Carl Holt

List of Publications by Year
in descending order

93 papers	6,139 citations	61984 43 h-index	69250 77 g-index
93 all docs	93 docs citations	93 times ranked	4042 citing authors

#	Article	IF	Citations
1	Invited Review: Î²-Lactoglobulin: Binding Properties, Structure, and Function. Journal of Dairy Science, 2004, 87, 785-796.	3.4	589
2	Structure and Stability of Bovine Casein Micelles. Advances in Protein Chemistry, 1992, 43, 63-151.	4.4	352
3	Invited review: Caseins and the casein micelle: Their biological functions, structures, and behavior in foods. Journal of Dairy Science, 2013, 96, 6127-6146.	3.4	338
4	Effect of temperature on the secondary structure of <i>Î²</i>-lactoglobulin at pHÂ6.7, as determined by CD and IR spectroscopy: a test of the molten globule hypothesis. Biochemical Journal, 1997, 324, 341-346.	3.7	301
5	The Ligand-binding Site of Bovine Î²-Lactoglobulin: Evidence for a Function?. Journal of Molecular Biology, 2002, 318, 1043-1055.	4.2	236
6	Caseins as rheomorphic proteins: interpretation of primary and secondary structures of the Î±S1-, Î²- and Îº-caseins. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 2683-2692.	1.7	225
7	A Raman optical activity study of rheomorphism in caseins, synucleins and tau. FEBS Journal, 2002, 269, 148-156.	0.2	214
8	Ability of a <i>Î²</i>-casein phosphopeptide to modulate the precipitation of calcium phosphate by forming amorphous dicalcium phosphate nanoclusters. Biochemical Journal, 1996, 314, 1035-1039.	3.7	170
9	Calculation of the ion equilibria in milk diffusate and comparison with experiment. Analytical Biochemistry, 1981, 113, 154-163.	2.4	160
10	A core-shell model of calcium phosphate nanoclusters stabilized by beta-casein phosphopeptides, derived from sedimentation equilibrium and small-angle X-ray and neutron-scattering measurements. FEBS Journal, 1998, 252, 73-78.	0.2	154
11	An equilibrium thermodynamic model of the sequestration of calcium phosphate by casein micelles and its application to the calculation of the partition of salts in milk. European Biophysics Journal, 2004, 33, 421-34.	2.2	148
12	Effects of colloidal calcium phosphate content and free calcium ion concentration in the milk serum on the dissociation of bovine casein micelles. Journal of Dairy Research, 1986, 53, 557-572.	1.4	144
13	Primary and predicted secondary structures of the caseins in relation to their biological functions. Protein Engineering, Design and Selection, 1988, 2, 251-259.	2.1	139
14	Thermal denaturation of Î²-lactoglobulin: effect of protein concentration at pH 6.75 and 8.05. BBA - Proteins and Proteomics, 1995, 1248, 43-49.	2.1	131
15	Multifunctional role of osteopontin in directing intrafibrillar mineralization of collagen and activation of osteoclasts. Acta Biomaterialia, 2014, 10, 494-507.	8.3	105
16	Conversion of amorphous calcium phosphate into hydroxyapatite investigated by EXAFS spectroscopy. Journal of Crystal Growth, 1987, 84, 563-570.	1.5	101
17	Inorganic constituents of milk III. The colloidal calcium phosphate of cow's milk. Journal of Dairy Research, 1982, 49, 29-38.	1.4	100
18	Casein Micelle Substructure and Calcium Phosphate Interactions Studied by Sephacryl Column Chromatography. Journal of Dairy Science, 1998, 81, 2994-3003.	3.4	87

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19	Electrophoretic and hydrodynamic properties of bovine casein micelles interpreted in terms of particles with an outer hairy layer. Journal of Colloid and Interface Science, 1986, 114, 513-524.	9.4	76
20	Role of calcium phosphate nanoclusters in the control of calcification. FEBS Journal, 2009, 276, 2308-2323.	4.7	76
21	Depletion interaction of casein micelles and an exocellular polysaccharide. Physical Review E, 1999, 60, 848-856.	2.1	74
22	An equilibrium thermodynamic model of the sequestration of calcium phosphate by casein phosphopeptides. European Biophysics Journal, 2004, 33, 435-47.	2.2	73
23	Discrimination amongBacillus cereus,B. mycoidesandB. thuringiensisand some other species of the genusBacillusby Fourier transform infrared spectroscopy. FEMS Microbiology Letters, 1998, 164, 201-206.	1.8	71
24	Inorganic constituents of cheese: analysis of juice from a one-month-old Cheddar cheese and the use of light and electron microscopy to characterize the crystalline phases. Journal of Dairy Research, 1988, 55, 255-268.	1.4	68
25	Casein and casein micelle structures, functions and diversity in 20Âspecies. International Dairy Journal, 2016, 60, 2-13.	3.0	68
26	Physicochemical Study of Îº- and Î²-Casein Dispersions and the Effect of Cross-Linking by Transglutaminase. Langmuir, 2002, 18, 4885-4891.	3.5	65
27	Inorganic constituents of milk: I. Correlation of soluble calcium with citrate in bovine milk. Journal of Dairy Research, 1979, 46, 433-439.	1.4	63
28	Darwinian transformation of a â€˜scarcely nutritious fluidâ€™ into milk. Journal of Evolutionary Biology, 2012, 25, 1253-1263.	1.7	61
29	Amorphous calcium phosphates prepared at pH 6.5 and 6.0. Materials Research Bulletin, 1989, 24, 55-62.	5.2	60
30	Mineralisation of soft and hard tissues and the stability of biofluids. Journal of Structural Biology, 2014, 185, 383-396.	2.8	60
31	Preparation of amorphous calcium-magnesium phosphates at pH 7 and characterization by x-ray absorption and fourier transform infrared spectroscopy. Journal of Crystal Growth, 1988, 92, 239-252.	1.5	59
32	Effect of sampling procedure and strain variation in Listeria monocytogenes on the discrimination of species in the genus Listeria by Fourier transform infrared spectroscopy and canonical variates analysis. FEMS Microbiology Letters, 2006, 147, 45-50.	1.8	57
33	Composition and structure of micellar calcium phosphate. Journal of Dairy Research, 1989, 56, 411-416.	1.4	54
34	Swelling of golgi vesicles in mammary secretory cells and its relation to the yield and quantitative composition of milk. Journal of Theoretical Biology, 1983, 101, 247-261.	1.7	53
35	A comparison of silver ion HPLC plus GC with Fourier-transform IR spectroscopy for the determination of trans double bonds in unsaturated fatty acids. Journal of the Science of Food and Agriculture, 1993, 61, 261-266.	3.5	53
36	A Recombinant C121S Mutant of Bovine Î²-Lactoglobulin Is More Susceptible to Peptic Digestion and to Denaturation by Reducing Agents and Heatingâ€. Biochemistry, 2004, 43, 6312-6321.	2.5	53

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37	A review of the biology of calcium phosphate sequestration with special reference to milk. Dairy Science and Technology, 2015, 95, 3-14.	2.2	52
38	Casein structures in the context of unfolded proteins. International Dairy Journal, 2015, 46, 2-11.	3.0	51
39	The heat stability of milk and concentrated milk containing added aldehydes and sugars. Journal of Dairy Research, 1978, 45, 47-52.	1.4	50
40	Measurements of the size of bovine casein micelles by means of electron microscopy and light scattering. Journal of Colloid and Interface Science, 1978, 65, 555-565.	9.4	49
41	Seasonal changes in the heat stability of milk from creamery silos in south-west Scotland. Journal of Dairy Research, 1978, 45, 183-190.	1.4	49
42	The Secondary Structure of Milk Proteins and their Biological Function. Journal of Dairy Science, 1993, 76, 3062-3078.	3.4	48
43	Apparent chemical composition of nine commercial or semi-commercial whey protein concentrates, isolates and fractions. International Journal of Food Science and Technology, 1999, 34, 543-556.	2.7	45
44	Casein and lactose concentrations in milk of 31 species are negatively correlated. Experientia, 1987, 43, 1015-1018.	1.2	44
45	A quantitative model of the bovine casein micelle: ion equilibria and calcium phosphate sequestration by individual caseins in bovine milk. European Biophysics Journal, 2019, 48, 45-59.	2.2	44
46	Casein micelle size from elastic and quasi-elastic light scattering measurements. Biochimica Et Biophysica Acta (BBA) - Protein Structure, 1975, 400, 293-301.	1.7	43
47	Measurement of particle sizes by elastic and quasi-elastic light scattering. Biochimica Et Biophysica Acta (BBA) - Protein Structure, 1975, 400, 283-292.	1.7	42
48	A biological perspective on the structure and function of caseins and casein micelles. International Journal of Dairy Technology, 2004, 57, 121-126.	2.8	40
49	Unfolded phosphopolypeptides enable soft and hard tissues to coexist in the same organism with relative ease. Current Opinion in Structural Biology, 2013, 23, 420-425.	5.7	39
50	Proteostasis and the Regulation of Intra- and Extracellular Protein Aggregation by ATP-Independent Molecular Chaperones: Lens Î±-Crystallins and Milk Caseins. Accounts of Chemical Research, 2018, 51, 745-752.	15.6	39
51	Some physico-chemical properties of nine commercial or semi-commercial whey protein concentrates, isolates and fractions. International Journal of Food Science and Technology, 1999, 34, 587-601.	2.7	35
52	Natural variations in the average size of bovine casein micelles: II. Milk samples from creamery bulk silos in south west Scotland. Journal of Dairy Research, 1978, 45, 347-353.	1.4	34
53	Structural analysis of the environment of calcium ions in crystalline and amorphous calcium phosphates by X-ray absorption spectroscopy and a hypothesis concerning the biological function of the casein micelle. International Dairy Journal, 1991, 1, 151-165.	3.0	33
54	Milk protein structureâ€"what can it tell the dairy industry?. International Dairy Journal, 2002, 12, 299-310.	3.0	33

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55	A geometrical model to describe the initial aggregation of partly renneted casein micelles. Journal of Colloid and Interface Science, 1988, 123, 80-84.	9.4	32
56	Aggregation Behavior of Bovine Îº- and Î²-Casein Studied with Small Angle Neutron Scattering, Light Scattering, and Cryogenic Transmission Electron Microscopy. Langmuir, 2012, 28, 13577-13589.	3.5	31
57	Comparison of the Effect of Heating on the Thermal Denaturation of Nine Different Î²-Lactoglobulin Preparations of Genetic Variants A, B or A/B, as Measured by Microcalorimetry. International Dairy Journal, 1998, 8, 99-104.	3.0	29
58	Structural Biology of Calcium Phosphate Nanoclusters Sequestered by Phosphoproteins. Crystals, 2020, 10, 755.	2.2	27
59	Adsorption of beta-Lactoglobulin variants A and B to the air-water interface. International Journal of Food Science and Technology, 1999, 34, 509-516.	2.7	26
60	Effect of Phosphorylation on a Human-like Osteopontin Peptide. Biophysical Journal, 2017, 112, 1586-1596.	0.5	25
61	Sequence characteristics responsible for proteinâ€protein interactions in the intrinsically disordered regions of caseins, amelogenins, and small heatâ€shock proteins. Biopolymers, 2019, 110, e23319.	2.4	23
62	Functional and dysfunctional folding, association and aggregation of caseins. Advances in Protein Chemistry and Structural Biology, 2019, 118, 163-216.	2.3	22
63	A quantitative calcium phosphate nanocluster model of the casein micelle: the average size, size distribution and surface properties. European Biophysics Journal, 2021, 50, 847-866.	2.2	21
64	Effect of anions on the denaturation and aggregation of beta-Lactoglobulin as measured by differential scanning microcalorimetry. International Journal of Food Science and Technology, 1999, 34, 477-481.	2.7	19
65	An E. coli over-expression system for multiply-phosphorylated proteins and its use in a study of calcium phosphate sequestration by novel recombinant phosphopeptides. Protein Expression and Purification, 2009, 67, 23-34.	1.3	19
66	Configuration of cellulose trinitrate in solution. Polymer, 1976, 17, 1027-1034.	3.8	18
67	Natural variations in the average size of bovine casein micelles: I. Milks from individual Ayrshire cows. Journal of Dairy Research, 1978, 45, 339-345.	1.4	18
68	Some Principles Determining Salt Composition and Partitioning of Ions in Milk. Journal of Dairy Science, 1981, 64, 1958-1964.	3.4	18
69	The effect of transglutaminase treatment on the physico-chemical properties of skim milk with added ethylenediaminetetraacetic acid. Food Hydrocolloids, 2017, 69, 329-340.	10.7	18
70	Natural variations in the average size of bovine casein micelles: III. Studies on colostrum by electron by microscopy and light scattering. Journal of Dairy Research, 1978, 45, 355-362.	1.4	15
71	The thermochemistry of reactions between Î±s1-casein and calcium chloride. Biochimica Et Biophysica Acta (BBA) - Protein Structure, 1975, 379, 638-644.	1.7	14
72	The synergic effect of urea and aldehydes on the heat stability of concentrated skim-milk. Journal of Dairy Research, 1979, 46, 381-384.	1.4	14

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73	Gel permeation chromatography of high molecular weight cellulose trinitrate. Polymer, 1978, 19, 1421-1426.	3.8	12
74	Comparison of the structure of micellar calcium phosphate in milk from six species by extended X-ray absorption fine structure spectroscopy. Journal of Dairy Research, 1985, 52, 267-273.	1.4	12
75	Structural studies of hydrated samples of amorphous calcium phosphate and phosphoprotein nanoclusters. European Biophysics Journal, 2016, 45, 405-412.	2.2	12
76	Î²-Casein Adsorption at the Silicon Oxide-Aqueous Solution Interface:Â Calcium Ion Effects. Biomacromolecules, 2004, 5, 319-325.	5.4	11
77	Analysis of EXAFS spectra from the brushite and monetite forms of calcium phosphate. Materials Research Bulletin, 1987, 22, 1151-1157.	5.2	10
78	Native disulphide-linked dimers facilitate amyloid fibril formation by bovine milk Î±S2-casein. Biophysical Chemistry, 2021, 270, 106530.	2.8	10
79	The inorganic constituents of milk IV. Diffusible calcium and magnesium concentrations in goat's milk and the effect of starvation. Journal of Dairy Research, 1982, 49, 179-186.	1.4	9
80	Co-adsorption of Î²-casein and calcium phosphate nanoclusters (CPN) at hydrophilic and hydrophobic solidâ€"solution interfaces studied by neutron reflectometry. Food Hydrocolloids, 2011, 25, 724-733.	10.7	9
81	Salt partition, ion equilibria, and the structure, composition, and solubility of micellar calcium phosphate in bovine milk with added calcium salts. Journal of Dairy Science, 2020, 103, 9893-9905.	3.4	9
82	Calcium environment in encrusting deposits from urinary catheters investigated by interpretation of EXAFS spectra. Journal of Inorganic Biochemistry, 1989, 36, 141-148.	3.5	8
83	Post-secretory aggregation of caseins. Journal of Dairy Research, 1979, 46, 193-195.	1.4	7
84	Letter to the Editor: A response to Horne and Lucey (2017). Journal of Dairy Science, 2017, 100, 5121-5124.	3.4	6
85	Multi-state thermal unfolding and aggregation of Î²-lactoglobulin A. Biochemical Society Transactions, 1995, 23, 74S-74S.	3.4	5
86	Expression of recombinant wild-type and mutant beta-Lactoglobulins in the yeast Pichia pastoris. International Journal of Food Science and Technology, 1999, 34, 445-450.	2.7	5
87	Are casein micelles extracellular condensates formed by liquidâ€liquid phase separation?. FEBS Letters, 2022, 596, 2072-2085.	2.8	5
88	Limited interpretation of changes in the FTIR spectrum of Î²-lactoglobulin with temperature. Biochemical Society Transactions, 1995, 23, 612S-612S.	3.4	4
89	Phosphopeptide dissociation from micellar calcium phosphate preparations does not induce crystallinity. Journal of Dairy Research, 1989, 56, 669-673.	1.4	3
90	Inorganic constituents of milk. V. Ion activity product for calcium phosphate in diffusates prepared from goats' milk. Journal of Dairy Research, 1994, 61, 423-426.	1.4	3

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91	Effect of sampling procedure and strain variation in Listeria monocytogenes on the discrimination of species in the genus Listeria by Fourier transform infrared spectroscopy and canonical variates analysis. FEMS Microbiology Letters, 1997, 147, 45-50.	1.8	2
92	Cortisol, parathyroid hormone-related protein and the onset of calcium secretion by the mammary gland of the goat. Journal of Dairy Research, 1997, 64, 633-636.	1.4	0
93	Effect of the free energies of formation of the core and shell and of the density of the casein phosphate centres on the thermodynamic stability of calcium phosphate nanoclusters. Materials Research Society Symposia Proceedings, 2004, 823, W7.1.1.	0.1	0