

Peiqiang Yu

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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	Nutrient variation and availability of wheat DDGS, corn DDGS and blend DDGS from bioethanol plants. <i>Journal of the Science of Food and Agriculture</i> , 2009 , 89, 1754-1761	4.3	127
278	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
277	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
276	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. <i>Journal of Agricultural and Food Chemistry</i> , 2005 , 53, 7115-27	5.7	99
275	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
274	Heat-induced protein structure and subfractions in relation to protein degradation kinetics and intestinal availability in dairy cattle. <i>Journal of Dairy Science</i> , 2009 , 92, 3319-30	4	92
273	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
272	Release of ferulic acid from oat hulls by <i>Aspergillus</i> ferulic acid esterase and <i>trichoderma</i> xylanase. <i>Journal of Agricultural and Food Chemistry</i> , 2002 , 50, 1625-30	5.7	84
271	Relationship of protein molecular structure to metabolisable proteins in different types of dried distillers grains with solubles: a novel approach. <i>British Journal of Nutrition</i> , 2010 , 104, 1429-37	3.6	83
270	347 Comparative effects of miR156. <i>Journal of Animal Science</i> , 2018 , 96, 173-173	0.7	78
269	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. <i>Animal Feed Science and Technology</i> , 2003 , 107, 45-60	3	77
268	Dry and moist heating-induced changes in protein molecular structure, protein subfraction, and nutrient profiles in soybeans. <i>Journal of Dairy Science</i> , 2011 , 94, 6092-102	4	71
267	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
266	Imaging molecular chemistry of Pioneer corn. <i>Journal of Agricultural and Food Chemistry</i> , 2004 , 52, 7345-52	5.7	64
265	Synchrotron IR microspectroscopy for protein structure analysis: Potential and questions. <i>Spectroscopy</i> , 2006 , 20, 229-251		59
264	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
263	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

262	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. <i>Journal of Dairy Science</i> , 2003 , 86, 2178-92	4	57
261	Using the DVE/OEB model to determine optimal conditions of pressure toasting on horse beans (<i>Vicia faba</i>) for the dairy feed industry. <i>Animal Feed Science and Technology</i> , 2000 , 86, 165-176	3	57
260	Estimation of ruminal and intestinal digestion profiles, hourly effective degradation ratio and potential N to energy synchronization of co-products from bioethanol processing. <i>Journal of the Science of Food and Agriculture</i> , 2010 , 90, 2058-67	4.3	56
259	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
258	An analysis of the nutritive value of heat processed legume seeds for animal production using the DVE/OEB model: a review. <i>Animal Feed Science and Technology</i> , 2002 , 99, 141-176	3	53
257	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> , 2012 , 61, 5449-59	5.7	51
256	Rapid characterization of molecular chemistry, nutrient make-up and microlocation of internal seed tissue. <i>Journal of Synchrotron Radiation</i> , 2007 , 14, 382-90	2.4	51
255	Using synchrotron transmission FTIR microspectroscopy as a rapid, direct, and nondestructive analytical technique to reveal molecular microstructural-chemical features within tissue in grain barley. <i>Journal of Agricultural and Food Chemistry</i> , 2004 , 52, 1484-94	5.7	51
254	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
253	Detecting molecular changes in Vimy flaxseed protein structure using synchrotron FTIRM and DRIFT spectroscopic techniques: Structural and biochemical characterization. <i>Spectroscopy</i> , 2009 , 23, 307-322		49
252	Enzymic release of reducing sugars from oat hulls by cellulase, as influenced by <i>Aspergillus ferulic acid esterase</i> and <i>trichoderma xylanase</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2003 , 51, 218-23	5.7	49
251	Plant-based food and feed protein structure changes induced by gene-transformation, heating and bio-ethanol processing: a synchrotron-based molecular structure and nutrition research program. <i>Molecular Nutrition and Food Research</i> , 2010 , 54, 1535-45	5.9	46
250	What makes protein indigestible from tissue-related, cellular, and molecular aspects?. <i>Molecular Nutrition and Food Research</i> , 2013 , 57, 1695-707	5.9	46
249	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. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2009 , 73, 846-53	4.4	45
248	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. <i>Journal of Agricultural and Food Chemistry</i> , 2010 , 58, 7801-10	5.7	42
247	Improving the nutritional value of oat hulls for ruminant animals with pretreatment of a multienzyme cocktail: in vitro studies. <i>Journal of Animal Science</i> , 2005 , 83, 1133-41	0.7	39
246	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
245	Effects of bioethanol plant and coproduct type on the metabolic characteristics of the proteins in dairy cattle. <i>Journal of Dairy Science</i> , 2010 , 93, 3775-83	4	38

244	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
243	Molecular chemical structure of barley proteins revealed by ultra-spatially resolved synchrotron light sourced FTIR microspectroscopy: comparison of barley varieties. <i>Biopolymers</i> , 2007 , 85, 308-17	2.2	36
242	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
241	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	2	35
240	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. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2012 , 95, 53-63	4.4	34
239	Protein Molecular Structures, Protein SubFractions, and Protein Availability Affected by Heat Processing: A Review. <i>American Journal of Biochemistry and Biotechnology</i> , 2007 , 3, 66-86	0.4	34
238	Molecular chemistry imaging to reveal structural features of various plant feed tissues. <i>Journal of Structural Biology</i> , 2005 , 150, 81-9	3.4	33
237	Molecular basis of structural makeup of hulless barley in relation to rumen degradation kinetics and intestinal availability in dairy cattle: A novel approach. <i>Journal of Dairy Science</i> , 2011 , 94, 5151-9	4	32
236	Multicomponent peak modeling of protein secondary structures: comparison of gaussian with lorentzian analytical methods for plant feed and seed molecular biology and chemistry research. <i>Applied Spectroscopy</i> , 2005 , 59, 1372-80	3.1	32
235	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
234	Effect of altered carbohydrate traits in hulless 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
233	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
232	Short communication: Relationship of carbohydrate molecular spectroscopic features to carbohydrate nutrient profiles in co-products from bioethanol production. <i>Journal of Dairy Science</i> , 2012 , 95, 2091-6	4	31
231	Using DRIFT molecular spectroscopy with uni- and multivariate spectral techniques to detect protein molecular structure differences among different genotypes of barley. <i>Journal of Agricultural and Food Chemistry</i> , 2010 , 58, 6264-9	5.7	31
230	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
229	Studies on <i>Brassica carinata</i> seed. 2. Carbohydrate molecular structure in relation to carbohydrate chemical profile, energy values, and biodegradation characteristics. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 10127-34	5.7	30
228	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. <i>Journal of Agricultural and Food Chemistry</i> , 2008 , 56, 3417-26	5.7	30
227	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). <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 2820-30	5.7	28

226	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. <i>Journal of Agricultural and Food Chemistry</i> , 2010 , 58, 10553-9	5.7	28
225	Application of cluster analysis (CLA) in feed chemical imaging to accurately reveal structural-chemical features of feeds and plants within cellular dimension. <i>Journal of Agricultural and Food Chemistry</i> , 2005 , 53, 2872-80	5.7	28
224	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
223	Relationship of carbohydrate molecular spectroscopic features in combined feeds to carbohydrate utilization and availability in ruminants. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2012 , 92, 225-33	4.4	27
222	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
221	Effect of processing conditions on the nutritive value of canola meal and presscake. Comparison of the yellow and brown-seeded canola meal with the brown-seeded canola presscake. <i>Journal of the Science of Food and Agriculture</i> , 2013 , 93, 1986-95	4.3	27
220	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
219	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. <i>Animal Feed Science and Technology</i> , 2012 , 172, 162-170	3	26
218	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
217	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
216	Molecular structure and metabolic characteristics of the proteins and energy in triticale grains and dried distillers grains with solubles for dairy cattle. <i>Journal of Agricultural and Food Chemistry</i> , 2012 , 60, 10064-74	5.7	25
215	Foam stability of leaves from anthocyanidin-accumulating Lc-alfalfa and relation to molecular structures detected by fourier-transformed infrared-vibration spectroscopy. <i>Grass and Forage Science</i> , 2012 , 67, 369-381	2.3	25
214	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. <i>International Journal of Molecular Sciences</i> , 2011 , 12, 1921-35	6.3	25
213	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
212	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. <i>Journal of Dairy Science</i> , 2012 , 95, 6695-715	4	24
211	Studies on <i>Brassica carinata</i> seed. 1. Protein molecular structure in relation to protein nutritive values and metabolic characteristics. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 10118-26	5.7	24
210	Protein molecular structures and protein fraction profiles of new coproducts from BioEthanol production: a novel approach. <i>Journal of Agricultural and Food Chemistry</i> , 2010 , 58, 3460-4	5.7	24
209	Use of synchrotron-based FTIR microspectroscopy to determine protein secondary structures of raw and heat-treated brown and golden flaxseeds: A novel approach. <i>Canadian Journal of Animal Science</i> , 2005 , 85, 437-448	0.9	24

208	Purine derivative excretion and ruminal microbial yield in growing lambs fed raw and dry roasted legume seeds as protein supplements. <i>Animal Feed Science and Technology</i> , 2002 , 95, 33-48	3	22
207	Transformation with TT8 and HB12 RNAi Constructs in Model Forage (Medicago sativa, 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
206	Molecular basis of protein structure in combined feeds (hulless barley with bioethanol coproduct of wheat dried distillers grains with solubles) in relation to protein rumen degradation kinetics and intestinal availability in dairy cattle. <i>Journal of Dairy Science</i> , 2012 , 95, 3363-79	4	21
205	Characterization of Arabidopsis thaliana lines with altered seed storage protein profiles using synchrotron-powered FT-IR spectromicroscopy. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 901-12	5-7	21
204	Molecular clustering, interrelationships and carbohydrate conformation in hull and seeds among barley cultivars. <i>Journal of Cereal Science</i> , 2011 , 53, 379-383	3-8	21
203	Physicochemical characteristics, hydroxycinnamic acids (ferulic acid, P-coumaric acid) and their ratio, and in situ biodegradability: comparison of genotypic differences among six barley varieties. <i>Journal of Agricultural and Food Chemistry</i> , 2009 , 57, 4777-83	5-7	21
202	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
201	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
200	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. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2015 , 151, 980-8	4-4	20
199	Modeling degradation ratios and nutrient availability of anthocyanidin-accumulating Lc-alfalfa populations in dairy cows. <i>Journal of Dairy Science</i> , 2011 , 94, 1430-44	4	20
198	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
197	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
196	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
195	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
194	Protein fractionation byproduct from canola meal for dairy cattle. <i>Journal of Dairy Science</i> , 2012 , 95, 4488-500	4	19
193	Structural makeup, biopolymer conformation, and biodegradation characteristics of a newly developed super genotype of oats (CDC SO-1 versus conventional varieties): a novel approach. <i>Journal of Agricultural and Food Chemistry</i> , 2010 , 58, 2377-87	5-7	19
192	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
191	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

190	Using synchrotron radiation-based infrared microspectroscopy to reveal microchemical structure characterization: frost damaged wheat vs. normal wheat. <i>International Journal of Molecular Sciences</i> , 2013 , 14, 16706-18	6.3	18
189	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
188	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
187	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
186	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
185	Nutrient composition and degradation profiles of anthocyanidin-accumulating Lc-alfalfa populations. <i>Canadian Journal of Animal Science</i> , 2010 , 90, 401-412	0.9	17
184	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
183	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
182	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
181	Response and sensitivity of lipid related molecular structure to wet and dry heating in canola tissue. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2012 , 90, 63-71	4.4	16
180	Metabolic characteristics in ruminants of the proteins in newly developed hull-less barley varieties with altered starch traits. <i>Journal of Cereal Science</i> , 2012 , 55, 351-360	3.8	16
179	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. <i>Journal of Dairy Science</i> , 2012 , 95, 6624-34	4	16
178	Modeling nutrient availability of alfalfa hay harvested at three stages of maturity and in the afternoon and morning in dairy cows. <i>Animal Feed Science and Technology</i> , 2012 , 178, 12-19	3	16
177	Investigating the molecular structural features of hullless barley (<i>Hordeum vulgare</i> L.) in relation to metabolic characteristics using synchrotron-based fourier transform infrared microspectroscopy. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 11250-60	5.7	16
176	Microprobing the molecular spatial distribution and structural architecture of feed-type sorghum seed tissue (<i>Sorghum Bicolor</i> L.) using the synchrotron radiation infrared microspectroscopy technique. <i>Journal of Synchrotron Radiation</i> , 2011 , 18, 790-801	2.4	16
175	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
174	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
173	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

172	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
171	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
170	Nutrient profile and availability of co-products from bioethanol processing. <i>Journal of Animal Physiology and Animal Nutrition</i> , 2012 , 96, 450-8	2.6	15
169	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. <i>Journal of Animal Physiology and Animal Nutrition</i> , 2009 , 93, 555-67	2.6	15
168	Understanding the differences in molecular conformation of carbohydrate and protein in endosperm tissues of grains with different biodegradation kinetics using advanced synchrotron technology. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2009 , 71, 1837-44	4.4	15
167	Heat-induced changes to lipid molecular structure in Vimy flaxseed: spectral intensity and molecular clustering. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2011 , 79, 51-9	4.4	14
166	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. <i>Journal of Agricultural and Food Chemistry</i> , 2009 , 57, 6871-8	5.7	14
165	An emerging method for rapid characterization of feed structures and feed component matrix at a cellular level and relation to feed quality and nutritive value. <i>Archives of Animal Nutrition</i> , 2006 , 60, 229-247	4.7	14
164	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
163	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
162	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
161	Thermal stability and molecular microstructure of heat-induced cereal grains, revealed with Raman molecular microspectroscopy and differential scanning calorimetry. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 6495-504	5.7	13
160	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. <i>Journal of the Science of Food and Agriculture</i> , 2011 , 91, 405-11	4.3	13
159	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
158	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
157	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
156	Use of a dry fractionation process to manipulate the chemical profile and nutrient supply of a coproduct from bioethanol processing. <i>Journal of Agricultural and Food Chemistry</i> , 2012 , 60, 6846-54	5.7	12
155	Spectroscopic impact on protein and carbohydrate inherent molecular structures of barley, oat and corn combined with wheat DDGS. <i>Spectroscopy</i> , 2011 , 26, 255-277		12

154	Relationship of physicochemical characteristics and hydrolyzed hydroxycinnamic acid profile of barley varieties and nutrient availability in ruminants. <i>Journal of Cereal Science</i> , 2011 , 53, 178-187	3.8	12
153	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. <i>Animal Feed Science and Technology</i> , 2001 , 93, 71-91	3	12
152	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
151	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
150	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
149	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
148	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. <i>Journal of Dairy Science</i> , 2013 , 96, 5908-13	4	11
147	The ratios of degradation characteristics of forages in the rumen of dairy cows: effect of variety and stage of maturity. <i>Journal of the Science of Food and Agriculture</i> , 2004 , 84, 179-189	4.3	11
146	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
145	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
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143	Study the sensitivity of molecular functional groups to bioethanol processing in lipid biopolymer of co-products using DRIFT molecular spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2011 , 82, 1-7	4.4	10
142	Reveal protein molecular structural-chemical differences between two types of winterfat (forage) seeds with physiological differences in low temperature tolerance using synchrotron-based Fourier transform infrared microspectroscopy. <i>Journal of Agricultural and Food Chemistry</i> , 2005 , 53, 9297-303	5.7	10
141	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
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139	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
138	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
137	Protein molecular structures in alfalfa hay cut at three stages of maturity and in the afternoon and morning and relationship with nutrient availability in ruminants. <i>Journal of the Science of Food and Agriculture</i> , 2013 , 93, 3072-80	4.3	9

136	Chemical characteristics and in situ ruminal parameters of barley for cattle: Comparison of the malting cultivar AC Metcalfe and five feed cultivars. <i>Canadian Journal of Animal Science</i> , 2008 , 88, 711-719	8.9	9
135	Using a non-invasive technique in nutrition: synchrotron radiation infrared microspectroscopy spectroscopic characterization of oil seeds treated with different processing conditions on molecular spectral factors influencing nutrient delivery. <i>Journal of Agricultural and Food Chemistry</i> , 2011 , 59, 1122-1132	5.7	9
134	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
133	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
132	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
131	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
130	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
129	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 , 170, 41-50	4.4	8
128	Effect of wheat-based dried distillers grains with solubles inclusion on barley-based feed chemical profile, energy values, rumen degradation kinetics, and protein supply. <i>Journal of Agricultural and Food Chemistry</i> , 2012 , 60, 4986-93	5.7	8
127	Board-invited review: Sensitivity and responses of functional groups to feed processing methods on a molecular basis. <i>Journal of Animal Science and Biotechnology</i> , 2012 , 3, 40	6	8
126	Univariate and multivariate molecular spectral analyses of lipid related molecular structural components in relation to nutrient profile in feed and food mixtures. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2013 , 102, 432-42	4.4	8
125	Assessing protein availability of different bioethanol coproducts in dairy cattle. <i>Animal</i> , 2013 , 7, 255-64	3.1	8
124	Using the NRC chemical summary and biological approaches to predict energy values of new co-product from bio-ethanol production for dairy cows. <i>Animal Feed Science and Technology</i> , 2011 , 170, 165-170	3	8
123	Molecular chemistry of plant protein structure at a cellular level by synchrotron-based FTIR spectroscopy: Comparison of yellow (<i>Brassica rapa</i>) and Brown (<i>Brassica napus</i>) canola seed tissues. <i>Infrared Physics and Technology</i> , 2008 , 51, 473-481	2.7	8
122	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
121	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
120	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
119	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

118	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
117	Synchrotron-based microspectroscopic study on the effects of heat treatments on cotyledon tissues in yellow-type canola (Brassica) seeds. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 7234-41	5.7	7
116	Effects of supplementing spring-calving beef cows grazing barley crop residue with a wheat-corn blend dried distillers grains with solubles on animal performance and estimated dry matter intake. <i>The Professional Animal Scientist</i> , 2011 , 27, 219-227		7
115	Effect of the DVE and OEB value changes of grain legumes (lupin and faba beans) after roasting on the performance of lambs fed a roughage-based diet. <i>Animal Feed Science and Technology</i> , 2001 , 94, 89-102	3	7
114	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
113	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
112	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
111	New Approaches and Recent Advances on Characterization of Chemical Functional Groups and Structures, Physiochemical 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
110	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
109	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
108	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
107	Application of Advanced Synchrotron Radiation-Based and Conventional Molecular Techniques in Recent Research on Molecular Structure, Metabolic Characteristics, and Nutrition in Coproducts from Biofuel Processing. <i>Applied Spectroscopy Reviews</i> , 2013 , 48, 589-608	4.5	6
106	Characterizations of structural, biochemical, and nutritive profiles in silage among cool-season corn cultivars in relation to heat units (aCHU, dCHU) with curvilinear response and multivariate analyses. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 12315-26	5.7	6
105	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 , 233, 186-207	3	6
104	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
103	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
102	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
101	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

100	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
99	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
98	Protein structures among bio-ethanol co-products and its relationships with ruminal and intestinal availability of protein in dairy cattle. <i>International Journal of Molecular Sciences</i> , 2013 , 14, 16802-16	6.3	5
97	Effects of partially replacing barley or corn with raw and micronised CDC SO-1 oats on productive performance of lactating dairy cows. <i>Archives of Animal Nutrition</i> , 2010 , 64, 425-36	2.7	5
96	Effect of barley variety and growth year on ferulic and para-coumaric acids, and their ratio in the seed and hull. <i>Cereal Research Communications</i> , 2010 , 38, 521-532	1.1	5
95	Modeling protein structures in feed and seed tissues using novel synchrotron-based analytical technique. <i>Animal Feed Science and Technology</i> , 2008 , 140, 199-206	3	5
94	Ultra-spatial synchrotron radiation for imaging molecular chemical structure: Applications in plant and animal studies. <i>Spectroscopy</i> , 2007 , 21, 183-192		5
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92	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
91	Structural changes on a molecular basis of canola meal by conditioning temperature and time during pelleting process in relation to physicochemical (energy and protein) properties relevant to ruminants. <i>PLoS ONE</i> , 2017 , 12, e0170173	3.7	5
90	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
89	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
88	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
87	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> , 2017 , 178, 118-123	4.4	5
86	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
85	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 Countries. <i>Journal of Agricultural and Food Chemistry</i> , 2019 , 67, 1171-1181	6.7	5
84	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
83	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, 5171-81	5.7	4

82	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
81	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
80	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
79	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
78	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
77	Influence of dry roasting on rumen protein degradation characteristics of whole faba bean (<i>Vicia faba</i>) in dairy cows. <i>Asian-Australasian Journal of Animal Sciences</i> , 1998 , 11, 35-42	2.4	4
76	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
75	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
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73	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
72	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
71	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
70	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
69	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
68	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
67	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
66	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
65	CHEMOTYPING USING SYNCHROTRON MID-INFRARED AND X-RAY SPECTROSCOPY TO IMPROVE AGRICULTURAL PRODUCTION. <i>Canadian Journal of Plant Science</i> , 2017 ,	1	3

64	Study of Barley Grain Molecular Structure for Ruminants Using DRIFT, FTIR-ATR and Synchrotron Radiation Infrared Microspectroscopy (SR-IMS): A Review. <i>Journal of Physics: Conference Series</i> , 2012 , 359, 012008	0.3	3
63	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
62	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
61	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 spectroscopy. <i>Critical Reviews in Food Science and Nutrition</i> , 2019 , 59, 2014-2034	11.5	3
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59	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
58	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
57	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
56	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
55	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
54	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
53	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
52	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
51	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
50	Investigate the magnitude of differences in total metabolizable protein among different genotypes of barley grown for three consecutive years. <i>Cereal Research Communications</i> , 2012 , 40, 405-412	11.1	2
49	Effect of heat processing methods on spectral images of biological tissues (yellow canola seed protein) using advanced synchrotron-based infrared technique. <i>Biomedical Spectroscopy and Imaging</i> , 2012 , 1, 147-157	1.3	2
48	Optimized utilization of the co-products from bioethanol processing and oat grain: effect of blending on biochemical, biodegradation, and nutritional profiles. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 11517-23	5.7	2
47	Visualizing tissue molecular structure of a black type of canola (Brassica) seed with a thick seed coat after heat-related processing in a chemical way. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 1471-6	5.7	2

46	Correlation between median and mean irregular particle sizes and degradation kinetics in barley genotypes. <i>Journal of Animal Physiology and Animal Nutrition</i> , 2011 , 95, 1-5	2.6	2
45	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> , 2018 , 204, 791-797	4.4	2
44	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
43	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
42	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
41	Microprobing Structural Architecture Using Mid-Infrared Vibrational Molecular Spectroscopy 2016 ,		1
40	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
39	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
38	Detect Structure Features of Asymmetric and Symmetric CH ₂ and CH ₃ Functional Groups and Their Ratio of Biopolymers within Intact Tissue in Complex Plant System Using Synchrotron FTIRM and DRIFT Molecular Spectroscopy 2010 ,		1
37	Chemical characterization, energy values, protein and carbohydrate fractions, degradation kinetics of frost damaged wheat (with severely overall weight loss) in ruminants. <i>Animal Science Journal</i> , 2009 , 80, 140-8	1.8	1
36	Using a complex non-TDN based model (the DVE/OEB system) to predict microbial protein synthesis, endogenous protein, degradation balance, and total truly absorbed protein supply of different varieties of cereal oats for ruminants. <i>Animal Science Journal</i> , 2009 , 80, 273-9	1.8	1
35	Using the unique degradation ratio system (DRS) as an alternative method for feed evaluation and diet formulation: A review. <i>Animal Science Journal</i> , 2008 , 79, 143-151	1.8	1
34	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
33	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
32	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
31	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
30	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
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28	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
27	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
26	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
25	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> , 2021 , 276, 114903	3	1
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