Gerhard Knothe

List of Publications by Year
in descending order

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88 papers	12,130 citations	94433 37 h-index	64796 79 g-index
90 all docs	90 docs citations	90 times ranked	9317 citing authors

#	Article	IF	Citations
1	Dependence of biodiesel fuel properties on the structure of fatty acid alkyl esters. Fuel Processing Technology, 2005, 86, 1059-1070.	7.2	1,842
2	â€œDesignerâ€•Biodiesel: Optimizing Fatty Ester Composition to Improve Fuel Properties. Energy & Fuels, 2008, 22, 1358-1364.	5.1	1,107
3	Biodiesel and renewable diesel: A comparison. Progress in Energy and Combustion Science, 2010, 36, 364-373.	31.2	733
4	Kinematic viscosity of biodiesel fuel components and related compounds. Influence of compound structure and comparison to petrodiesel fuel components. Fuel, 2005, 84, 1059-1065.	6.4	710
5	Improving biodiesel fuel properties by modifying fatty ester composition. Energy and Environmental Science, 2009, 2, 759.	30.8	549
6	Biodiesel fuels. Progress in Energy and Combustion Science, 2017, 58, 36-59.	31.2	537
7	Some aspects of biodiesel oxidative stability. Fuel Processing Technology, 2007, 88, 669-677.	7.2	521
8	Cetane numbers of branched and straight-chain fatty esters determined in an ignition quality testerâ˜†. Fuel, 2003, 82, 971-975.	6.4	500
9	Moringa oleifera oil: A possible source of biodiesel. Bioresource Technology, 2008, 99, 8175-8179.	9.6	424
10	Exhaust Emissions of Biodiesel, Petrodiesel, Neat Methyl Esters, and Alkanes in a New Technology Engineâ€. Energy & Fuels, 2006, 20, 403-408.	5.1	414
11	Lubricity of Components of Biodiesel and Petrodiesel. The Origin of Biodiesel Lubricityâ€. Energy & Fuels, 2005, 19, 1192-1200.	5.1	354
12	Determination of the fatty acid profile by1H-NMR spectroscopy. European Journal of Lipid Science and Technology, 2004, 106, 88-96.	1.5	337
13	Structure indices in FA chemistry. How relevant is the iodine value?. JAOCS, Journal of the American Oil Chemists' Society, 2002, 79, 847-854.	1.9	333
14	A Comprehensive Evaluation of the Melting Points of Fatty Acids and Esters Determined by Differential Scanning Calorimetry. JAOCS, Journal of the American Oil Chemists' Society, 2009, 86, 843-856.	1.9	325
15	Dependence of oil stability index of fatty compounds on their structure and concentration and presence of metals. JAOCS, Journal of the American Oil Chemists' Society, 2003, 80, 1021-1026.	1.9	295
16	Evaluation of biodiesel obtained from cottonseed oil. Fuel Processing Technology, 2009, 90, 1157-1163.	7.2	238
17	Kinematic viscosity of biodiesel components (fatty acid alkyl esters) and related compounds at low temperatures. Fuel, 2007, 86, 2560-2567.	6.4	202
18	Production and Evaluation of Biodiesel from Field Pennycress (Thlaspi arvenseL.) Oil^{â€}. Energy & Fuels, 2009, 23, 4149-4155.	5.1	187

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19	Biodiesel: The Use of Vegetable Oils and Their Derivatives as Alternative Diesel Fuels. ACS Symposium Series, 1997, , 172-208.	0.5	183
20	A technical evaluation of biodiesel from vegetable oils vs. algae. Will algae-derived biodiesel perform?. Green Chemistry, 2011, 13, 3048.	9.0	146
21	A comparison of used cooking oils: A very heterogeneous feedstock for biodiesel. Bioresource Technology, 2009, 100, 5796-5801.	9.6	135
22	Fuel Properties of Highly Polyunsaturated Fatty Acid Methyl Esters. Prediction of Fuel Properties of Algal Biodiesel. Energy & Fuels, 2012, 26, 5265-5273.	5.1	129
23	A comprehensive evaluation of the cetane numbers of fatty acid methyl esters. Fuel, 2014, 119, 6-13.	6.4	120
24	Cuphea Oil as Source of Biodiesel with Improved Fuel Properties Caused by High Content of Methyl Decanoate. Energy & Fuels, 2009, 23, 1743-1747.	5.1	107
25	Direct transesterification of spent coffee grounds for biodiesel production. Fuel, 2017, 199, 157-161.	6.4	103
26	Analysis of oxidized biodiesel by1H-NMR and effect of contact area with air. European Journal of Lipid Science and Technology, 2006, 108, 493-500.	1.5	99
27	Biodiesel from Citrus reticulata (mandarin orange) seed oil, a potential non-food feedstock. Industrial Crops and Products, 2013, 45, 355-359.	5.2	97
28	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.	6.4	91
29	Biodiesel: Current Trends and Properties. Topics in Catalysis, 2010, 53, 714-720.	2.8	81
30	Biodiesel from Milo (Thespesia populnea L.) seed oil. Biomass and Bioenergy, 2011, 35, 4034-4039.	5.7	79
31	Kinematic viscosity of fatty acid methyl esters: Prediction, calculated viscosity contribution of esters with unavailable data, and carbonâ€“oxygen equivalents. Fuel, 2011, 90, 3217-3224.	6.4	74
32	Synthesis of Epoxidized Cardanol and Its Antioxidative Properties for Vegetable Oils and Biodiesel. ACS Sustainable Chemistry and Engineering, 2016, 4, 901-906.	6.7	64
33	Biodiesel Derived from a Model Oil Enriched in Palmitoleic Acid, Macadamia Nut Oil. Energy & Fuels, 2010, 24, 2098-2103.	5.1	58
34	The effect of metals and metal oxides on biodiesel oxidative stability from promotion to inhibition. Fuel Processing Technology, 2018, 177, 75-80.	7.2	51
35	Methyl esters from vegetable oils with hydroxy fatty acids: Comparison of lesquerella and castor methyl esters. Fuel, 2012, 96, 535-540.	6.4	49
36	Evaluation of Indian milkweed (Calotropis gigantea) seed oil as alternative feedstock for biodiesel. Industrial Crops and Products, 2014, 54, 226-232.	5.2	43

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37	Liquid-Phase Penetration under Unsteady In-Cylinder Conditions: Soy- and Cuphea-Derived Biodiesel Fuels Versus Conventional Diesel. Energy & Fuels, 2010, 24, 5163-5180.	5.1	41
38	Biodiesel from meadowfoam (Limnanthes alba L.) seed oil: oxidative stability and unusual fatty acid composition. Energy and Environmental Science, 2010, 3, 318.	30.8	40
39	Physical properties of oleochemical carbonates. JAOCS, Journal of the American Oil Chemists' Society, 2005, 82, 201-205.	1.9	37
40	Avocado and olive oil methyl esters. Biomass and Bioenergy, 2013, 58, 143-148.	5.7	37
41	Cetane Numbers of Fatty Compounds:Influence of Compound Structure and of Various Potential Cetane Improvers. , 0, , .		35
42	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.	9.3	35
43	Synthesis and characterization of some long-chain diesters with branched or bulky moieties. JAOCS, Journal of the American Oil Chemists' Society, 2000, 77, 865-871.	1.9	32
44	NMR characterization of dihydrosterculic acid and its methyl ester. Lipids, 2006, 41, 393-396.	1.7	32
45	Production and Properties of Biodiesel from Algal Oils. , 2013, , 207-221.		31
46	Exhaust emissions and mutagenic effects of diesel fuel, biodiesel and biodiesel blends. Fuel, 2013, 103, 414-420.	6.4	29
47	Other Uses of Biodiesel. , 2010, , 401-403.		26
48	Biodiesel exhaust: The need for a systematic approach to health effects research. Respirology, 2015, 20, 1034-1045.	2.3	25
49	Allylic mono- and di-hydroxylation of isolated double bonds with selenium dioxideâ€“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.	0.9	22
50	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.	3.7	22
51	Kapok oil methyl esters. Biomass and Bioenergy, 2014, 66, 419-425.	5.7	22
52	Kenaf oil methyl esters. Industrial Crops and Products, 2013, 49, 568-572.	5.2	20
53	A Comprehensive Evaluation of the Density of Neat Fatty Acids and Esters. JAOCS, Journal of the American Oil Chemists' Society, 2014, 91, 1711-1722.	1.9	20
54	Evaluation of ball and disc wear scar data in the HFRR lubricity test. Lubrication Science, 2008, 20, 35-45.	2.1	18

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55	Methyl Esters (Biodiesel) from and Fatty Acid Profile of Gliricidia sepium Seed Oil. JAOCS, Journal of the American Oil Chemists' Society, 2015, 92, 769-775.	1.9	18
56	Decarboxylation of Fatty Acids with Triruthenium Dodecacarbonyl: Influence of the Compound Structure and Analysis of the Product Mixtures. ACS Omega, 2017, 2, 6473-6480.	3.5	18
57	Beyond Fatty Acid Methyl Esters: Expanding the Renewable Carbon Profile with Alkenones from Isochrysis sp.. Energy & Fuels, 2012, 26, 2434-2441.	5.1	17
58	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.	1.5	16
59	Fatty Acid Profile of Kenaf Seed Oil. JAOCS, Journal of the American Oil Chemists' Society, 2013, 90, 835-840.	1.9	15
60	Improvement of Diesel Lubricity by Chemically Modified Tung-Oil-Based Fatty Acid Esters as Additives. Energy & Fuels, 2019, 33, 5110-5115.	5.1	15
61	Synthesis and Analysis of an Alkenone-Free Biodiesel from Isochrysis sp.. Energy & Fuels, 2014, 28, 2677-2683.	5.1	14
62	Comparative citation analysis of duplicate or highly related publications. Journal of the Association for Information Science and Technology, 2006, 57, 1830-1839.	2.6	13
63	Will biodiesel derived from algal oils live up to its promise? A fuel property assessment. Lipid Technology, 2011, 23, 247-249.	0.3	13
64	Analysis and Properties of the Decarboxylation Products of Oleic Acid by Catalytic Triruthenium Dodecacarbonyl. Energy & Fuels, 2016, 30, 7443-7451.	5.1	13
65	Composition of Some Apiaceae Seed Oils Includes Phytochemicals, and Mass Spectrometry of Fatty Acid 2â€Methoxyethyl Esters. European Journal of Lipid Science and Technology, 2019, 121, 1800386.	1.5	13
66	Biodiesel and Its Properties. , 2016, , 15-42.		11
67	Decolorization improves the fuel properties of algal biodiesel from Isochrysis sp.. Fuel, 2016, 179, 229-234.	6.4	11
68	Cuphea Oil as a Potential Biodiesel Feedstock to Improve Fuel Properties. Journal of Energy Engineering - ASCE, 2014, 140, .	1.9	10
69	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.	1.5	10
70	Methyl esters (biodiesel) from Pachyrhizus erosus seed oil. Biofuels, 2018, 9, 449-454.	2.4	10
71	13C 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.	0.9	9
72	Production and properties of 7,10,12-trihydroxy-8(E)-octadecenoic acid from ricinoleic acid conversion byPseudomonas aeruginosa. European Journal of Lipid Science and Technology, 2004, 106, 405-411.	1.5	9

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73	Fuel properties of methyl esters of borage and black currant oils containing methyl Î³-linolenate. European Journal of Lipid Science and Technology, 2013, 115, 901-908.	1.5	8
74	Fatty Acid Profiles of Some Fabaceae Seed Oils. JAOCS, Journal of the American Oil Chemists' Society, 2016, 93, 1007-1011.	1.9	8
75	Fatty acids, triterpenes and cycloalkanes in ficus seed oils. Plant Physiology and Biochemistry, 2019, 135, 127-131.	5.8	8
76	Synthesis and characterization of long-chain 1,2-dioxo compounds. Chemistry and Physics of Lipids, 2002, 115, 85-91.	3.2	7
77	Fatty acid profile ofAlbizia lebbeckandAlbizia samanseed oils: Presence of coronaric acid. European Journal of Lipid Science and Technology, 2015, 117, 567-574.	1.5	7
78	1,2â€Isopropylidene Glycerol Carbonate: Preparation, Characterization, and Hydrolysis. JAOCS, Journal of the American Oil Chemists' Society, 2008, 85, 365-372.	1.9	5
79	The Potential of Biodiesel with Improved Properties to an Alternative Energy Mix. Green Energy and Technology, 2011, , 75-82.	0.6	3
80	Experimental Protocol for Biodiesel Production with Isolation of Alkenones as Coproducts from Commercial Isochrysis Algal Biomass. Journal of Visualized Experiments, 2016, , .	0.3	3
81	Comment on â€œBiodiesel Production from Freshwater Algaeâ€• Energy & Fuels, 2010, 24, 3299-3300.	5.1	2
82	Fatty Acid Methyl Esters with Two Vicinal Alkylthio Side Chains and Their NMR Characterization. JAOCS, Journal of the American Oil Chemists' Society, 2017, 94, 537-549.	1.9	1
83	Methyl esters (biodiesel) from Melanolepis multiglandulosa (alim) seed oil and their properties. Biofuels, 2019, 10, 239-243.	2.4	1
84	Biofuels: The Role of Biodiesel and Improving Its Performance. Materials Research Society Symposia Proceedings, 2011, 1326, 1.	0.1	0
85	Response to the Letter to the Editor regarding â€œDetermination of the fatty acid profile by1HNMR spectroscopyâ€• European Journal of Lipid Science and Technology, 2013, 115, 1201-1202.	1.5	0
86	Biobased Lubricants and Functional Products from Cuphea Oil. , 2014, , 443-482.		0
87	Biodiesel. , 2016, , 391-405.		0
88	Fatty Acid Profiles of Garuga floribunda, Ipomoea pesâ€caprae, Melanolepis multiglandulosa and Premna odorata Seed Oils. JAOCS, Journal of the American Oil Chemists' Society, 2017, 94, 333-338.	1.9	0