Gerhard Knothe

List of Publications by Citations

90 papers	10,289 citations	35 h-index	90 g-index
90 ext. papers	11,108 ext. citations	5.9 avg, IF	7.27 L-index

#	Paper	IF	Citations
90	Dependence of biodiesel fuel properties on the structure of fatty acid alkyl esters. *Fuel Processing Technology*, **2005**, 86, 1059-1070	7.2	1580
89	Designer Biodiesel: Optimizing Fatty Ester Composition to Improve Fuel Properties. *Energy & Fuels*, **2008**, 22, 1358-1364	4.1	966
88	Biodiesel and renewable diesel: A comparison. *Progress in Energy and Combustion Science*, **2010**, 36, 364-373	33.6	616
87	Kinematic viscosity of biodiesel fuel components and related compounds. Influence of compound structure and comparison to petrodiesel fuel components. *Fuel*, **2005**, 84, 1059-1065	7.1	610
86	Improving biodiesel fuel properties by modifying fatty ester composition. *Energy and Environmental Science*, **2009**, 2, 759	35.4	465
85	Some aspects of biodiesel oxidative stability. *Fuel Processing Technology*, **2007**, 88, 669-677	7.2	463
84	Cetane numbers of branched and straight-chain fatty esters determined in an ignition quality tester?. *Fuel*, **2003**, 82, 971-975	7.1	443
83	Biodiesel fuels. *Progress in Energy and Combustion Science*, **2017**, 58, 36-59	33.6	376
82	Exhaust Emissions of Biodiesel, Petrodiesel, Neat Methyl Esters, and Alkanes in a New Technology Engine *Energy & Fuels*, **2006**, 20, 403-408	4.1	370
81	Moringa oleifera oil: a possible source of biodiesel. *Bioresource Technology*, **2008**, 99, 8175-9	11	354
80	Lubricity of Components of Biodiesel and Petrodiesel. The Origin of Biodiesel Lubricity *Energy & Fuels*, **2005**, 19, 1192-1200	4.1	302
79	Determination of the fatty acid profile by 1H-NMR spectroscopy. *European Journal of Lipid Science and Technology*, **2004**, 106, 88-96	3	300
78	Structure indices in FA chemistry. How relevant is the iodine value?. *JAOCS, Journal of the American Oil Chemistsr Society*, **2002**, 79, 847-854	1.8	287
77	A Comprehensive Evaluation of the Melting Points of Fatty Acids and Esters Determined by Differential Scanning Calorimetry. *JAOCS, Journal of the American Oil Chemistsr Society*, **2009**, 86, 843-856	1.8	265
76	Dependence of oil stability index of fatty compounds on their structure and concentration and presence of metals. *JAOCS, Journal of the American Oil Chemistsr Society*, **2003**, 80, 1021-1026	1.8	253
75	Evaluation of biodiesel obtained from cottonseed oil. *Fuel Processing Technology*, **2009**, 90, 1157-1163	7.2	200
74	Kinematic viscosity of biodiesel components (fatty acid alkyl esters) and related compounds at low temperatures. *Fuel*, **2007**, 86, 2560-2567	7.1	180

73	Production and Evaluation of Biodiesel from Field Pennycress (Thlaspi arvense L.) Oil *Energy & Fuels*, **2009**, 23, 4149-4155	4.1	156
72	Biodiesel: The Use of Vegetable Oils and Their Derivatives as Alternative Diesel Fuels. *ACS Symposium Series*, **1997**, 172-208	0.4	141
71	A technical evaluation of biodiesel from vegetable oils vs. algae. Will algae-derived biodiesel perform?. *Green Chemistry*, **2011**, 13, 3048	10	127
70	A comparison of used cooking oils: a very heterogeneous feedstock for biodiesel. *Bioresource Technology*, **2009**, 100, 5796-801	11	123
69	Fuel Properties of Highly Polyunsaturated Fatty Acid Methyl Esters. Prediction of Fuel Properties of Algal Biodiesel. *Energy & Fuels*, **2012**, 26, 5265-5273	4.1	109
68	A comprehensive evaluation of the cetane numbers of fatty acid methyl esters. *Fuel*, **2014**, 119, 6-13	7.1	99
67	Cuphea Oil as Source of Biodiesel with Improved Fuel Properties Caused by High Content of Methyl Decanoate. *Energy & Fuels*, **2009**, 23, 1743-1747	4.1	93
66	Analysis of oxidized biodiesel by 1H-NMR and effect of contact area with air. *European Journal of Lipid Science and Technology*, **2006**, 108, 493-500	3	87
65	Direct transesterification of spent coffee grounds for biodiesel production. *Fuel*, **2017**, 199, 157-161	7.1	85
64	Comparison of exhaust emissions and their mutagenicity from the combustion of biodiesel, vegetable oil, gas-to-liquid and petrodiesel fuels. *Fuel*, **2009**, 88, 1064-1069	7.1	81
63	Biodiesel from Citrus reticulata (mandarin orange) seed oil, a potential non-food feedstock. *Industrial Crops and Products*, **2013**, 45, 355-359	5.9	75
62	Biodiesel: Current Trends and Properties. *Topics in Catalysis*, **2010**, 53, 714-720	2.3	72
61	Biodiesel from Milo (Thespesia populnea L.) seed oil. *Biomass and Bioenergy*, **2011**, 35, 4034-4039	5.3	69
60	Kinematic viscosity of fatty acid methyl esters: Prediction, calculated viscosity contribution of esters with unavailable data, and carbon□xygen equivalents. *Fuel*, **2011**, 90, 3217-3224	7.1	62
59	Biodiesel Derived from a Model Oil Enriched in Palmitoleic Acid, Macadamia Nut Oil. *Energy & Fuels*, **2010**, 24, 2098-2103	4.1	52
58	Synthesis of Epoxidized Cardanol and Its Antioxidative Properties for Vegetable Oils and Biodiesel. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 901-906	8.3	48
57	Methyl esters from vegetable oils with hydroxy fatty acids: Comparison of lesquerella and castor methyl esters. *Fuel*, **2012**, 96, 535-540	7.1	39
56	Liquid-Phase Penetration under Unsteady In-Cylinder Conditions: Soy- and Cuphea-Derived Biodiesel Fuels Versus Conventional Diesel. *Energy & Fuels*, **2010**, 24, 5163-5180	4.1	39

55	The effect of metals and metal oxides on biodiesel oxidative stability from promotion to inhibition. *Fuel Processing Technology*, **2018**, 177, 75-80	7.2	35
54	Evaluation of Indian milkweed (Calotropis gigantea) seed oil as alternative feedstock for biodiesel. *Industrial Crops and Products*, **2014**, 54, 226-232	5.9	35
53	Biodiesel from meadowfoam (Limnanthes alba L.) seed oil: oxidative stability and unusual fatty acid composition. *Energy and Environmental Science*, **2010**, 3, 318	35.4	35
52	Avocado and olive oil methyl esters. *Biomass and Bioenergy*, **2013**, 58, 143-148	5.3	30
51	Glycerolysis with crude glycerin as an alternative pretreatment for biodiesel production from grease trap waste: Parametric study and energy analysis. *Journal of Cleaner Production*, **2017**, 162, 504-511	10.3	28
50	Physical properties of oleochemical carbonates. *JAOCS, Journal of the American Oil Chemistsr Society*, **2005**, 82, 201-205	1.8	28
49	NMR characterization of dihydrosterculic acid and its methyl ester. *Lipids*, **2006**, 41, 393-6	1.6	27
48	Cetane Numbers of Fatty Compounds:Influence of Compound Structure and of Various Potential Cetane Improvers **1997**,		26
47	Synthesis and characterization of some long-chain diesters with branched or bulky moieties. *JAOCS, Journal of the American Oil ChemistsrSociety*, **2000**, 77, 865-871	1.8	26
46	Production and Properties of Biodiesel from Algal Oils **2013**, 207-221		24
45	Exhaust emissions and mutagenic effects of diesel fuel, biodiesel and biodiesel blends. *Fuel*, **2013**, 103, 414-420	7.1	24
44	Biodiesel exhaust: the need for a systematic approach to health effects research. *Respirology*, **2015**, 20, 1034-45	3.6	22
43	Kapok oil methyl esters. *Biomass and Bioenergy*, **2014**, 66, 419-425	5.3	21
42	Kenaf oil methyl esters. *Industrial Crops and Products*, **2013**, 49, 568-572	5.9	20
41	Fatty Acid Alkyl Esters as Solvents: Evaluation of the Kauri-Butanol Value. Comparison to Hydrocarbons, Dimethyl Diesters, and Other Oxygenates. *Industrial & Engineering Chemistry Research*, **2011**, 50, 4177-4182	3.9	20
40	Other Uses of Biodiesel **2010**, 401-403		20
39	Allylic mono- and di-hydroxylation of isolated double bonds with selenium dioxide/tert-butyl hydroperoxide. NMR characterization of long-chain enols, allylic and saturated 1,4-diols, and enones. *Journal of the Chemical Society Perkin Transactions II*, **1994**, 1661-1669		18
38	Beyond Fatty Acid Methyl Esters: Expanding the Renewable Carbon Profile with Alkenones from Isochrysis sp.. *Energy & Fuels*, **2012**, 26, 2434-2441	4.1	17

37	Fatty acids of Thespesia populnea: Mass spectrometry of picolinyl esters of cyclopropene fatty acids. *European Journal of Lipid Science and Technology*, **2011**, 113, 980-984	3	16
36	Evaluation of ball and disc wear scar data in the HFRR lubricity test. *Lubrication Science*, **2008**, 20, 35-45	1.3	16
35	Methyl Esters (Biodiesel) from and Fatty Acid Profile of Gliricidia sepium Seed Oil. *JAOCS, Journal of the American Oil Chemistsr Society*, **2015**, 92, 769-775	1.8	15
34	A Comprehensive Evaluation of the Density of Neat Fatty Acids and Esters. *JAOCS, Journal of the American Oil Chemistsr Society*, **2014**, 91, 1711-1722	1.8	15
33	Fatty Acid Profile of Kenaf Seed Oil. *JAOCS, Journal of the American Oil Chemistsr Society*, **2013**, 90, 835-840	1.8	14
32	Decarboxylation of Fatty Acids with Triruthenium Dodecacarbonyl: Influence of the Compound Structure and Analysis of the Product Mixtures. *ACS Omega*, **2017**, 2, 6473-6480	3.9	13
31	Synthesis and Analysis of an Alkenone-Free Biodiesel from Isochrysis sp.. *Energy & Fuels*, **2014**, 28, 2677-2683	4.1	13
30	Will biodiesel derived from algal oils live up to its promise? A fuel property assessment. *Lipid Technology*, **2011**, 23, 247-249		12
29	Analysis and Properties of the Decarboxylation Products of Oleic Acid by Catalytic Triruthenium Dodecacarbonyl. *Energy & Fuels*, **2016**, 30, 7443-7451	4.1	11
28	Fatty acid profile of seashore mallow (Kosteletzkya pentacarpos) seed oil and properties of the methyl esters. *European Journal of Lipid Science and Technology*, **2015**, 117, 1287-1294	3	10
27	Comparative citation analysis of duplicate or highly related publications. *Journal of the Association for Information Science and Technology*, **2006**, 57, 1830-1839		9
26	13 C NMR spectroscopy of unsaturated long-chain compounds: an evaluation of the unsaturated carbon signals as rational functions. *Journal of the Chemical Society Perkin Transactions II*, **1995**, 615		9
25	Biodiesel and Its Properties **2016**, 15-42		9
24	Methyl esters (biodiesel) from Pachyrhizus erosus seed oil. *Biofuels*, **2018**, 9, 449-454	2	8
23	Production and properties of 7,10,12-trihydroxy-8(E)-octadecenoic acid from ricinoleic acid conversion by Pseudomonas aeruginosa. *European Journal of Lipid Science and Technology*, **2004**, 106, 405-411	3	8
22	Decolorization improves the fuel properties of algal biodiesel from Isochrysis sp.. *Fuel*, **2016**, 179, 229-234	4.1	8
21	Improvement of Diesel Lubricity by Chemically Modified Tung-Oil-Based Fatty Acid Esters as Additives. *Energy & Fuels*, **2019**, 33, 5110-5115	4.1	7
20	Cuphea Oil as a Potential Biodiesel Feedstock to Improve Fuel Properties. *Journal of Energy Engineering - ASCE*, **2014**, 140,	1.7	7

19	Fuel properties of methyl esters of borage and black currant oils containing methyl γ-linolenate. *European Journal of Lipid Science and Technology*, **2013**, 115, 901-908	3	7
18	Synthesis and characterization of long-chain 1,2-dioxo compounds. *Chemistry and Physics of Lipids*, **2002**, 115, 85-91	3.7	7
17	Composition of Some Apiaceae Seed Oils Includes Phytochemicals, and Mass Spectrometry of Fatty Acid 2-Methoxyethyl Esters. *European Journal of Lipid Science and Technology*, **2019**, 121, 1800386	3	7
16	Fatty Acid Profiles of Some Fabaceae Seed Oils. *JAOCS, Journal of the American Oil Chemistsr Society*, **2016**, 93, 1007-1011	1.8	6
15	1,2-Isopropylidene Glycerol Carbonate: Preparation, Characterization, and Hydrolysis. *JAOCS, Journal of the American Oil ChemistsrSociety*, **2008**, 85, 365-372	1.8	5
14	Fatty acid profile of Albizia lebbeck and Albizia saman seed oils: Presence of coronaric acid. *European Journal of Lipid Science and Technology*, **2015**, 117, 567-574	3	4
13	Experimental Protocol for Biodiesel Production with Isolation of Alkenones as Coproducts from Commercial Isochrysis Algal Biomass. *Journal of Visualized Experiments*, **2016**,	1.6	2
12	The Potential of Biodiesel with Improved Properties to an Alternative Energy Mix. *Green Energy and Technology*, **2011**, 75-82	0.6	2
11	Fatty acids, triterpenes and cycloalkanes in ficus seed oils. *Plant Physiology and Biochemistry*, **2019**, 135, 127-131	5.4	2
10	Analysis of Biodiesel **2017**, 1-15		1
9	Fatty Acid Methyl Esters with Two Vicinal Alkylthio Side Chains and Their NMR Characterization. *JAOCS, Journal of the American Oil ChemistsrSociety*, **2017**, 94, 537-549	1.8	1
8	Comment on Biodiesel Production from Freshwater Algae *Energy & Fuels*, **2010**, 24, 3299-3300	4.1	1
7	Methyl esters (biodiesel) from Melanolepis multiglandulosa (alim) seed oil and their properties. *Biofuels*, **2019**, 10, 239-243	2	1
6	Fatty Acid Profiles of Garuga floribunda, Ipomoea pes-caprae, Melanolepis multiglandulosa and Premna odorata Seed Oils. *JAOCS, Journal of the American Oil ChemistsrSociety*, **2017**, 94, 333-338	1.8	
5	Biodiesel **2016**, 391-405		
4	Biobased Lubricants and Functional Products from Cuphea Oil **2014**, 443-482		
3	Response to the Letter to the Editor regarding Determination of the fatty acid profile by 1H NMR spectroscopy *European Journal of Lipid Science and Technology*, **2013**, 115, 1201-1202	3	
2	Biofuels: The Role of Biodiesel and Improving Its Performance. *Materials Research Society Symposia Proceedings*, **2011**, 1326, 1		

List of Publications

1 Biodiesel Lubricity and Other Properties **2014**, 483-500