

Ravikrishnan Vinu

List of Publications by Year in descending order

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121
papers

4,917
citations

76196

40
h-index

110170

64
g-index

123
all docs

123
docs citations

123
times ranked

4879
citing authors

#	ARTICLE	IF	CITATIONS
1	Development of novel chitosan-lignin composites for adsorption of dyes and metal ions from wastewater. <i>Chemical Engineering Journal</i> , 2014, 254, 491-502.	6.6	320
2	A mechanistic model of fast pyrolysis of glucose-based carbohydrates to predict bio-oil composition. <i>Energy and Environmental Science</i> , 2012, 5, 9808.	15.6	307
3	Kinetics of Sonophotocatalytic Degradation of Anionic Dyes with Nano-TiO ₂ . <i>Environmental Science & Technology</i> , 2009, 43, 473-479.	4.6	141
4	Microwave assisted co-pyrolysis of biomasses with polypropylene and polystyrene for high quality bio-oil production. <i>Fuel Processing Technology</i> , 2018, 175, 64-75.	3.7	138
5	Kinetics of Simultaneous Photocatalytic Degradation of Phenolic Compounds and Reduction of Metal Ions with Nano-TiO ₂ . <i>Environmental Science & Technology</i> , 2008, 42, 913-919.	4.6	132
6	Investigation of dye functional group on the photocatalytic degradation of dyes by nano-TiO ₂ . <i>Journal of Hazardous Materials</i> , 2010, 176, 765-773.	6.5	121
7	Unraveling Reaction Pathways and Specifying Reaction Kinetics for Complex Systems. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2012, 3, 29-54.	3.3	115
8	Resource recovery from synthetic polymers via microwave pyrolysis using different susceptors. <i>Journal of Analytical and Applied Pyrolysis</i> , 2015, 113, 701-712.	2.6	104
9	Bio-Oil Production from <i>Prosopis juliflora</i> via Microwave Pyrolysis. <i>Energy & Fuels</i> , 2015, 29, 2571-2581.	2.5	99
10	Catalytic fast pyrolysis of <i>Arthrospira platensis</i> (spirulina) algae using zeolites. <i>Journal of Analytical and Applied Pyrolysis</i> , 2016, 118, 298-307.	2.6	96
11	Peroxide-assisted microwave activation of pyrolysis char for adsorption of dyes from wastewater. <i>Bioresource Technology</i> , 2016, 216, 511-519.	4.8	94
12	Resource recovery via catalytic fast pyrolysis of polystyrene using zeolites. <i>Journal of Analytical and Applied Pyrolysis</i> , 2015, 113, 349-359.	2.6	91
13	Photocatalytic activity of Ag-substituted and impregnated nano-TiO ₂ . <i>Applied Catalysis A: General</i> , 2009, 366, 130-140.	2.2	85
14	Dye sensitized visible light degradation of phenolic compounds. <i>Chemical Engineering Journal</i> , 2010, 165, 784-797.	6.6	85
15	Algae characterization and multistep pyrolysis mechanism. <i>Journal of Analytical and Applied Pyrolysis</i> , 2017, 128, 423-436.	2.6	80
16	Kinetic analysis of co-pyrolysis of cellulose and polypropylene. <i>Journal of Thermal Analysis and Calorimetry</i> , 2014, 117, 1441-1451.	2.0	79
17	Effective deoxygenation for the production of liquid biofuels via microwave assisted co-pyrolysis of agro residues and waste plastics combined with catalytic upgradation. <i>Bioresource Technology</i> , 2020, 302, 122775.	4.8	75
18	Microwave assisted pyrolysis of Indian and Indonesian coals and product characterization. <i>Fuel Processing Technology</i> , 2016, 154, 96-103.	3.7	74

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19	Non-catalytic and catalytic fast pyrolysis of Schizochytrium limacinum microalga. Fuel, 2017, 205, 1-10.	3.4	73
20	Mechanistic Understanding of Thermochemical Conversion of Polymers and Lignocellulosic Biomass. Advances in Chemical Engineering, 2016, 49, 95-198.	0.5	70
21	Bio-oil production via catalytic microwave pyrolysis of model municipal solid waste component mixtures. RSC Advances, 2015, 5, 57619-57631.	1.7	68
22	Microwave-assisted pyrolysis and analytical fast pyrolysis of macroalgae: product analysis and effect of heating mechanism. Sustainable Energy and Fuels, 2019, 3, 3009-3020.	2.5	67
23	Production of carbon nanostructures in biochar, bio-oil and gases from bagasse via microwave assisted pyrolysis using Fe and Co as susceptors. Journal of Analytical and Applied Pyrolysis, 2017, 124, 310-318.	2.6	66
24	Kinetics of thermal decomposition of PMMA at different heating rates and in a wide temperature range. Thermochimica Acta, 2019, 671, 17-25.	1.2	65
25	Technical challenges in scaling up the microwave technology for biomass processing. Renewable and Sustainable Energy Reviews, 2022, 153, 111767.	8.2	63
26	Effects of Biomass Particle Size on Slow Pyrolysis Kinetics and Fast Pyrolysis Product Distribution. Waste and Biomass Valorization, 2018, 9, 465-477.	1.8	62
27	Non-catalytic fast pyrolysis and catalytic fast pyrolysis of Nannochloropsis oculata using Co-Mo/ γ -Al ₂ O ₃ catalyst for valuable chemicals. Algal Research, 2018, 34, 12-24.	2.4	62
28	Reaction engineering and kinetics of algae conversion to biofuels and chemicals via pyrolysis and hydrothermal liquefaction. Reaction Chemistry and Engineering, 2020, 5, 1320-1373.	1.9	62
29	Characterization of Thermal Stability of Synthetic and Semi-Synthetic Engine Oils. Lubricants, 2015, 3, 54-79.	1.2	60
30	Fast co-pyrolysis of cellulose and polypropylene using Py-GC/MS and Py-FT-IR. RSC Advances, 2015, 5, 66861-66870.	1.7	60
31	Effect of alkaline ultrasonic pretreatment on crystalline morphology and enzymatic hydrolysis of cellulose. Cellulose, 2016, 23, 1725-1740.	2.4	60
32	Fast pyrolysis kinetics of alkali lignin: Evaluation of apparent rate parameters and product time evolution. Bioresource Technology, 2017, 241, 142-151.	4.8	60
33	Microwave-assisted co-pyrolysis of high ash Indian coal and rice husk: Product characterization and evidence of interactions. Fuel Processing Technology, 2018, 178, 41-52.	3.7	60
34	Production of phenolics via photocatalysis of ball milled lignin-TiO ₂ mixtures in aqueous suspension. RSC Advances, 2016, 6, 18204-18216.	1.7	53
35	Production of guaiacols via catalytic fast pyrolysis of alkali lignin using titania, zirconia and ceria. Journal of Analytical and Applied Pyrolysis, 2016, 119, 31-39.	2.6	52
36	Apparent Kinetics of Fast Pyrolysis of Four Different Microalgae and Product Analyses Using Pyrolysis-FTIR and Pyrolysis-GC/MS. Energy & Fuels, 2017, 31, 12339-12349.	2.5	50

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37	Production of diesel range hydrocarbons from crude oil sludge via microwave-assisted pyrolysis and catalytic upgradation. <i>Chemical Engineering Research and Design</i> , 2021, 146, 383-395.	2.7	48
38	Selective production of phenolics from waste printed circuit boards via microwave assisted pyrolysis. <i>Journal of Cleaner Production</i> , 2018, 197, 525-533.	4.6	45
39	Microwave-assisted and analytical pyrolysis of coking and non-coking coals: Comparison of tar and char compositions. <i>Journal of Analytical and Applied Pyrolysis</i> , 2019, 142, 104614.	2.6	44
40	Microwave Assisted Synthesis of Nanostructured Titanium Dioxide with High Photocatalytic Activity. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 9636-9643.	1.8	42
41	Selective production of phenols from lignin via microwave pyrolysis using different carbonaceous susceptors. <i>Bioresource Technology</i> , 2018, 270, 519-528.	4.8	42
42	Biomass waste conversion into value-added products via microwave-assisted Co-Pyrolysis platform. <i>Renewable Energy</i> , 2021, 170, 400-409.	4.3	41
43	Hydrothermal liquefaction of municipal solid wastes for high quality bio-crude production using glycerol as co-solvent. <i>Bioresource Technology</i> , 2021, 339, 125537.	4.8	39
44	Catalytic Hydrodeoxygenation of Lignin-Derived Oxygenates: Catalysis, Mechanism, and Effect of Process Conditions. <i>Energy & Fuels</i> , 2022, 36, 1155-1188.	2.5	39
45	Performance enhancement of hydrothermal liquefaction for strategic and sustainable valorization of de-oiled yeast biomass into green bio-crude. <i>Journal of Cleaner Production</i> , 2019, 227, 292-301.	4.6	38
46	Microwave torrefaction of <i>Prosopis juliflora</i> : Experimental and modeling study. <i>Fuel Processing Technology</i> , 2018, 172, 86-96.	3.7	37
47	Understanding lignin depolymerization to phenols via microwave-assisted solvolysis process. <i>Journal of Environmental Chemical Engineering</i> , 2017, 5, 4759-4768.	3.3	35
48	Unified Kinetic Model for Cellulose Deconstruction via Acid Hydrolysis. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 8714-8725.	1.8	34
49	Selective production of valuable hydrocarbons from waste motorbike engine oils via catalytic fast pyrolysis using zeolites. <i>Journal of Analytical and Applied Pyrolysis</i> , 2015, 114, 281-292.	2.6	34
50	Photocatalytic degradation of methyl methacrylate copolymers. <i>Polymer Degradation and Stability</i> , 2008, 93, 1440-1449.	2.7	32
51	Selective production of aromatic hydrocarbons from lignocellulosic biomass via catalytic fast-hydrolysis using $W_2C/\gamma-Al_2O_3$. <i>Catalysis Communications</i> , 2018, 110, 68-73.	1.6	32
52	Unraveling the interactions in fast co-pyrolysis of microalgae model compounds via pyrolysis-GC/MS and pyrolysis-FTIR techniques. <i>Reaction Chemistry and Engineering</i> , 2019, 4, 278-297.	1.9	31
53	Isothermal fast pyrolysis kinetics of synthetic polymers using analytical Pyroprobe. <i>Journal of Analytical and Applied Pyrolysis</i> , 2019, 139, 48-58.	2.6	31
54	Application of the distributed activation energy model to the kinetic study of pyrolysis of <i>Nannochloropsis oculata</i> . <i>Algal Research</i> , 2018, 35, 168-177.	2.4	30

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55	Synthesis and photoactivity of Pd substituted nano-TiO ₂ . Journal of Molecular Catalysis A, 2008, 291, 5-11.	4.8	29
56	Understanding the influence of water droplet initiated discharges on damage caused to corona-aged silicone rubber. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 2421-2431.	1.8	28
57	Hydrothermal Liquefaction of Rice Straw Using Methanol as Co-Solvent. Energies, 2020, 13, 2618.	1.6	27
58	Hydrodeoxygenation kinetics of syringol, guaiacol and phenol over H-ZSM-5. Catalysis Communications, 2021, 148, 106164.	1.6	27
59	Pyrolysis of electronic waste and their mixtures: Kinetic and pyrolysate composition studies. Journal of Environmental Chemical Engineering, 2021, 9, 105382.	3.3	27
60	Investigation on thermally aged natural ester oil for real-time monitoring and analysis of transformer insulation. High Voltage, 2020, 5, 209-217.	2.7	27
61	Preparation of carbon nanostructures from medium and high ash Indian coals via microwave-assisted pyrolysis. Advanced Powder Technology, 2020, 31, 1229-1240.	2.0	26
62	Detailed mechanistic modeling of poly(styrene peroxide) pyrolysis using kinetic Monte Carlo simulation. Chemical Engineering Science, 2012, 69, 456-471.	1.9	25
63	Fast pyrolysis of guaiacol to simple phenols: Experiments, theory and kinetic model. Chemical Engineering Science, 2019, 207, 619-630.	1.9	25
64	Effects of aqueous phase recirculation on product yields and quality from hydrothermal liquefaction of rice straw. Bioresource Technology, 2021, 342, 125951.	4.8	25
65	Characterization, bioenergy value, and thermal stability of biochars derived from diverse agriculture and forestry lignocellulosic wastes. Biomass Conversion and Biorefinery, 2023, 13, 879-892.	2.9	25
66	Analytical and microwave pyrolysis of empty oil palm fruit bunch: Kinetics and product characterization. Bioresource Technology, 2020, 310, 123394.	4.8	24
67	Kinetics of photoconversion of cyclohexane and benzene by LnVO ₄ and LnMo _{0.15} V _{0.85} O ₄ (Ln = Ce, Pr) Tj ETQq1 1 0.784314,rgBT /0 2.2 23	2.2	23
68	Thermal aging of cellulosic pressboard material and its surface discharge and chemical characterization. Cellulose, 2017, 24, 5197-5210.	2.4	23
69	Photocatalytic Degradation of Poly(Acrylamide-co-acrylic Acid). Journal of Physical Chemistry B, 2008, 112, 8928-8935.	1.2	21
70	Understanding Corona discharge activity in titania nanoparticles dispersed in transformer oil under AC and DC voltages. IEEE Transactions on Dielectrics and Electrical Insulation, 2017, 24, 2325-2336.	1.8	21
71	Recovery of renewable carbon resources from the household kitchen waste via char induced microwave pyrolysis. Renewable Energy, 2021, 179, 370-378.	4.3	21
72	Sonophotocatalytic degradation of lignin: Production of valuable chemicals and kinetic analysis. Journal of Environmental Chemical Engineering, 2020, 8, 104286.	3.3	20

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73	Valorization of red macroalgae biomass via hydrothermal liquefaction using homogeneous catalysts. <i>Bioresource Technology</i> , 2022, 346, 126515.	4.8	20
74	Effect of water quality on the yield and quality of the products from hydrothermal liquefaction and carbonization of rice straw. <i>Bioresource Technology</i> , 2022, 351, 127031.	4.8	20
75	Evaluation of pressure and temperature effects on hydrolysis of pine sawdust: pyrolysate composition and kinetics studies. <i>Reaction Chemistry and Engineering</i> , 2020, 5, 1484-1500.	1.9	19
76	Current Status and Future Prospects of Biolubricants: Properties and Applications. <i>Lubricants</i> , 2022, 10, 70.	1.2	19
77	Synthesis, characterization and photocatalytic activity of $MxCe_{1-x}VO_4$ (M=Li, Ca and Fe). <i>Applied Catalysis A: General</i> , 2009, 361, 32-41.	2.2	18
78	Kinetics of sono-photooxidative degradation of poly(alkyl methacrylate)s. <i>Ultrasonics Sonochemistry</i> , 2011, 18, 608-616.	3.8	15
79	Optimization of bio-crude yield and its calorific value from hydrothermal liquefaction of bagasse using methanol as co-solvent. <i>Energy</i> , 2022, 244, 123192.	4.5	15
80	Development of a Swirl-Induced Rotating Glow Discharge Reactor for CO_2 Conversion: Fluid Dynamics and Discharge Dynamics Studies. <i>Energy Technology</i> , 2020, 8, 2000535.	1.8	14
81	Microwave co-pyrolysis of PET bottle waste and rice husk: effect of plastic waste loading on product formation. <i>Sustainable Energy Technologies and Assessments</i> , 2022, 49, 101781.	1.7	14
82	Photocatalytic Degradation of Water Pollutants Using Nano-TiO ₂ . <i>Green Energy and Technology</i> , 2011, 625-677.	0.4	13
83	Microwave-Assisted Catalytic Solvolysis of Lignin to Phenols: Kinetics and Product Characterization. <i>ACS Omega</i> , 2018, 3, 15076-15085.	1.6	13
84	Selective production of C ₉ monomeric phenols via hydrogenolysis of lignin using Pd-(W/Zr/Mo) catalyst. <i>Energy & Fuels</i> , 2022, 36, 826-836.	3.4	13
85	Renewable Energy via Photocatalysis. <i>Current Organic Chemistry</i> , 2013, 17, 2538-2558.	0.9	13
86	Influence of ambient medium on thermal ageing of pressboard in transformer oil containing dibenzyl disulphide (DBDS). <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2017, 24, 2836-2846.	1.8	12
87	Detailed kinetic analysis of slow and fast pyrolysis of poly(methyl methacrylate)-Flame retardant mixtures. <i>Thermochimica Acta</i> , 2020, 687, 178545.	1.2	12
88	Unraveling the reaction mechanism of selective C ₉ monomeric phenols formation from lignin using Pd-Al ₂ O ₃ -activated biochar catalyst. <i>Bioresource Technology</i> , 2022, 344, 126204.	4.8	12
89	Analytical pyrolysis of jet fuel using different free radical initiators to produce low molecular weight hydrocarbons. <i>Journal of Analytical and Applied Pyrolysis</i> , 2022, 162, 105430.	2.6	12
90	Selective Production of Hydrogen and Solid Carbon via Methane Pyrolysis Using a Swirl-Induced Point-Plane Non-thermal Plasma Reactor. <i>Energy & Fuels</i> , 2022, 36, 826-836.	2.5	12

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91	Pyrolysis kinetics and pyrolysate composition analysis of Mesua ferrea L: A non-edible oilseed towards the production of sustainable renewable fuel. <i>Bioresource Technology</i> , 2022, 351, 126987.	4.8	12
92	Effect of different nano-carbon reinforcements on microstructure and properties of TiO ₂ composites prepared by spark plasma sintering. <i>Ceramics International</i> , 2016, 42, 14266-14277.	2.3	11
93	Understanding electrical treeing activity in electron beam irradiated XLPE cable insulation. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2016, 23, 1652-1662.	1.8	11
94	Evidence of interactions in microwave-assisted co-pyrolysis of different varieties of coals. <i>Journal of the Energy Institute</i> , 2021, 95, 18-29.	2.7	11
95	Copyrolysis of Lignocellulosic Biomass With Waste Plastics for Resource Recovery. , 2018, , 349-391.		10
96	Analytical fast pyrolysis of nitrogen-rich mosquito species via pyrolysis-FTIR and pyrolysis-GC/MS. <i>Journal of Analytical and Applied Pyrolysis</i> , 2020, 146, 104766.	2.6	10
97	Fast pyrolysis kinetics of lignocellulosic biomass of varying compositions. <i>Energy Conversion and Management: X</i> , 2021, 10, 100071.	0.9	10
98	Hydrothermal liquefaction of biomass for the generation of value-added products. , 2022, , 65-107.		10
99	Biocatalytic lipoprotein bioamphiphile induced treatment of recalcitrant hydrocarbons in petroleum refinery oil sludge through transposon technology. <i>Journal of Hazardous Materials</i> , 2022, 431, 128520.	6.5	10
100	Analytical pyrolysis of bagasse and groundnut shell briquettes: Kinetics and pyrolysate composition studies. <i>Bioresource Technology Reports</i> , 2021, 15, 100784.	1.5	8
101	A low-cost and multifunctional bluecoke-based absorbent for high-efficiency microwave pyrolysis of coal. <i>Fuel</i> , 2022, 313, 122657.	3.4	8
102	Continuous Distribution Kinetics for Photopolymerization of Alkyl Methacrylates. <i>Macromolecular Reaction Engineering</i> , 2009, 3, 556-567.	0.9	7
103	Polymer Pyrolysis for Resource Recovery. , 2016, , .		7
104	Superior photocatalytic removal of metamitron and its mixture with Rhodamine B dye using combustion synthesized TiO ₂ nanomaterial. <i>Chemical Engineering Journal Advances</i> , 2021, 5, 100084.	2.4	7
105	Feedstock Characterization for Pyrolysis and Gasification. <i>Energy, Environment, and Sustainability</i> , 2018, , 3-36.	0.6	6
106	Understanding the water droplet initiated discharges on gamma irradiated silicone rubber insulation. <i>Polymer Engineering and Science</i> , 2019, 59, 182-191.	1.5	6
107	Investigation on the performance of thermally aged natural ester fluid impregnated pressboard material. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2020, 27, 1578-1586.	1.8	6
108	Microwave-assisted torrefaction and pyrolysis of rice straw pellets for bioenergy. <i>IET Renewable Power Generation</i> , 2022, 16, 2964-2977.	1.7	6

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109	Development of Novel Imidazole-Poly(ethylene glycol) Solvent for the Conversion of Lignocellulosic Agro-Residues to Valuable Chemicals. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 16033-16044.	1.8	5
110	Microwave-assisted torrefaction of biomass <i>Kappaphycus alvarezii</i> -based biochar and magnetic biochar for removal of hexavalent chromium [Cr(VI)] from aqueous solution. <i>Biomass Conversion and Biorefinery</i> , 2024, 14, 3643-3653.	2.9	5
111	Effect of Zeolite Addition on Partial Discharge and Dielectric Behavior of Thermally Aged Synthetic Ester Fluid Under External Magnetic Field. <i>IEEE Access</i> , 2022, 10, 46670-46677.	2.6	5
112	Understanding the physico-chemical and surface discharge properties of epoxy silicon carbide nanocomposites. <i>Polymer Composites</i> , 2018, 39, 3268-3279.	2.3	3
113	Impact of DBDS and Silver Sulfide on the Performance of Thermally Aged Mineral oil Impregnated Pressboard Material. <i>IEEE Access</i> , 2022, 10, 9618-9627.	2.6	3
114	Enzymatic Degradation of Poly(soybean oil-g-methyl methacrylate). <i>Journal of Polymer Engineering</i> , 2010, 30, .	0.6	2
115	Optimal use of glycerol co-solvent to enhance product yield and its quality from hydrothermal liquefaction of refuse-derived fuel. <i>Biomass Conversion and Biorefinery</i> , 2024, 14, 4925-4939.	2.9	2
116	Catalytic hydrogenolysis of lignin to phenols: Effect of operating conditions on product distribution. , 2021, , 83-107.		1
117	Production of Valuable Chemicals and Fuel Molecules from Lignin Via Fast Pyrolysis: Experimental and Theoretical Studies Using Model Compounds. <i>Biofuels and Biorefineries</i> , 2020, , 77-111.	0.5	1
118	Characterization data of palladium-alumina on activated biochar catalyst for hydrogenolysis reactions. <i>Data in Brief</i> , 2021, 39, 107591.	0.5	1
119	Double Dielectric Barrier Discharge-Assisted Conversion of Biogas to Synthesis Gas. <i>Springer Proceedings in Energy</i> , 2021, , 123-129.	0.2	0
120	Hydrodeoxygenation of Bio-Oil from Fast Pyrolysis of Pinewood Over Various Catalysts. <i>Springer Proceedings in Energy</i> , 2021, , 141-148.	0.2	0
121	Mechanistic Kinetic Analysis of Fast Pyrolysis of Vanillin to Primary Phenols. <i>Frontiers in Energy Research</i> , 0, 10, .	1.2	0