Genes in on the Changes of Carbohydrate Physiochemical, Fermentation, and Nutritional Profiles. <i>Journal of Agricultural and Food Chemistry</i> , 2020 , 68, 14540-14548	5.7	1
260	Implication of Modified Chemical Profiles of Different Seed Proteins through Heat-Related Processing to Protein Nutrition and Metabolic Characteristics in Ruminant Systems. <i>Journal of Agricultural and Food Chemistry</i> , 2020 , 68, 4939-4945	5.7	
259	Using advanced vibrational molecular spectroscopy to detect moist heating induced protein structure changes in cool-climate adapted barley grain. <i>PLoS ONE</i> , 2020 , 15, e0234126	3.7	2
258	Using advanced vibrational molecular spectroscopy (ATR-Ft/IRS) to study heating process induced changes on protein molecular structure of biodegradation residues in cool-climate adapted faba bean seeds: Relationship with rumen and intestinal protein digestion in ruminant systems. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2020 , 234, 118220	4.4	0
257	Using vibrational molecular spectroscopy to detect moist heating induced carbohydrates structure changes in cool-climate adapted barley grain. <i>Journal of Cereal Science</i> , 2020 , 95, 103007	3.8	1
256	Effect of processing methods (Rolling, steam-flaking, pelleting) on protein molecular structure profile, rumen degradation, and intestinal digestion of cool-climate adapted oats grain in comparison with barley grain in western Canada. <i>Livestock Science</i> , 2020 , 232, 103901	1.7	1
255	Using advanced vibrational molecular spectroscopy (ATR-Ft/IRS and synchrotron SR-IMS) to study an interaction between protein molecular structure from biodegradation residues and nutritional properties of cool-climate adapted faba bean seeds. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2020 , 228, 117630	4.4	2
254	Infrared attenuated total reflection spectroscopic analysis and quantitative detection of forage spectral features in ruminant systems. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2020 , 228, 117630	4.4	0
253	Effect of heat processing methods on the protein molecular structure, physicochemical, and nutritional characteristics of faba bean (low and normal tannin) grown in western Canada. <i>Animal Feed Science and Technology</i> , 2020 , 269, 114681	3	5
252	Utilization of synchrotron-based and global-sourced mid-infrared spectroscopy for faba nutritional research about molecular structural and nutritional interaction. <i>Critical Reviews in Food Science and Nutrition</i> , 2020 , 1-13	11.5	1
251	Synchrotron-radiation sourced SR-IMS molecular spectroscopy to explore impact of silencing TT8 and HB12 genes in alfalfa leaves on the molecular structure and chemical mapping. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2020 , 243, 118676	4.4	1
250	Chemical Imaging of the Microstructure of Chickpea Seed Tissue within a Cellular Dimension Using Synchrotron Infrared Microspectroscopy: A Preliminary Study. <i>Journal of Agricultural and Food Chemistry</i> , 2020 , 68, 11586-11593	5.7	
249	Recent progress in structural and nutritional characterization of faba legume and use as an environment probe with vibrational spectroscopy sourced by global and synchrotron. <i>Applied Spectroscopy Reviews</i> , 2020 , 55, 288-306	4.5	5
248	Interactive association between processing induced molecular structure changes and nutrient delivery on a molecular basis, revealed by cutting-edge vibrational biomolecular spectroscopy. <i>Journal of Animal Science and Biotechnology</i> , 2019 , 10, 85	6	
247	Effects of processing methods (rolling vs. pelleting vs. steam-flaking) of cool-season adapted oats on dairy cattle production performance and metabolic characteristics compared with barley. <i>Journal of Dairy Science</i> , 2019 , 102, 10916-10924	4	6
246	Genotypic impact on molecular structural, physicochemical, and nutritional characteristics of warm-season adapted sorghum kernels grown under warm climate conditions. <i>Journal of Cereal Science</i> , 2019 , 87, 334-339	3.8	
245	Biodegradation Profiles of Proanthocyanidin-Accumulating Alfalfa Plants Coexpressing Lc- bHLH and C1-MYB Transcriptional Flavanoid Regulatory Genes. <i>Journal of Agricultural and Food Chemistry</i> , 2019 , 67, 4793-4799	5.7	2

244	Vibrational spectroscopic study on feed molecular structure properties of oil-seeds and co-products from Canadian and Chinese bio-processing and relationship with protein and carbohydrate degradation fractions in ruminant systems. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019 , 216, 249-257	4.4	0
243	Natural Occurrence and Co-Contamination of Twelve Mycotoxins in Industry-Submitted Cool-Season Cereal Grains Grown under a Low Heat Unit Climate Condition. <i>Toxins</i> , 2019 , 11,	4.9	15
242	A methodology study on chemical and molecular structure imaging in modified forage leaf tissue with cutting-edge synchrotron-powered technology (SR-IMS) as a potential research tool. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019 , 213, 330-336	4.4	2
241	Interactive Curve-Linear Relationship Between Alteration of Carbohydrate Macromolecular Structure Traits in Hulless Barley (L.) Grain and Nutrient Utilization, Biodegradation and Bioavailability. <i>International Journal of Molecular Sciences</i> , 2019 , 20,	6.3	2
240	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. <i>Food Control</i> , 2019 , 102, 221-230	6.2	13
239	Using vibrational ATR-FTIR spectroscopy with chemometrics to reveal faba CHO molecular spectral profile and CHO nutritional features in ruminant systems. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019 , 214, 269-276	4.4	8
238	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. <i>Food Chemistry</i> , 2019 , 272, 507-513	8.5	26
237	Connection of inherent structure with nutrient profiles and bioavailability of different co-products and by-products after processing using advanced grading and vibrational molecular spectroscopy. <i>Critical Reviews in Food Science and Nutrition</i> , 2019 , 59, 2796-2806	11.5	3
236	Effects of silencing TT8 and HB12 on in vitro nutrients degradation and VFA production in relation to molecular structures of alfalfa (<i>Medicago sativa</i>). <i>Journal of the Science of Food and Agriculture</i> , 2019 , 99, 6850-6858	4.3	1
235	Silencing and Decreased Protein Degradation and Digestion, Microbial Synthesis, and Metabolic Protein in Relation to Molecular Structures of Alfalfa (). <i>Journal of Agricultural and Food Chemistry</i> , 2019 , 67, 7898-7907	5.7	2
234	Biodegradation kinetics by microorganisms, enzymatic biodigestion, and fractionation of protein in seeds of cool-climate-adapted oats: Comparison among oat varieties, between milling-type and feed-type oats, and with barley grain. <i>Journal of Cereal Science</i> , 2019 , 89, 102814	3.8	3
233	Protein molecular structure, degradation and availability of canola, rapeseed and soybean meals in dairy cattle diets. <i>Asian-Australasian Journal of Animal Sciences</i> , 2019 , 32, 1381-1388	2.4	4
232	9: Using non-invasive synchrotronbased analytical techniques in animal nutrition: a novel approach 2019 , 209-227		
231	Detect molecular spectral features of newly developed Vicia faba varieties and protein metabolic characteristics in ruminant system using advanced synchrotron radiation based infrared microspectroscopy: A preliminary study. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019 , 216, 118-123	4.4	5
230	Protein molecular structural, physicochemical and nutritional characteristics of warm-season adapted genotypes of sorghum grain: Impact of heat-related processing. <i>Journal of Cereal Science</i> , 2019 , 85, 182-191	3.8	3
229	Using vibrational molecular spectroscopy with chemometrics as an analytical method to investigate association of degradation with inherent molecular structures in grain. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019 , 208, 331-338	4.4	
228	Implications of recent research on microstructure modifications, through heat-related processing and trait alteration to bio-functions, molecular thermal stability and mobility, metabolic characteristics and nutrition in cool-climate cereal grains and other types of seeds with advanced molecular techniques. <i>Critical Reviews in Food Science and Nutrition</i> , 2019 , 59, 2214-2224	11.5	3
227	Contributions to advances in blend pellet products (BPP) research on molecular structure and molecular nutrition interaction by advanced synchrotron and global molecular (Micro)spectroscopy. <i>Critical Reviews in Food Science and Nutrition</i> , 2019 , 59, 2654-2665	11.5	1

226	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. <i>Journal of Cereal Science</i> , 2018 , 80, 212-220	3.8	12
225	Biodegradation characteristics and nutrient availability of newly developed carinata seeds in comparison with canola seeds in dairy cattle. <i>Animal Feed Science and Technology</i> , 2018 , 240, 88-101	3	2
224	Molecular spectroscopic features of protein in newly developed chickpea: Relationship with protein chemical profile and metabolism in the rumen and intestine of dairy cows. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 196, 168-177	4.4	9
223	Using vibrational molecular spectroscopy to reveal association of steam-flaking induced carbohydrates molecular structural changes with grain fractionation, biodigestion and biodegradation. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 194, 181-188	4.4	4
222	Effect of durations of microwave irradiation (3 and 5 min) on truly absorbable nutrient supply of newly developed hullless barley varieties (<i>Hordeum vulgare</i> L.) in comparison with conventional hulled barley variety. <i>Journal of Cereal Science</i> , 2018 , 79, 424-430	3.8	6
221	Curve-linear relationship between altered carbohydrate traits with molecular structure and truly absorbed nutrient supply to dairy cattle in new hullless barley (<i>Hordeum vulgare</i> L.). <i>Animal Feed Science and Technology</i> , 2018 , 235, 177-188	3	7
220	Determine effect of pressure heating on carbohydrate related molecular structures in association with carbohydrate metabolic profiles of cool-climate chickpeas using Global spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 201, 8-18	4.4	3
219	Mycotoxin contamination of food and feed in China: Occurrence, detection techniques, toxicological effects and advances in mitigation technologies. <i>Food Control</i> , 2018 , 91, 202-215	6.2	49
218	Advanced synchrotron-based and global-sourced molecular (micro) spectroscopy contributions to advances in food and feed research on molecular structure, mycotoxin determination, and molecular nutrition. <i>Critical Reviews in Food Science and Nutrition</i> , 2018 , 58, 2164-2175	11.5	6
217	Relationship between protein molecular structural makeup and metabolizable protein supply to dairy cattle from new cool-season forage corn cultivars. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 191, 303-314	4.4	8
216	Alteration of biomacromolecule in corn by steam flaking in relation to biodegradation kinetics in ruminant, revealed with vibrational molecular spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 191, 491-497	4.4	8
215	Molecular Structural Changes in Alfalfa Detected by ATR-FTIR Spectroscopy in Response to Silencing of TT8 and HB12 Genes. <i>International Journal of Molecular Sciences</i> , 2018 , 19,	6.3	11
214	Effects of TT8 and HB12 Silencing on the Relations between the Molecular Structures of Alfalfa (<i>Medicago sativa</i>) Plants and Their Nutritional Profiles and In Vitro Gas Production. <i>Journal of Agricultural and Food Chemistry</i> , 2018 , 66, 5602-5611	5.7	7
213	Potential nitrogen to energy synchronization, rumen degradation kinetics, and intestinal digestibility of blend pelleted products of new co-products from bio-fuel processing, pulse screenings and lignosulfonate compound in dairy cows. <i>Animal Feed Science and Technology</i> , 2018 ,	3	6
212	Relationship of carbohydrates and lignin molecular structure spectral profiles to nutrient profile in newly developed oats cultivars and barley grain. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 188, 495-506	4.4	8
211	Exploring the potential of applying infrared vibrational (micro)spectroscopy in ergot alkaloids determination: Techniques, current status, and challenges. <i>Applied Spectroscopy Reviews</i> , 2018 , 53, 395-419	4.5	10
210	347 Comparative effects of miR156. <i>Journal of Animal Science</i> , 2018 , 96, 173-173	0.7	78
209	339 Effect of varieties and tannin levels (low and normal) on the physicochemical and nutritional characterization of faba bean grown in western Canada.. <i>Journal of Animal Science</i> , 2018 , 96, 169-169	0.7	1

208	Metabolic characteristics and feed milk value of blend pelleted products based on combination of co-products from bio-fuel/bio-oil processing, pulse screenings and lignosulfonate in dairy cattle. <i>Animal Feed Science and Technology</i> , 2018 , 246, 62-71	3	4
207	On a Molecular Basis, Investigate Association of Molecular Structure with Bioactive Compounds, Anti-Nutritional Factors and Chemical and Nutrient Profiles of Canola Seeds and Co-Products from Canola Processing: Comparison Crusher Plants within Canada and within China as well as between	6.7	5
206	Application of FT/IR-ATR vibrational spectroscopy to reveal protein molecular structure of feedstock and co-products from Canadian and Chinese canola processing in relation to microorganism bio-degradation and enzyme bio-digestion. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 204, 791-797	4.4	2
205	Effect of fibrolytic enzymes on lactational performance, feeding behavior, and digestibility in high-producing dairy cows fed a barley silage-based diet. <i>Journal of Dairy Science</i> , 2018 , 101, 7971-7979	4	21
204	Protein molecular structure in relation to predicted biodegradation and nutrient supply of feedstocks and co-products from bio-oil processing with CNCPS system: Comparison Crusher Plants within Canada and within China as well as between Canada and China. <i>Animal Feed Science and Technology</i> , 2018 , 243, 125-139	3	1
203	Recent research in flaxseed (oil seed) on molecular structure and metabolic characteristics of protein, heat processing-induced effect and nutrition with advanced synchrotron-based molecular techniques. <i>Critical Reviews in Food Science and Nutrition</i> , 2017 , 57, 8-17	11.5	8
202	Synchrotron-based and global-sourced molecular (micro)spectroscopy contributions to advances in new hullless barley (with structure alteration) research on molecular structure, molecular nutrition, and nutrient delivery. <i>Critical Reviews in Food Science and Nutrition</i> , 2017 , 57, 224-236	11.5	8
201	The inter-relationship between processing-induced molecular structure features and metabolic and digestive characteristics in hulled and hullless barley (<i>Hordeum vulgare</i>) grains with altered carbohydrate traits. <i>Journal of the Science of Food and Agriculture</i> , 2017 , 97, 1207-1211	4.3	3
200	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. <i>Journal of Cereal Science</i> , 2017 , 74, 37-45	3.8	10
199	Bio-functions and molecular carbohydrate structure association study in forage with different source origins revealed using non-destructive vibrational molecular spectroscopy techniques. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2017 , 183, 260-266	4.4	3
198	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. <i>Food Control</i> , 2017 , 82, 57-65	6.2	58
197	Recent research on inherent molecular structure, physiochemical properties, and bio-functions of food and feed-type <i>Avena sativa</i> oats and processing-induced changes revealed with molecular microspectroscopic techniques. <i>Applied Spectroscopy Reviews</i> , 2017 , 52, 850-867	4.5	5
196	Molecular basis of structural make-up of feeds in relation to nutrient absorption in ruminants, revealed with advanced molecular spectroscopy: A review on techniques and models. <i>Applied Spectroscopy Reviews</i> , 2017 , 52, 653-673	4.5	2
195	Investigating Molecular Structures of Bio-Fuel and Bio-Oil Seeds as Predictors To Estimate Protein Bioavailability for Ruminants by Advanced Nondestructive Vibrational Molecular Spectroscopy. <i>Journal of Agricultural and Food Chemistry</i> , 2017 , 65, 9147-9157	5.7	4
194	The Occurrence, Biosynthesis, and Molecular Structure of Proanthocyanidins and Their Effects on Legume Forage Protein Precipitation, Digestion and Absorption in the Ruminant Digestive Tract. <i>International Journal of Molecular Sciences</i> , 2017 , 18,	6.3	30
193	Physiochemical Characteristics and Molecular Structures for Digestible Carbohydrates of Silages. <i>Journal of Agricultural and Food Chemistry</i> , 2017 , 65, 8979-8991	5.7	11
192	CHEMOTYPING USING SYNCHROTRON MID-INFRAED AND X-RAY SPECTROSCOPY TO IMPROVE AGRICULTURAL PRODUCTION. <i>Canadian Journal of Plant Science</i> , 2017 ,	1	3
191	Molecular Structure of Feeds in Relation to Nutrient Utilization and Availability in Animals: A Novel Approach. <i>Engineering</i> , 2017 , 3, 726-730	9.7	2

190	Nutritional and Metabolic Characteristics of Brassica carinata Co-products from Biofuel Processing in Dairy Cows. <i>Journal of Agricultural and Food Chemistry</i> , 2017 , 65, 5994-6001	5.7	13
189	A novel approach to determine synchronization index of lactating dairy cow diets with minimal sensitivity to random variations. <i>Animal Feed Science and Technology</i> , 2017 , 225, 143-156	3	0
188	On a molecular basis pelleting-induced changes on carbohydrate structure of co-products from bio-oil production revealed with vibrational molecular spectroscopy plus chemometrics: Sensitivity and response to conditioning temperature and time. <i>Biomedical Spectroscopy and Imaging</i> , 2017 , 5, 359-371	1.3	
187	The Use of Gene Modification and Advanced Molecular Structure Analyses towards Improving Alfalfa Forage. <i>International Journal of Molecular Sciences</i> , 2017 , 18,	6.3	25
186	Gene-Transformation-Induced Changes in Chemical Functional Group Features and Molecular Structure Conformation in Alfalfa Plants Co-Expressing Lc-bHLH and C1-MYB Transcriptional Flavanoid Regulatory Genes: Effects of Single-Gene and Two-Gene Insertion. <i>International Journal of Molecular Sciences</i> , 2017 , 18,	6.3	4
185	Structural Responses of Chemical Functional Groups in Different Types of Cereal Grains to Heat-Related Processing Methods Revealed with Advanced Synchrotron and Global-Sourced Molecular (Micro) Spectroscopy 2017 , 463-484		1
184	Structural changes on a molecular basis of canola meal by conditioning temperature and time during pelleting process in relation to physiochemical (energy and protein) properties relevant to ruminants. <i>PLoS ONE</i> , 2017 , 12, e0170173	3.7	5
183	Carbohydrate and lipid spectroscopic molecular structures of different alfalfa hay and their relationship with nutrient availability in ruminants. <i>Asian-Australasian Journal of Animal Sciences</i> , 2017 , 30, 1575-1589	2.4	8
182	Microprobing Structural Architecture Using Mid-Infrared Vibrational Molecular Spectroscopy 2016 ,		1
181	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. <i>Journal of Animal Science and Biotechnology</i> , 2016 , 7, 52	6	10
180	Structural and nutritional characterization of macromolecular complexes in new bioenergy feedstock by infrared radiation with advanced molecular spectroscopy and spectral chemometrics. <i>Applied Spectroscopy Reviews</i> , 2016 , 51, 822-838	4.5	9
179	Using non-invasive molecular spectroscopic techniques to detect unique aspects of protein Amide functional groups and chemical properties of modeled forage from different sourced-origins. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2016 , 156, 151-4	4.4	4
178	Investigation of structure interaction to nutrient properties and utilization in co-products after pellet processing at various conditions using advanced molecular spectroscopy. <i>Applied Spectroscopy Reviews</i> , 2016 , 51, 451-465	4.5	4
177	Association of protein structure, protein and carbohydrate subfractions with bioenergy profiles and biodegradation functions in modeled forage. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2016 , 157, 265-270	4.4	2
176	Recent Research and Progress in Food, Feed and Nutrition with Advanced Synchrotron-based SR-IMS and DRIFT Molecular Spectroscopy. <i>Critical Reviews in Food Science and Nutrition</i> , 2016 , 56, 910-8	11.5	13
175	Gene-Silencing-Induced Changes in Carbohydrate Conformation in Relation to Bioenergy Value and Carbohydrate Subfractions in Modeled Plant (<i>Medicago sativa</i>) with Down-Regulation of HB12 and TT8 Transcription Factors. <i>International Journal of Molecular Sciences</i> , 2016 , 17,	6.3	10
174	The Role of Proanthocyanidins Complex in Structure and Nutrition Interaction in Alfalfa Forage. <i>International Journal of Molecular Sciences</i> , 2016 , 17,	6.3	17
173	Univariate and multi-variate comparisons of protein and carbohydrate molecular structural conformations and their associations with nutritive factors in typical by-products. <i>Journal of the Science of Food and Agriculture</i> , 2016 , 96, 4736-4748	4.3	5

172	A nutritional evaluation of common barley varieties grown for silage by beef and dairy producers in western Canada. <i>Canadian Journal of Animal Science</i> , 2016 , 96, 598-608	0.9	16
171	Association of Bio-energy Processing-Induced Protein Molecular Structure Changes with CNCPS-Based Protein Degradation and Digestion of Co-products in Dairy Cows. <i>Journal of Agricultural and Food Chemistry</i> , 2016 , 64, 4086-94	5.7	4
170	Truly Absorbed Microbial Protein Synthesis, Rumen Bypass Protein, Endogenous Protein, and Total Metabolizable Protein from Starchy and Protein-Rich Raw Materials: Model Comparison and Predictions. <i>Journal of Agricultural and Food Chemistry</i> , 2015 , 63, 6518-24	5.7	2
169	Magnitude Differences in Bioactive Compounds, Chemical Functional Groups, Fatty Acid Profiles, Nutrient Degradation and Digestion, Molecular Structure, and Metabolic Characteristics of Protein in Newly Developed Yellow-Seeded and Black-Seeded Canola Lines. <i>Journal of Agricultural and Food Chemistry</i> , 2015 , 63, 5471-81	5.7	4
168	Magnitude differences in agronomic, chemical, nutritional, and structural features among different varieties of forage corn grown on dry land and irrigated land. <i>Journal of Agricultural and Food Chemistry</i> , 2015 , 63, 2383-91	5.7	5
167	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. <i>Journal of Dairy Science</i> , 2015 , 98, 4869-81	4	16
166	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. <i>Journal of Dairy Science</i> , 2015 , 98, 8836-45	4	18
165	Molecular basis of processing-induced changes in protein structure in relation to intestinal digestion in yellow and green type pea (<i>Pisum sativum</i> L.): A molecular spectroscopic analysis. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2015 , 151, 980-8	4.4	20
164	Nutritive value of maize silage in relation to dairy cow performance and milk quality. <i>Journal of the Science of Food and Agriculture</i> , 2015 , 95, 238-52	4.3	94
163	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. <i>Animal Production Science</i> , 2015 , 55, 201	1.4	17
162	Combining vibrational biomolecular spectroscopy with chemometric techniques for the study of response and sensitivity of molecular structures/functional groups mainly related to lipid biopolymer to various processing applications. <i>Analytical and Bioanalytical Chemistry</i> , 2015 , 407, 7245-53	4.4	5
161	Transformation with TT8 and HB12 RNAi Constructs in Model Forage (<i>Medicago sativa</i> , Alfalfa) Affects Carbohydrate Structure and Metabolic Characteristics in Ruminant Livestock Systems. <i>Journal of Agricultural and Food Chemistry</i> , 2015 , 63, 9590-600	5.7	21
160	Effect of Heating Method on Alteration of Protein Molecular Structure in Flaxseed: Relationship with Changes in Protein Subfraction Profile and Digestion in Dairy Cows. <i>Journal of Agricultural and Food Chemistry</i> , 2015 , 63, 1057-1066	5.7	31
159	Rumen degradation, intestinal and total digestion characteristics and metabolizable protein supply of carinata meal (a non-conventional feed resource) in comparison with canola meal. <i>Animal Feed Science and Technology</i> , 2014 , 191, 106-110	3	19
158	Non-destructive analysis of the conformational differences among feedstock sources and their corresponding co-products from bioethanol production with molecular spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014 , 118, 407-21	4.4	12
157	New Approaches and Recent Advances on Characterization of Chemical Functional Groups and Structures, Physicochemical Property, and Nutritional Values in Feedstocks and By-Products: Advanced Spectroanalytical and Modeling Investigations. <i>Applied Spectroscopy Reviews</i> , 2014 , 49, 585-602	4.5	6
156	Interactive association between biopolymers and biofunctions in carinata seeds as energy feedstock and their coproducts (carinata meal) from biofuel and bio-oil processing before and after biodegradation: current advanced molecular spectroscopic investigations. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 4039-47	5.7	3
155	Correlating molecular spectroscopy and molecular chemometrics to explore carbohydrate functional groups and utilization of coproducts from biofuel and biobrewing processing. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 5108-17	5.7	7

154	Impact of ethanol bioprocessing on association of protein structures at a molecular level to protein nutrient utilization and availability of different co-products from cereal grains as energy feedstocks. <i>Biomass and Bioenergy</i> , 2014 , 69, 47-57	5.3	5
153	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. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 6546-55	5.7	35
152	Effect of thermal processing on estimated metabolizable protein supply to dairy cattle from camelina seeds: relationship with protein molecular structural changes. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 8263-73	5.7	17
151	Implication of modified molecular structure of lipid through heat-related process to fatty acids supply in Brassica carinata seed. <i>Industrial Crops and Products</i> , 2014 , 62, 204-211	5.9	5
150	Molecular structures and metabolic characteristics of protein in brown and yellow flaxseed with altered nutrient traits. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 6556-64	5.7	19
149	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. <i>Journal of Agricultural and Food Chemistry</i> , 2014 , 62, 7977-88	5.7	15
148	Explore protein molecular structure in endosperm tissues in newly developed black and yellow type canola seeds by using synchrotron-based Fourier transform infrared microspectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014 , 120, 421-7	4.4	15
147	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. <i>Animal Feed Science and Technology</i> , 2014 , 192, 62-72	3	16
146	Moist and dry heating-induced changes in protein molecular structure, protein subfractions, and nutrient profiles in camelina seeds. <i>Journal of Dairy Science</i> , 2014 , 97, 446-57	4	54
145	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. <i>Animal Feed Science and Technology</i> , 2014 , 194, 136-144	3	11
144	Characterization of protein and carbohydrate mid-IR spectral features in crop residues. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014 , 129, 565-71	4.4	3
143	Relationship of feeds protein structural makeup in common Prairie feeds with protein solubility, in situ ruminal degradation and intestinal digestibility. <i>Animal Feed Science and Technology</i> , 2014 , 194, 58-70	7.0	35
142	Effects of barley-based diets with 3 different rumen-degradable protein balances on performance and carcass characteristics of feedlot steers. <i>The Professional Animal Scientist</i> , 2014 , 30, 432-443		3
141	Ruminal dry matter and nitrogen degradation in relation to condensed tannin and protein molecular structures in sainfoin (<i>Onobrychis viciifolia</i>) and lucerne (<i>Medicago sativa</i>). <i>Journal of Agricultural Science</i> , 2014 , 152, 333-345	1	6
140	Detect changes in lipid-related structure of brown- and yellow-seeded Brassica Carinata seed during rumen fermentation in relation to basic chemical profile using ATR-FT/IR molecular spectroscopy with chemometrics. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014 , 133, 811-7	4.4	6
139	Molecular spectroscopic investigation on fractionation-induced changes on biomacromolecule of co-products from bioethanol processing to explore protein metabolism in ruminants. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014 , 122, 591-7	4.4	5
138	Common Prairie feeds with different soluble and insoluble fractions used for CPM diet formulation in dairy cattle: impact of carbohydrate-protein matrix structure on protein and other primary nutrient digestion. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2014 , 121, 14-22	4.4	8
137	Characterizing the molecular structure features of newly developed hullless barley cultivars with altered carbohydrate traits (<i>Hordeum vulgare</i> L.) by global-sourced infrared spectroscopy in relation to nutrient utilization and availability. <i>Journal of Cereal Science</i> , 2014 , 60, 48-59	3.8	24

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135	Predicted truly absorbed protein supply to dairy cattle from hullless barley (<i>Hordeum vulgare</i> L.) with altered carbohydrate traits with multi-year samples. <i>Journal of Cereal Science</i> , 2013 , 58, 372-379	3.8	11
134	Detect the sensitivity and response of protein molecular structure of whole canola seed (yellow and brown) to different heat processing methods and relation to protein utilization and availability using ATR-FT/IR molecular spectroscopy with chemometrics. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2013 , 105, 304-13	4.4	27
133	Evaluation of the feed value for ruminants of blends of corn and wheat distillers dried grains. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 4387-95	5.7	6
132	Using ATR-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. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2013 , 114, 599-606	4.4	19
131	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. <i>Journal of Dairy Science</i> , 2013 , 96, 6631-43	4	19
130	In-depth study of the protein molecular structures of different types of dried distillers grains with solubles and their relationship to digestive characteristics. <i>Journal of the Science of Food and Agriculture</i> , 2013 , 93, 1438-48	4.3	18
129	Detect changes in protein structure of carinata meal during rumen fermentation in relation to basic chemical profile and comparison with canola meal using ATR-FT/IR molecular spectroscopy with chemometrics. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2013 , 112, 318-25	4.4	17
128	Effect of altered carbohydrate traits in hullless barley (<i>Hordeum vulgare</i> L.) on nutrient profiles and availability and nitrogen to energy synchronization. <i>Journal of Cereal Science</i> , 2013 , 58, 182-190	3.8	31
127	Chemical profile, energy values, and protein molecular structure characteristics of biofuel/bio-oil co-products (carinata meal) in comparison with canola meal. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 3926-33	5.7	38
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125	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. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 5119-25	5.7	51
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119	Synchrotron-based microspectroscopic study on the effects of heat treatments on cotyledon tissues in yellow-type canola (<i>Brassica</i>) seeds. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 7234-41	5.7	7

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29	Hydroxycinnamic acids and ferulic acid esterase in relation to biodegradation of complex plant cell walls. <i>Canadian Journal of Animal Science</i> , 2005 , 85, 255-267	0.9	26

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27	Protein secondary structures (alpha-helix and beta-sheet) at a cellular level and protein fractions in relation to rumen degradation behaviours of protein: a new approach. <i>British Journal of Nutrition</i> , 2005 , 94, 655-65	3.6	111
26	Prediction of protein supply to ruminants from concentrates: comparison of the NRC-2001 model with the DVE/OEB system. <i>Journal of the Science of Food and Agriculture</i> , 2005 , 85, 527-538	4.3	21
25	Potential protein degradation balance and total metabolizable protein supply to dairy cows from heat-treated faba beans. <i>Journal of the Science of Food and Agriculture</i> , 2005 , 85, 1268-1274	4.3	5
24	Ultrastructural-chemical makeup of yellow-seeded (<i>Brassica rapa</i>) and brown-seeded (<i>Brassica napus</i>) canola within cellular dimensions, explored with synchrotron reflection FTIR microspectroscopy. <i>Canadian Journal of Plant Science</i> , 2005 , 85, 533-541	1	38
23	Use of synchrotron FTIR microspectroscopy to identify chemical differences in barley endosperm tissue in relation to rumen degradation characteristics. <i>Canadian Journal of Animal Science</i> , 2004 , 84, 523-527	0.9	32
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21	The specificity and the ability of <i>Aspergillus feruloyl</i> esterase to release p-coumaric acid from complex cell walls of oat hulls. <i>Journal of Chemical Technology and Biotechnology</i> , 2004 , 79, 729-733	3.5	18
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19	Imaging molecular chemistry of Pioneer corn. <i>Journal of Agricultural and Food Chemistry</i> , 2004 , 52, 7345-52	5.7	64
18	Using synchrotron-based FTIR microspectroscopy to reveal chemical features of feather protein secondary structure: comparison with other feed protein sources. <i>Journal of Agricultural and Food Chemistry</i> , 2004 , 52, 7353-61	5.7	86
17	In situ rumen degradation kinetics of timothy and alfalfa as affected by cultivar and stage of maturity. <i>Canadian Journal of Animal Science</i> , 2004 , 84, 255-263	0.9	28
16	Application of advanced synchrotron radiation-based Fourier transform infrared (SR-FTIR) microspectroscopy to animal nutrition and feed science: a novel approach. <i>British Journal of Nutrition</i> , 2004 , 92, 869-85	3.6	108
15	Using Chemical and Biological Approaches to Predict Energy Values of Selected Forages Affected by Variety and Maturity Stage: Comparison of Three Approaches. <i>Asian-Australasian Journal of Animal Sciences</i> , 2004 , 17, 228-236	2.4	5
14	Probing Equivocal Effects of Heat Processing of Legume Seeds on Performance of Ruminants - A Review -. <i>Asian-Australasian Journal of Animal Sciences</i> , 2004 , 17, 869-876	2.4	16
13	Effect of variety and maturity stage on chemical composition, carbohydrate and protein subfractions, in vitro rumen degradability and energy values of timothy and alfalfa. <i>Canadian Journal of Animal Science</i> , 2003 , 83, 279-290	0.9	59
12	Chemical imaging of microstructures of plant tissues within cellular dimension using synchrotron infrared microspectroscopy. <i>Journal of Agricultural and Food Chemistry</i> , 2003 , 51, 6062-7	5.7	68
11	Enzymic release of reducing sugars from oat hulls by cellulase, as influenced by <i>Aspergillus ferulic</i> acid esterase and <i>trichoderma xylanase</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2003 , 51, 218-23	5.7	49

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