Gail Bornhorst

List of Publications by Year
in descending order

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50 papers	1,570 citations	236612 25 h-index	301761 39 g-index
51 all docs	51 docs citations	51 times ranked	1204 citing authors

#	Article	IF	Citations
1	Gastric Digestion In Vivo and In Vitro: How the Structural Aspects of Food Influence the Digestion Process. Annual Review of Food Science and Technology, 2014, 5, 111-132.	5.1	155
2	Bolus Formation and Disintegration during Digestion of Food Carbohydrates. Comprehensive Reviews in Food Science and Food Safety, 2012, 11, 101-118.	5.9	112
3	Kinetics of in Vitro Bread Bolus Digestion with Varying Oral and Gastric Digestion Parameters. Food Biophysics, 2013, 8, 50-59.	1.4	77
4	Engineering Digestion: Multiscale Processes of Food Digestion. Journal of Food Science, 2016, 81, R534-43.	1.5	73
5	Gastric emptying rate and chyme characteristics for cooked brown and white rice mealsin vivo. Journal of the Science of Food and Agriculture, 2013, 93, 2900-2908.	1.7	66
6	Effects of freezing, freeze drying and convective drying on in vitro gastric digestion of apples. Food Chemistry, 2017, 215, 7-16.	4.2	65
7	Protein Digestion of Baby Foods: Study Approaches and Implications for Infant Health. Molecular Nutrition and Food Research, 2018, 62, 1700231.	1.5	63
8	Gastric pH Distribution and Mixing of Soft and Rigid Food Particles in the Stomach using a Dual-Marker Technique. Food Biophysics, 2014, 9, 292-300.	1.4	59
9	Buffering capacity of protein-based model food systems in the context of gastric digestion. Food and Function, 2019, 10, 6074-6087.	2.1	55
10	Food processing and structure impact the metabolizable energy of almonds. Food and Function, 2016, 7, 4231-4238.	2.1	52
11	Particle Size Distribution of Brown and White Rice during Gastric Digestion Measured by Image Analysis. Journal of Food Science, 2013, 78, E1383-91.	1.5	45
12	A Proposed Food Breakdown Classification System to Predict Food Behavior during Gastric Digestion. Journal of Food Science, 2015, 80, R924-34.	1.5	45
13	Rheological Properties and Textural Attributes of Cooked Brown and White Rice During Gastric Digestion in Vivo. Food Biophysics, 2013, 8, 137-150.	1.4	42
14	Gastric Mixing During Food Digestion: Mechanisms and Applications. Annual Review of Food Science and Technology, 2017, 8, 523-542.	5.1	42
15	Acid Diffusion into Rice Boluses is Influenced by Rice Type, Variety, and Presence of Î±â€Amylase. Journal of Food Science, 2015, 80, E316-25.	1.5	41
16	Buffering capacity of commercially available foods is influenced by composition and initial properties in the context of gastric digestion. Food and Function, 2020, 11, 2255-2267.	2.1	35
17	Rice bolus texture changes due to Î±-amylase. LWT - Food Science and Technology, 2014, 55, 27-33.	2.5	33
18	Modeling the softening of carbohydrate-based foods during simulated gastric digestion. Journal of Food Engineering, 2018, 222, 38-48.	2.7	32

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19	Structural breakdown of starchâ€based foods during gastric digestion and its link to glycemic response: In vivo and in vitro considerations. Comprehensive Reviews in Food Science and Food Safety, 2021, 20, 2660-2698.	5.9	32
20	Properties of Gastric Chyme from Pigs Fed Cooked Brown or White Rice. Food Biophysics, 2013, 8, 12-23.	1.4	30
21	Acid and moisture uptake in steamed and boiled sweet potatoes and associated structural changes during in vitro gastric digestion. Food Research International, 2016, 88, 247-255.	2.9	30
22	Fatty acid bioaccessibility and structural breakdown fromin vitrodigestion of almond particles. Food and Function, 2019, 10, 5174-5187.	2.1	28
23	Characterization of individual particle movement during in vitro gastric digestion in the Human Gastric Simulator (HGS). Journal of Food Engineering, 2020, 264, 109674.	2.7	28
24	Physical Property Changes in Raw and Roasted Almonds during Gastric Digestion In vivo and In vitro. Food Biophysics, 2014, 9, 39-48.	1.4	27
25	Mass transport processes in orange-fleshed sweet potatoes leading to structural changes during inÂvitro gastric digestion. Journal of Food Engineering, 2016, 191, 48-57.	2.7	27
26	Food buffering capacity: quantification methods and its importance in digestion and health. Food and Function, 2021, 12, 543-563.	2.1	27
27	Fracture properties of foods: Experimental considerations and applications to mastication. Journal of Food Engineering, 2019, 263, 213-226.	2.7	24
28	Pearl millet (Pennisetum glaucum) couscous breaks down faster than wheat couscous in the Human Gastric Simulator, though has slower starch hydrolysis. Food and Function, 2020, 11, 111-122.	2.1	22
29	Freshâ€Squeezed Orange Juice Properties Before and During In Vitro Digestion as Influenced by Orange Variety and Processing Method. Journal of Food Science, 2017, 82, 2438-2447.	1.5	20
30	Tracking physical breakdown of rice- and wheat-based foods with varying structures during gastric digestion and its influence on gastric emptying in a growing pig model. Food and Function, 2021, 12, 4349-4372.	2.1	20
31	Gastric Digestion of Raw and Roasted Almonds In Vivo. Journal of Food Science, 2013, 78, H1807-13.	1.5	19
32	Assessing the Fate and Bioavailability of Glucosinolates in Kale (Brassica oleracea) Using Simulated Human Digestion and Caco-2 Cell Uptake Models. Journal of Agricultural and Food Chemistry, 2019, 67, 9492-9500.	2.4	19
33	Breakdown mechanisms of whey protein gels during dynamic in vitro gastric digestion. Food and Function, 2021, 12, 2112-2125.	2.1	17
34	Gastric protein hydrolysis of raw and roasted almonds in the growing pig. Food Chemistry, 2016, 211, 502-508.	4.2	15
35	Nondestructive characterization of structural changes during in vitro gastric digestion of apples using 3D time-series micro-computed tomography. Journal of Food Engineering, 2020, 267, 109692.	2.7	11
36	Inflammatory Effects of Thickened Water on the Lungs in a Murine Model of Recurrent Aspiration. Laryngoscope, 2021, 131, 1223-1228.	1.1	11

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37	Gastric secretion rate and protein concentration impact intragastric pH and protein hydrolysis during dynamic in vitro gastric digestion. Food Hydrocolloids for Health, 2021, 1, 100027.	1.6	10
38	Contribution of the proximal and distal gastric phases to the breakdown of cooked starch-rich solid foods during static in vitro gastric digestion. Food Research International, 2022, 157, 111270.	2.9	8
39	Chemical and structural characteristics of frankfurters during inÂvitro gastric digestion as influenced by cooking method and severity. Journal of Food Engineering, 2018, 229, 102-108.	2.7	7
40	Interlaboratory Measurement of Rheological Properties of Tomato Salad Dressing. Journal of Food Science, 2019, 84, 3204-3212.	1.5	7
41	Interactions between whey proteins and cranberry juice after thermal or non-thermal processing duringin vitrogastrointestinal digestion. Food and Function, 2020, 11, 7661-7680.	2.1	7
42	Acid and Moisture Uptake into Red Beets during in Vitro Gastric Digestion as Influenced by Gastric pH. Food Biophysics, 2020, 15, 261-272.	1.4	7
43	Starch and protein hydrolysis in cooked quinoa (Chenopodium quinoa Willd.) during static and dynamic in vitro oral and gastric digestion. Food and Function, 2022, 13, 920-932.	2.1	7
44	Influence of food macrostructure on the kinetics of acidification in the pig stomach after the consumption of rice- and wheat-based foods: Implications for starch hydrolysis and starch emptying rate. Food Chemistry, 2022, 394, 133410.	4.2	6
45	Development and characterization of standardized model, solid foods with varying breakdown rates during gastric digestion. Journal of Food Engineering, 2022, 316, 110827.	2.7	5
46	End-to-end prediction of uniaxial compression profiles of apples during in vitro digestion using time-series micro-computed tomography and deep learning. Journal of Food Engineering, 2022, 325, 111014.	2.7	3
47	Fate of Phytometabolites of Antibiotics during In Vitro Digestion and Implications for Human Health. Journal of Agricultural and Food Chemistry, 2021, 69, 12598-12607.	2.4	2
48	Carbohydrate Digestion: The importance of the proximal and distal stomach during digestion in growing pigs. Animal Science Proceedings, 2022, 13, 127-132.	0.0	2
49	Future Perspectives and Opportunities for Interdisciplinary Research on Food Digestion. , 2019, , 339-347.		0
50	Characterization of raft-forming alginate suspensions formed in HCl or model food systems at varying pH levels to better simulate gastric postprandial conditions. Drug Development and Industrial Pharmacy, 2021, , 1-11.	0.9	0