Douglas G Hayes

List of Publications by Year in Descending Order

114 papers	2,576 citations	28 h-index	46 g-index
126 ext. papers	3,044 ext. citations	3.8 avg, IF	5.3 L-index

#	Paper	IF	Citations
114	Deterioration of Soil-biodegradable Mulch Films during Storage and Its Impact on Specialty Crop Production. *HortTechnology*, **2021**, 1-12	1.3	0
113	Are micro- and nanoplastics from soil-biodegradable plastic mulches an environmental concern?. *Journal of Hazardous Materials Advances*, **2021**, 4, 100024		3
112	Incorporation of Membrane Proteins Into Bicontinuous Microemulsions Through Winsor-III System-Based Extraction. *Journal of Surfactants and Detergents*, **2021**, 24, 649-660	1.9	0
111	Oils and Their Use Beyond the Food Industry **2021**, 119-148		0
110	Melittin exerts opposing effects on short- and long-range dynamics in bicontinuous microemulsions. *Journal of Colloid and Interface Science*, **2021**, 590, 94-102	9.3	1
109	A Tribute to Dr. Milton J. Rosen: An Innovator and Leader in Surfactant Science and Technology. *Journal of Surfactants and Detergents*, **2021**, 24, 523-533	1.9	0
108	Impact of Agricultural Weathering on Physicochemical Properties of Biodegradable Plastic Mulch Films: Comparison of Two Diverse Climates Over Four Successive Years. *Journal of Polymers and the Environment*, **2021**, 29, 1-16	4.5	11
107	Effect of Environmental Weathering on Biodegradation of Biodegradable Plastic Mulch Films under Ambient Soil and Composting Conditions. *Journal of Polymers and the Environment*, **2021**, 29, 2916-2931	4.5	5
106	Decoupling Conductivity and Solubility in Electrolytes Using Microemulsions. *Journal of the Electrochemical Society*, **2021**, 168, 080502	3.9	2
105	Enhanced end-of-life performance for biodegradable plastic mulch films through improving standards and addressing research gaps. *Current Opinion in Chemical Engineering*, **2021**, 33, 100695	5.4	3
104	Effect of interactions between glycosylated protein and tannic acid on the physicochemical stability of Pickering emulsions. *LWT - Food Science and Technology*, **2021**, 152, 112383	5.4	4
103	3-Hydroxypicolinic Acid as an Effective Matrix for Sophorolipid Structural Elucidation Using Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry. *Journal of Surfactants and Detergents*, **2020**, 23, 565-571	1.9	2
102	Regioselective Synthesis of Palm-Based Sorbitol Esters as Biobased Surfactant by Lipase from Thermomyces lanuginosus in Nonaqueous Media. *Journal of Surfactants and Detergents*, **2020**, 23, 1067-1077	1.9	2
101	Soil Microbial Communities Associated With Biodegradable Plastic Mulch Films. *Frontiers in Microbiology*, **2020**, 11, 587074	5.7	23
100	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS). *PLoS ONE*, **2020**, 15, e0235893	3.7	7
99	Electron Transfer in Microemulsion-Based Electrolytes. *ACS Applied Materials & Interfaces*, **2020**, 12, 40213-40219	9.5	8
98	In situ degradation of biodegradable plastic mulch films in compost and agricultural soils. *Science of the Total Environment*, **2020**, 727, 138668	10.2	51

97	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS) **2020**, 15, e0235893		
96	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS) **2020**, 15, e0235893		
95	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS) **2020**, 15, e0235893		
94	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS) **2020**, 15, e0235893		
93	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS) **2020**, 15, e0235893		
92	Effects of soil particles and convective transport on dispersion and aggregation of nanoplastics via small-angle neutron scattering (SANS) and ultra SANS (USANS) **2020**, 15, e0235893		
91	Biobased Surfactants: Overview and Industrial State of the Art **2019**, 3-38		18
90	Sugar Esters **2019**, 325-363		5
89	Release of micro- and nanoparticles from biodegradable plastic during in situ composting. *Science of the Total Environment*, **2019**, 675, 686-693	10.2	43
88	Incorporation of Melittin Enhances Interfacial Fluidity of Bicontinuous Microemulsions. *Journal of Physical Chemistry C*, **2019**, 123, 11197-11206	3.8	6
87	Biodegradable Plastic Mulch Films for Sustainable Specialty Crop Production **2019**, 183-213		14
86	Intermediate temperature water gas shift kinetics for hydrogen production. *Reaction Chemistry and Engineering*, **2019**, 4, 1814-1822	4.9	10
85	Mechanical formation of micro- and nano-plastic materials for environmental studies in agricultural ecosystems. *Science of the Total Environment*, **2019**, 685, 1097-1106	10.2	46
84	Assessing Heat Management Practices in High Tunnels to Improve the Production of Romaine Lettuce. *Agriculture (Switzerland)*, **2019**, 9, 203	3	
83	Acid Precipitation versus Solvent Extraction: Two Techniques Leading to Different Lactone/Acidic Sophorolipid Ratios. *Journal of Surfactants and Detergents*, **2019**, 22, 365-371	1.9	4
82	Assessing heat management practices in high tunnels to improve organic production of bell peppers. *Scientia Horticulturae*, **2019**, 246, 928-941	4.1	3
81	Interaction of Lumbricus terrestris with macroscopic polyethylene and biodegradable plastic mulch. *Science of the Total Environment*, **2018**, 635, 1600-1608	10.2	35
80	Bicontinuous microemulsions as a biomembrane mimetic system for melittin. *Biochimica Et Biophysica Acta - Biomembranes*, **2018**, 1860, 624-632	3.8	11

79	Observation of a structural gradient in Winsor-III microemulsion systems. *Soft Matter*, **2018**, 14, 5270-5276	3.6	4
78	Nanoscopic dynamics of bicontinous microemulsions: effect of membrane associated protein. *Soft Matter*, **2017**, 13, 4871-4880	3.6	16
77	Suitability of Biodegradable Plastic Mulches for Organic and Sustainable Agricultural Production Systems. *Hortscience: A Publication of the American Society for Hortcultural Science*, **2017**, 52, 10-15	2.4	42
76	Policy considerations for limiting unintended residual plastic in agricultural soils. *Environmental Science and Policy*, **2017**, 69, 81-84	6.2	99
75	Commentary: The Relationship Between Biobased, Biodegradability and Environmentally-Friendliness (or the Absence Thereof). *JAOCS, Journal of the American Oil Chemists Society*, **2017**, 94, 1329-1331	1.8	3
74	Modeling Energy Balance and Airflow Characteristics in a Naturally Ventilated High Tunnel. *Transactions of the ASABE*, **2017**, 60, 1683-1697	0.9	
73	Protein extraction into the bicontinuous microemulsion phase of a Water/SDS/pentanol/dodecane winsor-III system: Effect on nanostructure and protein conformation. *Colloids and Surfaces B: Biointerfaces*, **2017**, 160, 144-153	6	20
72	Effect of diverse weathering conditions on the physicochemical properties of biodegradable plastic mulches. *Polymer Testing*, **2017**, 62, 454-467	4.5	50
71	Fatty Acids Based Surfactants and Their Uses **2017**, 355-384		7
70	Analysis of the time course of degradation for fully biobased nonwoven agricultural mulches in compost-enriched soil. *Textile Reseach Journal*, **2016**, 86, 1343-1355	1.7	11
69	Introduction to Industrial Oil Crops **2016**, 1-13		1
68	Solvent-Free Lipase-Catalyzed Synthesis of Technical-Grade Sugar Esters and Evaluation of Their Physicochemical and Bioactive Properties. *Catalysts*, **2016**, 6, 78	4	21
67	Polymeric Products Derived From Industrial Oils for Paints, Coatings, and Other Applications **2016**, 43-73		3
66	Control of membrane permeability in air-stable droplet interface bilayers. *Langmuir*, **2015**, 31, 4224-31	4	7
65	Soil Degradation of Polylactic Acid/Polyhydroxyalkanoate-Based Nonwoven Mulches. *Journal of Polymers and the Environment*, **2015**, 23, 302-315	4.5	36
64	Effect of protein incorporation on the nanostructure of the bicontinuous microemulsion phase of Winsor-III systems: a small-angle neutron scattering study. *Langmuir*, **2015**, 31, 1901-10	4	15
63	Dynamic morphologies of microscale droplet interface bilayers. *Soft Matter*, **2014**, 10, 2530-8	3.6	22
62	Effect of Simulated Weathering on Physicochemical Properties and Inherent Biodegradation of PLA/PHA Nonwoven Mulches. *Journal of Polymers and the Environment*, **2014**, 22, 417-429	4.5	45

61	Effects of Particle Size of Sucrose Suspensions and Pre-incubation of Enzymes on Lipase-Catalyzed Synthesis of Sucrose Oleic Acid Esters. *JAOCS, Journal of the American Oil Chemists'Society*, **2014**, 91, 1891-1901	1.8	15
60	Transparent dispersions of milk-fat-based nanostructured lipid carriers for delivery of β-carotene. *Journal of Agricultural and Food Chemistry*, **2013**, 61, 9435-43	5.7	56
59	Introduction of primary antioxidant activity to chitosan for application as a multifunctional food packaging material. *Food Hydrocolloids*, **2013**, 33, 207-214	10.6	151
58	Physicochemical characterization of water-in-oil microemulsions formed by a binary 1,3-dioxolane alkyl ethoxylate/Aerosol-OT surfactant system. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2013**, 417, 99-110	5.1	5
57	Evaluation of Degradable Spun-Melt 100% Polylactic Acid Nonwoven Mulch Materials in a Greenhouse Environment. *Journal of Engineered Fibers and Fabrics*, **2013**, 8, 155892501300800	0.9	1
56	Activation of lignocellulosic biomass by ionic liquid for biorefinery fractionation. *Bioresource Technology*, **2012**, 104, 701-7	11	57
55	Biodegradable Agricultural Mulches Derived from Biopolymers. *ACS Symposium Series*, **2012**, 201-223	0.4	17
54	Bioprocessing Approaches to Synthesize Bio-based Surfactants and Detergents **2012**, 243-266		1
53	Solvent-free lipase-catalysed synthesis of saccharide-fatty acid esters: closed-loop bioreactor system with in situ formation of metastable suspensions. *Biocatalysis and Biotransformation*, **2012**, 30, 209-216	2.5	14
52	Lipase-Catalyzed Synthesis of Saccharide-Fatty Acid Esters Utilizing Solvent-Free Suspensions: Effect of Acyl Donors and Acceptors, and Enzyme Activity Retention. *JAOCS, Journal of the American Oil Chemists'Society*, **2012**, 89, 455-463	1.8	18
51	Modification of oligo-Ricinoleic Acid and Its Derivatives with 10-Undecenoic Acid via Lipase-Catalyzed Esterification. *Polymers*, **2012**, 4, 1037-1055	4.5	20
50	Sucrose monolaurate improves the efficacy of sodium hypochlorite against Escherichia coli O157:H7 on spinach. *International Journal of Food Microbiology*, **2011**, 145, 64-8	5.8	41
49	Optimization of the Solvent-Free Lipase-Catalyzed Synthesis of Fructose-Oleic Acid Ester Through Programming of Water Removal. *JAOCS, Journal of the American Oil Chemists'Society*, **2011**, 88, 1351-1359	1.8	23
48	Protein extraction by Winsor-III microemulsion systems. *Biotechnology Progress*, **2011**, 27, 1091-100	2.8	19
47	Compatible ionic liquid-cellulases system for hydrolysis of lignocellulosic biomass. *Biotechnology and Bioengineering*, **2011**, 108, 1042-8	4.9	101
46	Pyrethroid-laden textiles for protection from biting insects **2011**, 404-433		1
45	Lipase-Catalyzed Synthesis of Saccharide-Fatty Acid Esters Using Suspensions of Saccharide Crystals in Solvent-Free Media. *JAOCS, Journal of the American Oil Chemists'Society*, **2010**, 87, 281-293	1.8	40
44	Partitioning behavior of an acid-cleavable, 1,3-dioxolane alkyl ethoxylate, surfactant in single and binary surfactant mixtures for 2- and 3-phase microemulsion systems according to ethoxylate head group size. *Journal of Colloid and Interface Science*, **2010**, 352, 424-35	9.3	15

43	Comparative genome analysis of lignin biosynthesis gene families across the plant kingdom. *BMC Bioinformatics*, **2009**, 10 Suppl 11, S3	3.6	146
42	Characterization of Microemulsion Systems Formed by a Mixed 1,3-Dioxolane Ethoxylate/Octyl Glucoside Surfactant System. *Journal of Surfactants and Detergents*, **2009**, 12, 277-283	1.9	8
41	Designs of Bioreactor Systems for Solvent-Free Lipase-Catalyzed Synthesis of Fructose Oleic Acid Esters. *JAOCS, Journal of the American Oil Chemists' Society*, **2009**, 86, 521-529	1.8	22
40	Efficient reduction of chitosan molecular weight by high-intensity ultrasound: underlying mechanism and effect of process parameters. *Journal of Agricultural and Food Chemistry*, **2008**, 56, 5112-9	5.7	113
39	Desorption of Fructose from a Packed Column to an Oleic Acid/Fructose Oleate Mixture for Employment in a Bioreactor System. *JAOCS, Journal of the American Oil Chemists' Society*, **2008**, 85, 1033-1040	1.8	9
38	Fast classification and compositional analysis of cornstover fractions using Fourier transform near-infrared techniques. *Bioresource Technology*, **2008**, 99, 7323-32	11	66
37	Three-component microemulsions formed using pH-degradable 1,3-dioxolane alkyl ethoxylate surfactants. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2007**, 301, 394-403	5.1	8
36	Solubilization of enzymes in water-in-oil microemulsions and their rapid and efficient release through use of a pH-degradable surfactant. *Biotechnology Letters*, **2007**, 29, 767-71	3	18
35	Effect of temperature programming on the performance of urea inclusion compound-based free fatty acid fractionation. *JAOCS, Journal of the American Oil Chemists' Society*, **2006**, 83, 253-259	1.8	14
34	Lipase-catalyzed synthesis of polyhydric alcohol-poly(ricinoleic acid) ester star polymers. *Journal of Applied Polymer Science*, **2006**, 101, 1646-1656	2.9	34
33	Biocatalytic Synthesis of Ricinoleic Acid Star Polymers: "Green" Manufacturing of Potentially Valuable Lubricant Additives and Drug Delivery Materials. *ACS Symposium Series*, **2006**, 126-139	0.4	4
32	Purification of Free Fatty Acids via Urea Inclusion Compounds. *Functional Foods & Nutraceuticals Series*, **2005**, 77-88		3
31	Feed batch addition of saccharide during saccharide-fatty acid esterification catalyzed by immobilized lipase: Time course, water activity, and kinetic model. *JAOCS, Journal of the American Oil Chemists' Society*, **2005**, 82, 487-493	1.8	21
30	Lipid Modification in Water-in-Oil Microemulsions **2005**, 46-69		
29	Ziegler Natta Catalysis **2005**, 3247-3259		
28	Enzyme-Catalyzed modification of oilseed materials to produce eco-friendly products. *JAOCS, Journal of the American Oil Chemists' Society*, **2004**, 81, 1077-1103	1.8	61
27	Molecular weight-based fractionation of poly-l- and poly-d,l-lactic acid polymers via a simple inclusion compound based process. *Separation Science and Technology*, **2002**, 37, 769-782	2.5	3
26	TRIANGULAR PHASE DIAGRAMS TO PREDICT THE FRACTIONATION OF FREE FATTY ACID MIXTURES VIA UREA COMPLEX FORMATION. *Separation Science and Technology*, **2001**, 36, 45-58	2.5	8

25	Synthesis of pH-Degradable Nonionic Surfactants and Their Applications in Microemulsions. *Langmuir*, **2001**, 17, 6816-6821	4	21
24	How to Employ Proteins in Nonaqueous Environments **2001**,		1
23	Urea-based fractionation of seed oil samples containing fatty acids and acylglycerols of polyunsaturated and hydroxy fatty acids. *JAOCS, Journal of the American Oil Chemists' Society*, **2000**, 77, 207-213	1.8	16
22	Increased rate of lipase-catalyzed saccharide-fatty acid esterification by control of reaction medium. *JAOCS, Journal of the American Oil Chemists' Society*, **1999**, 76, 1495-1500	1.8	24
21	Expulsion of proteins from water-in-oil microemulsions by treatment with cosurfactant. *Biotechnology and Bioengineering*, **1998**, 59, 557-66	4.9	13
20	Urea complexation for the rapid, ecologically responsible fractionation of fatty acids from seed oil. *JAOCS, Journal of the American Oil Chemists' Society*, **1998**, 75, 1403-1409	1.8	38
19	Mechanism of protein extraction from the solid state by water-in-oil microemulsions. *Biotechnology and Bioengineering*, **1997**, 53, 583-93	4.9	22
18	Supercritical fluid chromatographic analysis of new crop seed oils and their reactions. *JAOCS, Journal of the American Oil Chemists' Society*, **1996**, 73, 1691-1697	1.8	8
17	The catalytic activity of lipases toward hydroxy fatty acids: A review. *JAOCS, Journal of the American Oil Chemists' Society*, **1996**, 73, 543-549	1.8	42
16	The isolation of hydroxy acids from lesquerella oil lipolysate by a saponification/extraction technique. *JAOCS, Journal of the American Oil Chemists' Society*, **1996**, 73, 1113-1119	1.8	11
15	Lipase-catalyzed synthesis of lesquerolic acid wax and diol esters and their properties. *JAOCS, Journal of the American Oil Chemists' Society*, **1996**, 73, 1385-1392	1.8	23
14	A detailed triglyceride analysis of *Lesquerella fendleri* oil: Column chromatographic fractionation followed by supercritical fluid chromatography. *JAOCS, Journal of the American Oil Chemists' Society*, **1996**, 73, 267-269	1.8	18
13	Recovery of proteins from water-in-oil microemulsions in highly concentrated form through dilution techniques. *Biotechnology Letters*, **1996**, 10, 699		2
12	Lipase-catalyzed synthesis and properties of estolides and their esters. *JAOCS, Journal of the American Oil Chemists' Society*, **1995**, 72, 1309-1316	1.8	45
11	The triglyceride composition, structure, and presence of estolides in the oils of *Lesquerella* and related species. *JAOCS, Journal of the American Oil Chemists' Society*, **1995**, 72, 559-569	1.8	60
10	Configurational purity of lesquerolic acid. *JAOCS, Journal of the American Oil Chemists' Society*, **1995**, 72, 1069-1071	1.8	1
9	Occurrence of estolides in processed Dimorphotheca pluvialis seed oil. *Industrial Crops and Products*, **1995**, 4, 295-301	5.9	12
8	Ethylene Glycol and a Fatty Acid Have a Profound Impact on the Behavior of Water-in-Oil Microemulsions Formed by the Surfactant Aerosol-OT. *Langmuir*, **1995**, 11, 4695-4702	4	30

7	Improvement of Enzyme Activity and Stability for Reverse Micellar-Encapsulated Lipases in the Presence of Short-Chain and Polar Alcohols. *Biocatalysis*, **1994**, 11, 223-231		18
6	The isolation and recovery of fatty acids with Δ5 unsaturation from meadowfoam oil by lipase-catalyzed hydrolysis and esterification. *JAOCS, Journal of the American Oil Chemists' Society*, **1993**, 70, 555-560	1.8	9
5	1,3-specific lipolysis of Lesquerella fendleri oil by immobilized and reverse-micellar encapsulated enzymes. *JAOCS, Journal of the American Oil Chemists' Society*, **1993**, 70, 1121-1127	1.8	15
4	Recovery of hydroxy fatty acids from lesquerella oil with lipases. *JAOCS, Journal of the American Oil Chemists' Society*, **1992**, 69, 982-985	1.8	21
3	Formation of polyol-fatty acid esters by lipases in reverse micellar media. *Biotechnology and Bioengineering*, **1992**, 40, 110-8	4.9	57
2	1-Monoglyceride production from lipase-catalyzed esterification of glycerol and fatty acid in reverse micelles. *Biotechnology and Bioengineering*, **1991**, 38, 507-17	4.9	85
1	Esterification reactions of lipase in reverse micelles. *Biotechnology and Bioengineering*, **1990**, 35, 793-801	4.9	131