Gabor Varhegyi

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3800197/publications.pdf

Version: 2024-02-01

101 papers	6,986 citations	87723 38 h-index	58464 82 g-index
102 all docs	102 docs citations	102 times ranked	4515 citing authors

#	Article	IF	Citations
1	Thermal decomposition of biomass wastes derived from palm oil production. Journal of Analytical and Applied Pyrolysis, 2021, 155, 105069.	2.6	19
2	Empirical Kinetic Models for the CO₂ Gasification of Biomass Chars. Part 1. Gasification of Wood Chars and Forest Residue Chars. ACS Omega, 2021, 6, 27552-27560.	1.6	4
3	Non-isothermal kinetics: best-fitting empirical models instead of model-free methods. Journal of Thermal Analysis and Calorimetry, 2020, 142, 1043-1054.	2.0	8
4	Empirical Kinetic Models for the Combustion of Charcoals and Biomasses in the Kinetic Regime. Energy & Fuels, 2020, 34, 16302-16309.	2.5	5
5	Empirical Models with Constant and Variable Activation Energy for Biomass Pyrolysis. Energy & Fuels, 2019, 33, 2348-2358.	2.5	14
6	CO₂ Gasification of Chars Prepared by Fast and Slow Pyrolysis from Wood and Forest Residue: A Kinetic Study. Energy & Fuels, 2018, 32, 588-597.	2.5	13
7	Towards a meaningful non-isothermal kinetics for biomass materials and other complex organic samples. Journal of Thermal Analysis and Calorimetry, 2018, 133, 703-712.	2.0	12
8	Biomass Charcoal Properties Changes During Storage. Energy Procedia, 2017, 105, 830-835.	1.8	11
9	Thermal Decomposition Kinetics of Wood and Bark and Their Torrefied Products. Energy & Fuels, 2017, 31, 4024-4034.	2.5	18
10	In Honor of Michael J. Antal. Energy & Fuels, 2016, 30, 7809-7810.	2.5	0
11	From â€œSirupsâ€•to Biocarbons: A 30 Year Research Cooperation for Better Biomass Utilization with Michael J. Antal, Jr. Energy & Fuels, 2016, 30, 7887-7895.	2.5	4
12	Combustion Characteristics of Biomass Charcoals Produced at Different Carbonization Conditions: A Kinetic Study. Energy & Fuels, 2016, 30, 3186-3197.	2.5	15
13	CO₂ Gasification of Torrefied Wood: A Kinetic Study. Energy & Fuels, 2014, 28, 7582-7590.	2.5	27
14	Thermal Decomposition Kinetics of Woods with an Emphasis on Torrefaction. Energy & Fuels, 2013, 27, 6134-6145.	2.5	33
15	Kinetic Behavior of Torrefied Biomass in an Oxidative Environment. Energy & Fuels, 2013, 27, 1050-1060.	2.5	43
16	CO₂ Gasification of Chars Prepared from Wood and Forest Residue: A Kinetic Study. Energy & Fuels, 2013, 27, 6098-6107.	2.5	31
17	Correlation between heating values and thermogravimetric data of sewage sludge, herbaceous crops and wood samples. Journal of Thermal Analysis and Calorimetry, 2012, 110, 1501-1509.	2.0	19
18	Kinetics of Corncob Pyrolysis. Energy & Fuels, 2012, 26, 2005-2013.	2.5	39

#	Article	IF	Citations
19	Combustion Kinetics of Biomass Materials in the Kinetic Regime. Energy & Fuels, 2012, 26, 1323-1335.	2.5	48
20	Thermogravimetric Study of Biomass Pyrolysis Kinetics. A Distributed Activation Energy Model with Prediction Tests. Energy & Fuels, 2011, 25, 24-32.	2.5	173
21	Thermogravimetric Analysis of Tobacco Combustion Assuming DAEM Devolatilization and Empirical Char-Burnoff Kinetics. Industrial & Engineering Chemistry Research, 2010, 49, 1591-1599.	1.8	29
22	Thermal behavior of corn fibers and corn fiber gums prepared in fiber processing to ethanol. Journal of Analytical and Applied Pyrolysis, 2009, 85, 11-18.	2.6	17
23	Tobacco pyrolysis. Kinetic evaluation of thermogravimetricâ€“mass spectrometric experiments. Journal of Analytical and Applied Pyrolysis, 2009, 86, 310-322.	2.6	65
24	Kinetics of cellulose pyrolysis after a pressurized heat treatment. Thermochimica Acta, 2009, 496, 59-65.	1.2	12
25	Formation of selected toxicants from tobacco under different pyrolysis conditions. Journal of Analytical and Applied Pyrolysis, 2009, 85, 47-53.	2.6	29
26	CO₂ Gasification of Biomass Chars: A Kinetic Study. Energy & Fuels, 2009, 23, 94-100.	2.5	60
27	Thermal Decomposition of Wheat, Oat, Barley, and Brassica carinata Straws. A Kinetic Study. Energy & Fuels, 2009, 23, 646-652.	2.5	74
28	Thermal analysis of energy crops. Journal of Analytical and Applied Pyrolysis, 2008, 81, 52-59.	2.6	37
29	Do All Carbonized Charcoals Have the Same Chemical Structure? 1. Implications of Thermogravimetryâ^'Mass Spectrometry Measurements. Industrial & Engineering Chemistry Research, 2007, 46, 5943-5953.	1.8	63
30	Thermal Decomposition of Biomass Wastes. A Kinetic Study. Industrial & Engineering Chemistry Research, 2007, 46, 2428-2437.	1.8	82
31	TG/MS, Py-GC/MS and THM-GC/MS study of the composition and thermal behavior of extractive components of Robinia pseudoacacia. Journal of Analytical and Applied Pyrolysis, 2007, 79, 61-70.	2.6	126
32	Thermogravimetry/mass spectrometry analysis of energy crops. Journal of Thermal Analysis and Calorimetry, 2007, 88, 477-482.	2.0	40
33	Aims and methods in non-isothermal reaction kinetics. Journal of Analytical and Applied Pyrolysis, 2007, 79, 278-288.	2.6	118
34	Combustion Kinetics of Corncob Charcoal and Partially Demineralized Corncob Charcoal in the Kinetic Regime. Industrial & Engineering Chemistry Research, 2006, 45, 4962-4970.	1.8	49
35	Slow Pyrolysis of Woody Residues and an Herbaceous Biomass Crop:â€‰ A Kinetic Study. Industrial & Engineering Chemistry Research, 2005, 44, 6650-6660.	1.8	36
36	Comparative study of the thermal behavior of wood and bark of young shoots obtained from an energy plantation. Journal of Analytical and Applied Pyrolysis, 2004, 72, 317-328.	2.6	86

#	Article	IF	Citations
37	Effects of Sample Origin, Extraction, and Hot-Water Washing on the Devolatilization Kinetics of Chestnut Wood. Industrial & Engineering Chemistry Research, 2004, 43, 2356-2367.	1.8	99
38	Thermogravimetric and Reaction Kinetic Analysis of Biomass Samples from an Energy Plantation. Energy & Fuels, 2004, 18, 497-507.	2.5	117
39	Kinetics of the oxidation of bismuth tellurite, Bi2TeO5. Thermochimica Acta, 2003, 399, 225-239.	1.2	7
40	Electrical and Physical Properties of Carbonized Charcoals. Industrial & Engineering Chemistry Research, 2003, 42, 5140-5151.	1.8	105
41	Kinetics of Charcoal Devolatilization. Energy & Fuels, 2002, 16, 724-731.	2.5	78
42	Thermogravimetric Analysis and Devolatilization Kinetics of Wood. Industrial & Engineering Chemistry Research, 2002, 41, 4201-4208.	1.8	640
43	Activated Carbon from Macadamia Nut Shell by Air Oxidation in Boiling Water. Industrial & Engineering Chemistry Research, 2001, 40, 578-588.	1.8	18
44	Least squares criteria for the kinetic evaluation of thermoanalytical experiments. Examples from a char reactivity study. Journal of Analytical and Applied Pyrolysis, 2001, 57, 203-222.	2.6	46
45	Oxidation of Bismuth Tellurite, Bi2TeO5. Journal of Solid State Chemistry, 2001, 161, 365-372.	1.4	12
46	Kinetic study of rapidly quenched Ni81P19 amorphous alloys. Thermochimica Acta, 2000, 351, 79-84.	1.2	5
47	Thermal decomposition of polypropylene in the presence of wood-derived materials. Journal of Analytical and Applied Pyrolysis, 2000, 56, 273-285.	2.6	208
48	Computer processing of thermogravimetric-mass spectrometric and high pressure thermogravimetric data. Part 1. Smoothing and differentiation. Thermochimica Acta, 1999, 329, 141-145.	1.2	28
49	A Round-Robin Study of Cellulose Pyrolysis Kinetics by Thermogravimetry. Industrial & Engineering Chemistry Research, 1999, 38, 2238-2244.	1.8	276
50	Comparison of Temperature-Programmed Char Combustion in CO2â^'O2and Arâ^'O2Mixtures at Elevated Pressure. Energy & Fuels, 1999, 13, 539-540.	2.5	31
51	Cellulose Pyrolysis Kinetics:Â Revisited. Industrial & Engineering Chemistry Research, 1998, 37, 1267-1275.	1.8	267
52	TG, TG-MS, and FTIR Characterization of High-Yield Biomass Charcoals. Energy & Fuels, 1998, 12, 969-974.	2.5	72
53	Decomposition of Cellulose and Glucose in Hot-Compressed Water under Catalyst-Free Conditions.. Journal of Chemical Engineering of Japan, 1998, 31, 131-134.	0.3	126
54	Liquefaction of Cellulose in Hot Compressed Water using Sodium Carbonate: Products Distribution at Different Reaction Temperatures.. Journal of Chemical Engineering of Japan, 1997, 30, 186-190.	0.3	65

#	Article	IF	Citations
55	Impact of Systematic Errors on the Determination of Cellulose Pyrolysis Kinetics. Energy & Fuels, 1997, 11, 1309-1310.	2.5	33
56	Kinetic modeling of biomass pyrolysis. Journal of Analytical and Applied Pyrolysis, 1997, 42, 73-87.	2.6	452
57	Mathematical Modeling of Char Reactivity in Arâ^'O2and CO2â^'O2Mixtures. Energy & Fuels, 1996, 10, 1208-1214.	2.5	112
58	Application of complex reaction kinetic models in thermal analysis. Journal of Theoretical Biology, 1996, 47, 535-542.	0.8	13
59	Thermogravimetric/mass spectrometric characterization of two energy crops, Arundo donax and Miscanthus sinensis. Journal of Analytical and Applied Pyrolysis, 1996, 36, 179-190.	2.6	97
60	Cellulose Pyrolysis Kinetics: The Current State of Knowledge. Industrial & Engineering Chemistry Research, 1995, 34, 703-717.	1.8	775
61	Kinetics of the thermal decomposition of cellulose under the experimental conditions of thermal analysis. Theoretical extrapolations to high heating rates. Biomass and Bioenergy, 1994, 7, 69-74.	2.9	39
62	Is the Broido-Shafizadeh Model for Cellulose Pyrolysis True?. Energy & Fuels, 1994, 8, 1345-1352.	2.5	195
63	Kinetics of the thermal decomposition of cellulose in sealed vessels at elevated pressures. Effects of the presence of water on the reaction mechanism. Journal of Analytical and Applied Pyrolysis, 1993, 26, 159-174.	2.6	113
64	Reaction Kinetics of the Thermal Decomposition of Cellulose and Hemicellulose in Biomass Materials. , 1993, , 760-770.		9
65	Productive and parasitic pathways in dilute acid-catalyzed hydrolysis of cellulose. Industrial & Engineering Chemistry Research, 1992, 31, 94-100.	1.8	216
66	Formation of charcoal from biomass in a sealed reactor. Industrial & Engineering Chemistry Research, 1992, 31, 1162-1166.	1.8	148
67	Thermogravimetric-mass spectrometric study on the low temperature oxidation of coals. Fuel Processing Technology, 1991, 28, 221-238.	3.7	33
68	Investigation of subbituminous coals by thermogravimetry-mass spectrometry. Thermochimica Acta, 1990, 170, 167-177.	1.2	15
69	Investigation of subbituminous coals by thermogravimetry-mass spectrometry. Thermochimica Acta, 1990, 170, 179-188.	1.2	8
70	Review of methods for improving the yield of charcoal from biomass. Energy & Fuels, 1990, 4, 221-225.	2.5	129
71	Thermogravimetric-mass spectrometric characterization of the thermal decomposition of sunflower stem. Energy & Fuels, 1989, 3, 755-760.	2.5	47
72	Kinetics of the thermal decomposition of cellulose, hemicellulose, and sugarcane bagasse. Energy & Fuels, 1989, 3, 329-335.	2.5	289

#	Article	IF	Citations
73	Thermogravimetric/mass spectrometric characterization of the thermal decomposition of (4-O-methyl-D-glucurono)-D-xylan. Journal of Applied Polymer Science, 1988, 36, 721-728.	1.3	47
74	Influence of the sample mass and the presence of the reaction products on the thermoanalytical results. Journal of Thermal Analysis, 1988, 33, 87-95.	0.7	9
75	Simultaneous thermogravimetric-mass spectrometric studies of the thermal decomposition of biopolymers. 1. Avicel cellulose in the presence and absence of catalysts. Energy & Fuels, 1988, 2, 267-272.	2.5	148
76	Simultaneous thermogravimetric-mass spectrometric studies of the thermal decomposition of biopolymers. 2. Sugarcane bagasse in the presence and absence of catalysts. Energy & Fuels, 1988, 2, 273-277.	2.5	66
77	Kinetic Aspects of Thermal Analysis. Critical Reviews in Analytical Chemistry, 1988, 19, 65-93.	1.8	29
78	The effects of heat and mass transport on the results of thermal decomposition studies. Journal of Analytical and Applied Pyrolysis, 1987, 11, 71-81.	2.6	12
79	The effects of heat and mass transport on the results of thermal decomposition studies. Journal of Analytical and Applied Pyrolysis, 1987, 11, 83-92.	2.6	23
80	Reaction kinetics in thermal analysis: a brief survey of fundamental research problems. Thermochimica Acta, 1987, 110, 95-99.	1.2	17
81	Problems in the DSC and DTA study of the burning properties of fuels and other organic materials. Thermochimica Acta, 1986, 106, 191-199.	1.2	9
82	Software for a mass spectrometer-thermobalance system. Thermochimica Acta, 1986, 102, 115-124.	1.2	14
83	Use of histograms in computer-aided comparison of chromatograms. Journal of Chromatography A, 1985, 318, 247-253.	1.8	2
84	On the kinetic.evaluation of the thermogravimetric curves. Thermochimica Acta, 1985, 92, 141-144.	1.2	2
85	Pyrolysis-gas chromatographic-mass spectrometric and thermogravimetric-mass spectrometric investigation of brown coals. Journal of Analytical and Applied Pyrolysis, 1985, 8, 255-269.	2.6	21
86	Studies on the kinetics of the gibbsite â†' Ï‡-alumina reaction. Thermochimica Acta, 1984, 76, 237-247.	1.2	13
87	The effects of imperfect temperature programming on the kinetic evaluation of thermoanalytical curves. Part 3. Error bounds for the activation energy and the formal reaction order. Thermochimica Acta, 1983, 65, 333-350.	1.2	12
88	The effects of imperfect temperature programming on the kinetic evaluation of thermoanalytical curves. Part 1. A simple mathematical example. Thermochimica Acta, 1982, 59, 31-41.	1.2	9
89	The shape of the thermoanalytical curves at hyperbolic temperature programs. Thermochimica Acta, 1982, 57, 247-250.	1.2	11
90	Reaction kinetics in thermal analysis. Part 1. The sensitivity of kinetic equations to experimental errors. A mathematical analysis. Thermochimica Acta, 1982, 57, 13-28.	1.2	35

#	Article	IF	Citations
91	The effects of imperfect temperature programming on the kinetic evaluation of thermoanalytical curves. Part 2. Concave and convex curvatures on the actual temperatureâ€"time functions. Thermochimica Acta, 1982, 59, 43-49.	1.2	6
92	A basic problem in mathematical modelling in pyrolysis: The number of the unknown parameters. Journal of Analytical and Applied Pyrolysis, 1980, 2, 1-6.	2.6	6
93	DSC examination of alloys. Thermochimica Acta, 1979, 30, 311-317.	1.2	8
94	Kinetic evaluation of non-isothermal thermoanalytical curves in the case of independent thermal reactions. Thermochimica Acta, 1979, 28, 367-376.	1.2	25
95	Integration of the rate constant and linearization of the kinetic equations in non-isothermal reaction kinetics. Thermochimica Acta, 1978, 25, 201-207.	1.2	29
96	Calculation of kinetic parameters and sequence distribution from pyrolysis gas chromatographic data of styrene-methyl acrylate copolymers. European Polymer Journal, 1978, 14, 625-630.	2.6	6
97	Thermal degradation and microstructure of vinyl copolymers. A mathematical model. European Polymer Journal, 1978, 14, 349-352.	2.6	5
98	Calculation of the Free Energy Equation Parameters from Ternary Liquid-Liquid Equilibrium Data. Industrial & Engineering Chemistry Fundamentals, 1977, 16, 182-185.	0.7	21
99	Mathematical modelling of thermal decomposition processes. Journal of Theoretical Biology, 1977, 12, 179-185.	0.8	4
100	Polycondensation kinetics. NMR study on the formation of furfurylalcohol-formaldehyde resins. Angewandte Makromolekulare Chemie, 1976, 54, 31-48.	0.3	7
101	Numerical differentiation of experimental data. Information Processing Letters, 1973, 2, 24-25.	0.4	6