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Review of the pyrolysis platform for coproducing bio-oil and biochar

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500	The future of biomass energy: A Fermi-calculation perspective. <b>2010</b> , 38, 1672-1674		47
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494	Surface Functionality and Carbon Structures in Lignocellulosic-Derived Biochars Produced by Fast Pyrolysis. <b>2011</b> , 25, 4693-4703		176
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469	Biochar. <b>2012</b> , 357-384	17

468	CHAPTER 1: Integrated Forest Biorefineries: Current State and Development Potential. <b>2012</b> , 1-66		2
467	Biochar as a Geoengineering Climate Solution: Hazard Identification and Risk Management. <b>2012</b> , 42, 225-250		38
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458	Effectiveness of low-temperature biochar in controlling the release and leaching of herbicides in soil. <b>2013</b> , 370, 333-344		49
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455	Dual role of biochars as adsorbents for aluminum: the effects of oxygen-containing organic components and the scattering of silicate particles. <b>2013</b> , 47, 8759-68		72
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451	Dynamic Elemental Thermal Analysis (DETA) [A] characterisation technique for the production of biochar and bio-oil from biomass resources. <b>2013</b> , 108, 656-667		9

450	Renewable acetic acid in combination with solid oxide fuel cells for sustainable clean electric power generation. <b>2013</b> , 1, 5620	31
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444	Evaluation of properties of fast pyrolysis products obtained, from Canadian waste biomass. <b>2013</b> , 104, 330-340	85
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442	Selection and Use of Designer Biochars to Improve Characteristics of Southeastern USA Coastal Plain Degraded Soils. <b>2013</b> , 69-96	23
441	Biochar: A Coproduct to Bioenergy from Slow-Pyrolysis Technology. <b>2013</b> , 97-117	4
440	Waste tyre pyrolysis [A review. <b>2013</b> , 23, 179-213	469
439	Catalytic Hydrotreatment of Bio-Oils for High-Quality Fuel Production. <b>2013</b> , 351-396	7
438	Multi-scale modeling of fixed-bed thermo-chemical processes of biomass with the representative particle model: Application to pyrolysis. <b>2013</b> , 103, 773-782	35
437	Fast pyrolysis of Amazon tucum $\bar{a}$ ( <i>Astrocaryum aculeatum</i> ) seeds in a bubbling fluidized bed reactor. <b>2013</b> , 99, 23-31	34
436	Fast pyrolysis of microalgae remnants in a fluidized bed reactor for bio-oil and biochar production. <b>2013</b> , 127, 494-9	216
435	Flash pyrolysis of forestry residues from the Portuguese Central Inland Region within the framework of the BioREFINA-Ter project. <b>2013</b> , 129, 512-8	51
434	Agroforestry and biochar to offset climate change: a review. <b>2013</b> , 33, 81-96	105
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432	Buffalo weed ( <i>Ambrosia trifida</i> L. var. <i>trifida</i> ) biochar for cadmium (II) and lead (II) adsorption in single and mixed system. <b>2013</b> , 51, 7732-7745	60
431	Characterization and Mineralization Rates of Low Temperature Peanut Hull and Pine Chip Biochars. <b>2013</b> , 3, 294-312	26
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428	Midwest vision for sustainable fuel production. <b>2014</b> , 5, 687-702	15
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312	Effects of maize stover and its derived biochar on greenhouse gases emissions and C-budget of brown earth in Northeast China. <b>2017</b> , 24, 8200-8209	21
311	Fast pyrolysis of sugarcane bagasse: Effect of pyrolysis conditions on final product distribution and properties. <b>2017</b> , 39, 184-190	18
310	Biochar Impacts on Crop Productivity and Greenhouse Gas Emissions from an Andosol. <b>2017</b> , 46, 27-35	10
309	Multistage torrefaction and in situ catalytic upgrading to hydrocarbon biofuels: analysis of life cycle energy use and greenhouse gas emissions. <b>2017</b> , 10, 1034-1050	29
308	Effects of biochar application on root traits: a meta-analysis. <b>2017</b> , 9, 1563-1572	106
307	CFD modelling of particle shrinkage in a fluidized bed for biomass fast pyrolysis with quadrature method of moment. <b>2017</b> , 164, 51-68	26

306	Biomaterials. <b>2017</b> , 185-231	
305	Economic analysis of converting of waste agricultural biomass into liquid fuel: A case study on a biofuel plant in China. <b>2017</b> , 70, 224-229	21
304	Chemical and morphological evaluation of chars produced from primary biomass constituents: Cellulose, xylan, and lignin. <b>2017</b> , 104, 17-35	49
303	Phytotoxic effects of argan shell biochar on salad and barley germination. <b>2017</b> , 51, 247-252	7
302	Pyrolysis characteristics and kinetics of microalgae via thermogravimetric analysis (TGA): A state-of-the-art review. <b>2017</b> , 246, 88-100	182
301	Effects of straw and biochar addition on soil nitrogen, carbon, and super rice yield in cold waterlogged paddy soils of North China. <b>2017</b> , 16, 1064-1074	51
300	Correlation of Feedstock and Bio-oil Compound Distribution. <b>2017</b> , 31, 7093-7100	43
299	Valorization of hazelnut shell waste in hot compressed water. <b>2017</b> , 166, 96-106	10
298	The Role of Bioenergy in Mitigating Climate Change. <b>2017</b> , 433-495	
297	Prospects for pyrolysis technologies in the bioenergy sector: A review. <b>2017</b> , 77, 59-69	185
296	Multi-year and multi-location soil quality and crop biomass yield responses to hardwood fast pyrolysis biochar. <b>2017</b> , 289, 46-53	41
295	Antioxidant enzyme and osmotic adjustment changes in bean seedlings as affected by biochar under salt stress. <b>2017</b> , 137, 64-70	143
294	Chemical characterization and oxidative aging of bio-asphalt and its compatibility with petroleum asphalt. <b>2017</b> , 142, 1837-1847	142
293	Sources and impacts of pharmaceutical components in wastewater and its treatment process: A review. <b>2017</b> , 34, 2787-2805	27
292	Increasing Rates of Biochar Application to Soil Induce Stronger Negative Priming Effect on Soil Organic Carbon Decomposition. <b>2017</b> , 6, 389-398	14
291	Pyrolysis of sugarcane bagasse in a fixed bed reactor: Influence of operational conditions in the distribution of products. <b>2017</b> , 95, 2249-2257	8
290	Resources from Wastes: Benefits and Complexity. <b>2017</b> , 143, 03117005	6
289	Biochar systems in the water-energy-food nexus: the emerging role of process systems engineering. <b>2017</b> , 18, 32-37	18

288	Initial Products and Reaction Mechanisms for Fast Pyrolysis of Synthetic G-Lignin Oligomers with $\beta$ O-4 Linkages via On-Line Mass Spectrometry and Quantum Chemical Calculations. <b>2017</b> , 2, 7185-7193	6
287	Biochar improves phosphorus use efficiency of organic-inorganic fertilizers, maize-wheat productivity and soil quality in a low fertility alkaline soil. <b>2017</b> , 214, 25-37	108
286	Retracted Article: The feasibility of char and bio-oil production from pyrolysis of pit latrine sludge. <b>2017</b> ,	
285	Spatial variation of soil macrofauna and nutrients in tropical agricultural systems influenced by historical charcoal production in South Nandi, Kenya. <b>2017</b> , 119, 286-293	8
284	Biochar based removal of antibiotic sulfonamides and tetracyclines in aquatic environments: A critical review. <b>2017</b> , 246, 150-159	291
283	Damage to the microbial cell membrane during pyrolytic sugar utilization and strategies for increasing resistance. <b>2017</b> , 44, 1279-1292	14
282	Sustainable In Situ Carbothermal Reduction Route to Biochar Stabilized RuCu Nanoalloys from Lignocellulosic Biomass as a Highly Efficient and Durable Catalyst. <b>2017</b> , 1, 1700102	6
281	Black Carbon (Biochar) In Water/Soil Environments: Molecular Structure, Sorption, Stability, and Potential Risk. <b>2017</b> , 51, 13517-13532	267
280	Assessment of bioenergy production from mid-rotation thinning of hardwood plantation: life cycle assessment and cost analysis. <b>2017</b> , 19, 2021-2040	13
279	Characterization of castor plant-derived biochars and their effects as soil amendments on seedlings. <b>2017</b> , 105, 96-106	26
278	BIOCHAR AS A TOOL TO REDUCE THE AGRICULTURAL GREENHOUSE-GAS BURDEN [KNOWN, UNKNOWN AND FUTURE RESEARCH NEEDS. <b>2017</b> , 25, 114-139	93
277	Preventing the Release of Cu <sup>2+</sup> and 4-CP from Contaminated Sediments by Employing a Biochar Capping Treatment. <b>2017</b> , 56, 7730-7738	14
276	Response of microbial community structure and function to short-term biochar amendment in an intensively managed bamboo ( <i>Phyllostachys praecox</i> ) plantation soil: Effect of particle size and addition rate. <b>2017</b> , 574, 24-33	102
275	Energetic valorization of waste tires. <b>2017</b> , 68, 306-315	88
274	Biotoxicity Evaluations of Three Typical Biochars Using a Simulated System of Fast Pyrolytic Biochar Extracts on Organisms of Three Kingdoms. <b>2017</b> , 5, 481-488	39
273	Synthesis of magnetic biochar from agricultural waste biomass to enhancing route for waste water and polymer application: A review. <b>2017</b> , 67, 257-276	212
272	Solar Pyrolysis. <b>2017</b> , 213-235	19
271	Biochar Addition Increases the Rates of Dissimilatory Iron Reduction and Methanogenesis in Ferrihydrite Enrichments. <b>2017</b> , 8, 589	15

270	Physical and chemical properties of pyrolyzed biosolids for utilization in sand-based turfgrass rootzones. <b>2018</b> , 76, 98-105	9
269	Adsorption of Pharmaceuticals from Water and Wastewater Using Nonconventional Low-Cost Materials: A Review. <b>2018</b> , 57, 3103-3127	217
268	Sustainable recycling of residues from the food waste (FW) composting plant via pyrolysis: Thermal characterization and kinetic studies. <b>2018</b> , 180, 43-49	36
267	An overview of carbothermal synthesis of metalBiochar composites for the removal of oxyanion contaminants from aqueous solution. <b>2018</b> , 129, 674-687	194
266	Remediation of an acidic mine spoil: Miscanthus biochar and lime amendment affects metal availability, plant growth, and soil enzyme activity. <b>2018</b> , 205, 709-718	65
265	Synthesis and formation mechanism of iron nanoparticles in graphitized carbon matrices using biochar from biomass model compounds as a support. <b>2018</b> , 134, 480-490	70
264	The impact of wood-derived biochar on the survival of <i>Trichoderma</i> spp. and growth of <i>Secale cereale</i> L. in sandy soil. <b>2018</b> , 28, 341-358	2
263	Valorization of citrus wastes by fast pyrolysis in a conical spouted bed reactor. <b>2018</b> , 224, 111-120	72
262	Time-lapse effect of ancient plant coal biochar on some soil agrochemical parameters and soil characteristics. <b>2018</b> , 25, 990-999	13
261	Enabling biomass combustion and co-firing through the use of Lignocol. <b>2018</b> , 211, 312-317	15
260	Slow pyrolysis of bio-oil and studies on chemical and physical properties of the resulting new bio-carbon. <b>2018</b> , 172, 2748-2758	27
259	The feasibility of char and bio-oil production from pyrolysis of pit latrine sludge. <b>2018</b> , 4, 253-264	7
258	Effects of conifer wood biochar as a substrate component on ornamental performance, photosynthetic activity, and mineral composition of potted <i>Rosa rugosa</i> . <b>2018</b> , 93, 519-528	14
257	Energy conversion and gas emissions from production and combustion of poultry-litter-derived hydrochar and biochar. <b>2018</b> , 213, 510-519	70
256	Potential of sawdust and corn cobs derived biochar to improve soil aggregate stability, water retention, and crop yield of degraded sandy loam soil. <b>2018</b> , 41, 2673-2682	6
255	Development of a multi-criteria decision making model for evaluating the energy potential of <i>Miscanthus</i> germplasm for bioenergy production. <b>2018</b> , 125, 602-615	12
254	Biochar Supercapacitors: Recent Developments in the Materials and Methods. <b>2018</b> , 223-249	7
253	Synthesis of biochar from sugarcane filter-cake and its impacts on physiological performance of lettuce ( <i>Lettuce sativa</i> ) grown on cadmium contaminated soil. <b>2018</b> , 11, 1	1

252	Conversion of Lignin to Heat and Power, Chemicals or Fuels into the Transition Energy Strategy. <b>2018,</b>	3
251	Potential carbon storage in biochar made from logging residue: Basic principles and Southern Oregon case studies. <b>2018,</b> 13, e0203475	15
250	Intermediate pyrolysis of <i>Acacia cincinnata</i> and <i>Acacia holosericea</i> species for bio-oil and biochar production. <b>2018,</b> 176, 393-408	59
249	Synthesis of N-doped carbon nanosheets with controllable porosity derived from bio-oil for high-performance supercapacitors. <b>2018,</b> 6, 19653-19663	75
248	Theoretical Analysis of Double Logistic Distributed Activation Energy Model for Thermal Decomposition Kinetics of Solid Fuels. <b>2018,</b> 57, 7817-7825	15
247	Electricity generation from pyrolysis gas produced in charcoal manufacture: Technical and economic analysis. <b>2018,</b> 194, 219-242	13
246	Bone char vs. S-enriched bone char: Multi-method characterization of bone chars and their transformation in soil. <b>2018,</b> 643, 145-156	12
245	Sidestreams From Bioenergy and Biorefinery Complexes as a Resource for Circular Bioeconomy. <b>2018,</b> 85-125	14
244	Pyrolysis Of Corncob Waste To Produce Liquid Smoke. <b>2018,</b> 175, 012020	1
243	Bio-oil upgrading by emulsification/microemulsification: A review. <b>2018,</b> 161, 214-232	93
242	High pyrolysis temperature biochars reduce nitrogen availability and nitrous oxide emissions from an acid soil. <b>2018,</b> 10, 930-945	10
241	Adsorption characteristics of Cd(ii) in aqueous solutions using spent mushroom substrate biochars produced at different pyrolysis temperatures.. <b>2018,</b> 8, 28002-28012	11
240	Synthesis of Value Added Product Processes from Residual Biomass. <b>2018,</b> 397-402	3
239	A circular framework for the valorisation of sugar industry wastes: Review on the industrial symbiosis between sugar, construction and energy industries. <b>2018,</b> 203, 89-108	51
238	Long term biochar effects on corn yield, soil quality and profitability in the US Midwest. <b>2018,</b> 227, 30-40	21
237	Concentration and Release of Phosphorus and Potassium From Lignocellulosic- and Manure-Based Biochars for Fertilizer Reuse. <b>2018,</b> 2,	20
236	Particle size dependence of the physicochemical properties of biochar. <b>2018,</b> 212, 385-392	33
235	Progress on the amendment in biochars and its effects on the soil-plant-micro-organism-biochar system. <b>2018,</b> 33, 281-293	1



234	Investigation on bio-oil yield and quality with scrap tire addition in sugarcane bagasse pyrolysis. <b>2018</b> , 196, 927-934	55
233	Biochar stability assessment methods: A review. <b>2019</b> , 647, 210-222	189
232	Co-plasma processing of banana peduncle with phosphogypsum waste for production of lesser toxic potassium-sulfur rich biochar. <b>2019</b> , 21, 107-115	15
231	Negative emission technologies. <b>2019</b> , 1-13	4
230	Effects of biochar amendment on nitrogen mineralization in black soil with different moisture contents under freeze-thaw cycles. <b>2019</b> , 353, 459-467	22
229	Effect of Shrimp Waste-Derived Biochar and Arbuscular Mycorrhizal Fungus on Yield, Antioxidant Enzymes, and Chemical Composition of Corn Under Salinity Stress. <b>2019</b> , 19, 758-770	13
228	Valorisation of food waste via hydrothermal carbonisation and techno-economic feasibility assessment. <b>2019</b> , 690, 261-276	77
227	Biochar from A Freshwater Macroalga as A Potential Biosorbent for Wastewater Treatment. <b>2019</b> , 11, 1390	31
226	Implications of poultry litter usage for electricity production. <b>2019</b> , 95, 493-503	9
225	Systems Biology of Metal Tolerance in Plants: A Case Study on the Effects of Cd Exposure on Two Model Plants. <b>2019</b> , 23-37	2
224	A review on commercial-scale high-value products that can be produced alongside cellulosic ethanol. <b>2019</b> , 12, 240	213
223	Study of the Mechanism of Migration and Transformation of Biochar-N and Its Utilization by Plants in Farmland Ecosystems. <b>2019</b> , 7, 17606-17615	2
222	Speciation Transformation of Phosphorus in Poultry Litter during Pyrolysis: Insights from X-ray Diffraction, Fourier Transform Infrared, and Solid-State NMR Spectroscopy. <b>2019</b> , 53, 13841-13849	14
221	Elemental Composition of Biochar Obtained from Agricultural Waste for Soil Amendment and Carbon Sequestration. <b>2019</b> , 9, 3980	32
220	Anaerobic digestion of aqueous phase from pyrolysis of biomass: Reducing toxicity and improving microbial tolerance. <b>2019</b> , 292, 121976	29
219	Biochar insights from laboratory incubations monitoring O <sub>2</sub> consumption and CO <sub>2</sub> production. <b>2019</b> , 1, 249-258	3
218	Fertilizer and soil conditioner value of broiler manure biochars. <b>2019</b> , 1, 259-270	10
217	Prospect of China's renewable energy development from pyrolysis and biochar applications under climate change. <b>2019</b> , 114, 109343	22

216	Pyrolysis of Garden Waste: Comparative Study of <i>Leucaena leucocephala</i> (Subabul Leaves) and <i>Azadirachta indica</i> (Neem Leaves) Wastes. <b>2019</b> , 293-306	1
215	An Overview of Magnetic Material: Preparation and Adsorption Removal of Heavy Metals from Wastewater. <b>2019</b> , 131-159	16
214	Liquefaction of Biomass and Upgrading of Bio-Oil: A Review. <b>2019</b> , 24,	48
213	Recent advancements in biochar preparation, feedstocks, modification, characterization and future applications. <b>2019</b> , 8, 47-64	37
212	Rural biorefinery: A viable solution for production of fuel and chemicals in rural India. <b>2019</b> , 21-47	3
211	Toxicity of Various Pyrolysis Liquids From Biosolids on Methane Production Yield. <b>2019</b> , 7,	12
210	New insights into contrasting mechanisms for PAE adsorption on millimeter, micron- and nano-scale biochar. <b>2019</b> , 26, 18636-18650	26
209	Characterization and Determination of the Toxicological Risk of Biochar Using Invertebrate Toxicity Tests in the State of Aguascalientes, México. <b>2019</b> , 9, 1706	9
208	Nutrient and Carbon Recovery from Organic Wastes. <b>2019</b> , 351-373	3
207	Emerging applications of biochar-based materials for energy storage and conversion. <b>2019</b> , 12, 1751-1779	265
206	Preparation and Modification of Biochar Materials and their Application in Soil Remediation. <b>2019</b> , 9, 1365	98
205	Green Diesel: Biomass Feedstocks, Production Technologies, Catalytic Research, Fuel Properties and Performance in Compression Ignition Internal Combustion Engines. <b>2019</b> , 12, 809	94
204	Comparison of catalytic and noncatalytic pyrolysis and product yields of some waste biomass species. <b>2019</b> , 43, 2032	6
203	Electrocatalytic Upgrading of Phenolic Compounds Observed after Lignin Pyrolysis. <b>2019</b> , 7, 8375-8386	35
202	A review on biochar modulated soil condition improvements and nutrient dynamics concerning crop yields: Pathways to climate change mitigation and global food security. <b>2019</b> , 227, 345-365	115
201	Biochar potentially mitigates greenhouse gas emissions from cultivation of oilseed rape for biodiesel. <b>2019</b> , 671, 180-188	26
200	Characterisation of bio-oil and its sub-fractions from catalytic fast pyrolysis of biomass mixture. <b>2019</b> , 37, 674-685	2
199	Prototyping of a Laboratory-Scale Cyclone Separator for Biofuel Production from Biomass Feedstocks Using a Fused Deposition Modeling Printer. <b>2019</b> , 289-297	

198	Mechanical Aspects and Applications of Pellets Prepared from Biomass Resources. <b>2019</b> , 325-358	
197	Impact of Carbon Properties on Mo <sub>2</sub> C/Carbon Catalysts for the Hydrodeoxygenation of 4-Methylphenol. <b>2019</b> , 33, 4506-4514	6
196	Biochar compost blends facilitate switchgrass growth in mine soils by reducing Cd and Zn bioavailability.. <b>2019</b> , 1, 97-114	43
195	Optimization-based decision support methodology for the synthesis of negative-emissions biochar systems. <b>2019</b> , 19, 105-116	7
194	Food waste to biochars through pyrolysis: A review. <b>2019</b> , 144, 310-320	150
193	Valorization of Agricultural Byproducts Through Conversion to Biochar and Bio-Oil. <b>2019</b> , 501-522	4
192	Potentials, Limitations, Co-Benefits, and Trade-Offs of Biochar Applications to Soils for Climate Change Mitigation. <b>2019</b> , 8, 179	34
191	Simulation of Food Waste Pyrolysis for the Production of Biochar: A Qatar Case Study. <b>2019</b> , 46, 901-906	12
190	Biochar use in global forests: opportunities and challenges. <b>2019</b> , 427-453	6
189	The crucial factors of soil fertility and rapeseed yield - A five year field trial with biochar addition in upland red soil, China. <b>2019</b> , 649, 1467-1480	50
188	Migration and Transformation Mechanisms of Nutrient Elements (N, P, K) within Biochar in StrawBiocharBoilPlant Systems: A Review. <b>2019</b> , 7, 22-32	41
187	Numerical investigations of the impact of inflow conditions on characteristics of a large-scale pyrolysis unit. <b>2019</b> , 169, 1101-1111	3
186	Future Biochar Research Directions. <b>2019</b> , 423-435	2
185	Life Cycle Assessment (LCA) in Municipal Waste Management Decision Making. <b>2019</b> , 377-402	2
184	Elemental and Spectroscopic Characterization of Low-Temperature (350°C) Lignocellulosic- and Manure-Based Designer Biochars and Their Use as Soil Amendments. <b>2019</b> , 37-58	6
183	Costs of biomass pyrolysis as a negative emission technology: A case study. <b>2019</b> , 43, 1232-1244	8
182	Soil acidity, available phosphorus content, and optimal biochar and nitrogen fertilizer application rates: A five-year field trial in upland red soil, China. <b>2019</b> , 232, 77-87	39
181	Where should we apply biochar?. <b>2019</b> , 14, 044005	9

180	Life cycle perspective of bio-oil and biochar production from hardwood biomass; what is the optimum mix and what to do with it?. <b>2019</b> , 212, 173-189	23
179	Application of nitrogen-based blowing agents as an additive in pyrolysis of cellulose. <b>2019</b> , 137, 203-211	6
178	Biochar as Sustainable Reinforcement for Polymer Composites. <b>2020</b> , 10-22	2
177	Recent advances in carbon-based renewable adsorbent for selective carbon dioxide capture and separation-A review. <b>2020</b> , 242, 118409	101
176	Influence of Pyro-Gasification and Activation Conditions on the Porosity of Activated Biochars: A Literature Review. <b>2020</b> , 11, 5079-5098	10
175	Model and sensitivity analysis of the reciprocating biomass conversion reactor (RBCR). <b>2020</b> , 147, 118988	0
174	A comprehensive state-of-technology review for upgrading bio-oil to renewable or blended hydrocarbon fuels. <b>2020</b> , 118, 109548	82
173	A Review on Lignin Liquefaction: Advanced Characterization of Structure and Microkinetic Modeling. <b>2020</b> , 59, 526-555	22
172	Environmental and energy assessment of biomass residues to biochar as fuel: A brief review with recommendations for future bioenergy systems. <b>2020</b> , 251, 119714	52
171	Influence of pyrolytic thermal history on olive pruning biochar and related epoxy composites mechanical properties. <b>2020</b> , 54, 1863-1873	22
170	Preparation and application of magnetic biochar in water treatment: A critical review. <b>2020</b> , 711, 134847	109
169	Toxic Metal Adsorption from Aqueous Solution by Activated Biochars Produced from Macadamia Nutshell Waste. <b>2020</b> , 12, 7909	6
168	Nutrient recovery from municipal waste stream: status and prospects. <b>2020</b> , 265-297	1
167	Evaluation of the life cycle of hydrothermally carbonized biomass for energy and horticulture application. <b>2020</b> , 132, 110046	10
166	Coconut Shell Feedstock Based Top Lit Updraft Gasifier for Biochar and Heat Cogeneration. <b>2020</b> , 1519, 012014	0
165	Modeling of downdraft gasification process: Part II - Studies on the effect of shrinking and non-shrinking biomass geometries on the performance of gasification process. <b>2020</b> , 207, 118186	
164	Systematic relationship between soil properties and organic carbon mineralization based on structural equation modeling analysis. <b>2020</b> , 277, 123338	5
163	Co-pyrolysis of softwood with waste mussel shells: Biochar analysis. <b>2020</b> , 282, 118792	15

162	Review of Carbon Fixation Evaluation and Emission Reduction Effectiveness for Biochar in China. <b>2020</b> , 34, 10583-10606	14
161	Amelioration of Drought Tolerance in Maize Using Rice Husk Biochar. <b>2020</b> ,	1
160	Biochar Administration to San Marzano Tomato Plants Cultivated Under Low-Input Farming Increases Growth, Fruit Yield, and Affects Gene Expression. <b>2020</b> , 11, 1281	1
159	Pyrolysis of Triclosan and Its Chlorinated Derivatives. <b>2020</b> , 124, 8050-8056	
158	Retracted Article: Challenges and opportunities of hydrothermal carbonisation in the UK; case study in Chirside.. <b>2020</b> , 10, 31586-31610	17
157	Biochar Effects on Soil Physiochemical Properties in Degraded Managed Ecosystems in Northeastern Bangladesh. <b>2020</b> , 4, 69	11
156	Design and Assessment of a Novel Cogeneration Process of Synthetic Natural Gas and Char via Biomass Pyrolysis-Coupled Hydrothermal Gasification. <b>2020</b> , 59, 22205-22214	3
155	Production, activation, and applications of biochar in recent times. <b>2020</b> , 2, 253-285	65
154	Integrated Process of Biomass Thermochemical Conversion to Obtain Pyrolytic Sugars for Biofuels and Bioproducts. <b>2020</b> , 285-311	3
153	Biofuels production of third generation biorefinery from macroalgal biomass in the Mexican context: An overview. <b>2020</b> , 393-446	9
152	Fuel properties of hydrochar and pyrochar: Prediction and exploration with machine learning. <b>2020</b> , 269, 115166	42
151	Pyrolysis of creosote-treated railroad ties to recover creosote and produce biochar. <b>2020</b> , 149, 104826	2
150	Biochar influences nitrogen availability in Andisols of north Idaho forests. <b>2020</b> , 2, 1	1
149	Biochar production and applications in agro and forestry systems: A review. <b>2020</b> , 723, 137775	69
148	Obtaining bioproducts by slow pyrolysis of coffee and cocoa husks as suitable candidates for being used as soil amendment and source of energy. <b>2020</b> , 49, 23-29	2
147	Effects of biochar on soil fertility and crop productivity in arid regions: a review. <b>2020</b> , 13,	38
146	Scientometric analysis and scientific trends on biochar application as soil amendment. <b>2020</b> , 395, 125128	19
145	Combined application of biochar and farmyard manure reduces wheat crop eco-physiological performance in a tropical dryland agro-ecosystem. <b>2020</b> , 5, 171-183	2

144	Rice husk biochar influences runoff features, soil loss, and hydrological behavior of a loamy soil in a series of successive simulated rainfall events. <b>2020</b> , 192, 104587	7
143	Biochar as an Additive in Anaerobic Digestion of Municipal Sludge: Biochar Properties and Their Effects on the Digestion Performance. <b>2020</b> , 8, 6391-6401	20
142	The use of biochar for sustainable treatment of contaminated soils. <b>2020</b> , 119-167	3
141	Sequential valorization strategies for dairy wastewater and water hyacinth to produce fuel and fertilizer. <b>2021</b> , 44, e13585	3
140	The Hydrodeoxygenation of Glycerol over NiMoS <sub>x</sub> : Catalyst Stability and Activity at Hydropyrolysis Conditions. <b>2021</b> , 13, 425-437	3
139	Unraveling the mechanisms of lead adsorption and ageing process on high-temperature biochar. <b>2021</b> , 96, 775-784	1
138	Effect of main solid biomass commodities of patula pine on biochar properties produced under gasification conditions. <b>2021</b> , 160, 113123	7
137	CFD-based coupled multiphase modeling of biochar production using a large-scale pyrolysis plant. <b>2021</b> , 217, 119325	6
136	Exploring untapped effect of process conditions on biochar characteristics and applications. <b>2021</b> , 21, 101310	13
135	Transforming biomass pyrolysis technologies to produce liquid smoke food flavouring. <b>2021</b> , 294, 125368	14
134	Analysis of premixed and non-premixed co-injection of volatile gas in an industrial indirect pyrolysis plant. <b>2021</b> , 99, 1186-1198	
133	State of the Art and Perspectives in Catalytic Conversion Mechanism of Biomass to Bio-aromatics. <b>2021</b> , 35, 45-62	12
132	Studies on power plant algae: assessment of growth kinetics and bio-char production from slow pyrolysis process. <b>2021</b> , 63, 129-138	
131	Sustainable improvement of soil health utilizing biochar and arbuscular mycorrhizal fungi: A review. <b>2021</b> , 268, 115549	25
130	Conversion of food waste into biofuel and biocarbon. <b>2021</b> , 383-449	
129	Effects of Biochar Application on Soil Properties, Plant Biomass Production, and Soil Greenhouse Gas Emissions: A Mini-Review. <b>2021</b> , 12, 213-236	3
128	Biochar Role in Mitigation of Greenhouse Gas Emissions from Agricultural Soils. <b>2021</b> , 261-278	
127	Biochar Role in the Sustainability of Agriculture and Environment. <b>2021</b> , 13, 1330	16

126	Biochar Role in Soil Carbon Stabilization and Crop Productivity. <b>2021</b> , 1-46	1
125	Investigation of pyrolysis kinetics and gaseous compounds emitted during charcoal production from woods commonly used in the Eastern Mediterranean. <i>Biofuels, Bioproducts and Biorefining</i> , <b>2021</b> , 15, 646-656	53 3
124	Biochar: an organic amendment to crops and an environmental solution. <b>2021</b> , 6, 401-415	7
123	Mesophilic Anaerobic Digestion of Hydrothermally Pretreated Lignocellulosic Biomass (Norway Spruce ( <i>Picea abies</i> )). <b>2021</b> , 9, 190	6
122	Biomass pyrolysis technologies for value-added products: a state-of-the-art review. <b>2021</b> , 23, 14324-14378	18
121	A state of the art review on the cultivation of algae for energy and other valuable products: Application, challenges, and opportunities. <b>2021</b> , 138, 110649	46
120	A review on catalytic pyrolysis for high-quality bio-oil production from biomass. 1	10
119	NaOH-modified mesoporous biochar derived from tea residue for methylene Blue and Orange II removal. <b>2021</b> , 167, 129-140	21
118	Prospective contributions of biomass pyrolysis to China's 2050 carbon reduction and renewable energy goals. <b>2021</b> , 12, 1698	36
117	Upcycling food waste using black soldier fly larvae: Effects of further composting on frass quality, fertilising effect and its global warming potential. <b>2021</b> , 288, 125664	26
116	Liquefaction of Lignin Using Chemical Decomposition and Its Application to Polyurethane Foam. <b>2021</b> , 6, 10745-10751	3
115	Physio-Chemical Characterization of Biochar, Compost and Co-Composted Biochar Derived from Green Waste. <b>2021</b> , 13, 4628	5
114	Quantification of Cellulose Pyrolyzates via a Tube Reactor and a Pyrolyzer-Gas Chromatograph/Flame Ionization Detector-Based System. <b>2021</b> , 6, 12022-12026	2
113	Feasibility of Nitrogen-Enriched Chars as Circular Fertilizers. 1	1
112	Review on biomass feedstocks, pyrolysis mechanism and physicochemical properties of biochar: State-of-the-art framework to speed up vision of circular bioeconomy. <b>2021</b> , 297, 126645	63
111	The Role of Pyrolysis and Gasification in a Carbon Negative Economy. <b>2021</b> , 9, 882	6
110	Recent advances in biochar engineering for soil contaminated with complex chemical mixtures: Remediation strategies and future perspectives. <b>2021</b> , 767, 144351	30
109	The fate of imazapyr herbicide in the soil amended with carbon sorbents. 1	1

108	Assessing the diverse environmental effects of biochar systems: An evaluation framework. <b>2021</b> , 286, 112154	7
107	Biochar and urea co-application regulates nitrogen availability in soil. <b>2021</b> , 193, 326	4
106	Advances in metal/ biochar catalysts for biomass hydro-upgrading: A review. <b>2021</b> , 303, 126825	15
105	A scientometric review of biochar preparation research from 2006 to 2019. <b>2021</b> , 3, 283-298	4
104	Potential of coupling anaerobic digestion with thermochemical technologies for waste valorization. <b>2021</b> , 294, 120533	19
103	Biochar [Production, Properties, and Service to Environmental Protection against Toxic Metals. <b>2021</b> , 53-75	2
102	Energy recovery from municipal solid waste using pyrolysis technology: A review on current status and developments. <b>2021</b> , 145, 111073	30
101	Effects of rice straw biochar and nitrogen fertilizer on ramie ( <i>Boehmeria nivea</i> L.) morpho-physiological traits, copper uptake and post-harvest soil characteristics, grown in an aged-copper contaminated soil. 1-14	2
100	Food waste and sewage sludge co-digestion amended with different biochars: VFA kinetics, methane yield and digestate quality assessment. <b>2021</b> , 290, 112457	10
99	The role of soils in provision of energy. <b>2021</b> , 376, 20200180	3
98	Organic carbon mineralization of the biochar and organic compost of poultry litter in an Argisol. <b>2021</b> , 42, 3167-3184	0
97	BIOCHAR IN TEMPERATE SOILS: OPPORTUNITIES AND CHALLENGES.	1
96	Responses of greenhouse gas emissions to different straw management methods with the same amount of carbon input in cotton field. <b>2021</b> , 213, 105126	1
95	Effect of Sorbent Additives to Copper-Contaminated Soils on Seed Germination and Early Growth of Grass Seedlings. <b>2021</b> , 26,	0
94	Biochar Stability in a Highly Weathered Sandy Soil under Four Years of Continuous Corn Production. <b>2021</b> , 14, 6157	
93	Sustainable Approach and Safe Use of Biochar and Its Possible Consequences. <b>2021</b> , 13, 10362	8
92	Sustainable biochars from carbonization of cellulose filaments and nanocrystals. <b>2021</b> , 100838	0
91	Environmental impact comparison of wheat straw fast pyrolysis systems with different hydrogen production processes based on life cycle assessment. <b>2021</b> , 734242X211045004	0



90	Environmental assessment of a waste-to-energy practice: The pyrolysis of agro-industrial biomass residues. <b>2021</b> , 28, 866-876	9
89	A green route to synthesize nitrogen-enriched graphene-like carbon nanosheets from bio-oil for supercapacitors. <b>2021</b> , 118, 108530	1
88	A review on lignocellulosic biomass waste into biochar-derived catalyst: Current conversion techniques, sustainable applications and challenges. <b>2021</b> , 154, 106245	5
87	Supercritical water gasification of fruit pulp for hydrogen production: Effect of reaction parameters. <b>2021</b> , 177, 105329	2
86	Synergy of anaerobic digestion and pyrolysis processes for sustainable waste management: A critical review and future perspectives. <b>2021</b> , 152, 111603	7
85	CO capture by adsorption on biomass-derived activated char: A review. <b>2021</b> , 798, 149296	11
84	Co-pyrolysis of swine manure and pinewood sawdust: Evidence of cross-interaction of the volatiles and profound impacts on product characteristics. <b>2021</b> , 179, 1370-1384	3
83	Improvement of Soil Quality by Solid Waste Recycling: A Global Perspective. <b>2021</b> , 637-667	
82	Cotton stalk-derived hydrothermal carbon for methylene blue dye removal: investigation of the raw material plant tissues. <b>2021</b> , 8,	7
81	Biofuels: Types, Promises, Challenges, and Role of Fungi. <b>2020</b> , 1-14	3
80	Biochar in Soil for Climate Change Mitigation and Adaptation. <b>2011</b> , 345-368	15
79	Application of Biochar in Agriculture: A Sustainable Approach for Enhanced Plant Growth, Productivity and Soil Health. <b>2020</b> , 107-130	2
78	Utilization of nonedible oilseeds in a biorefinery approach with special emphasis on rubber seeds. <b>2020</b> , 311-336	2
77	Climate adaptive crop-residue management for soil-function improvement; recommendations from field interventions at two agro-ecological zones in South Asia. <b>2020</b> , 183, 109164	7
76	Understanding water retention behavior and mechanism in bio-char. <b>2018</b> , 169, 101-111	18
75	A critical review on life cycle analysis of algae biodiesel: current challenges and future prospects. <b>2020</b> , 134, 110143	28
74	Comparative study on pharmaceuticals adsorption in reclaimed water desalination concentrate using biochar: Impact of salts and organic matter. <b>2017</b> , 601-602, 857-864	63
73	Risk Evaluation of Pyrolyzed Biochar from Multiple Wastes. <b>2019</b> , 2019, 1-28	22

72	A systematic review of biochar research, with a focus on its stability in situ and its promise as a climate mitigation strategy. <b>2013</b> , 8, e75932	130
71	Ceviz Kabuğunun Karbonizasyonu ile Elde Edilen Katı Toprak Drenleyicisi Olarak Kullanılması,	2
70	A review and future directions on enhancing sustainability benefits across food-energy-water systems: the potential role of biochar-derived products. <b>2019</b> , 6, 379-416	8
69	Effect of Biochar Application on Soil Carbon Fluxes from Sequential Dry and Wet Cultivation Systems. <b>2018</b> , 07, 40-53	1
68	Effects of Biochar on the Emissions of Greenhouse Gases from Sugarcane Residues Applied to Soils. <b>2017</b> , 08, 869-886	7
67	Sustainable Technologies for Small-Scale Biochar Production: A Review. <b>2015</b> , 05, 10-31	37
66	Experimental investigation on the production of bio-oil from maize straw at a pilot scale. <b>2022</b> , 27, 200592-0	1
65	Cu and Cd Sorption of the Biochar Derived from Coffee Sludge. <b>2012</b> , 17, 47-53	3
64	Preparation and Application in Water Treatment of Magnetic Biochar. <b>2021</b> , 9, 769667	0
63	Progress of the Pyrolyzer Reactors and Advanced Technologies for Biomass Pyrolysis Processing. <b>2021</b> , 13, 11061	10
62	Physicochemical Properties and Cu Sorption of the Biochar Derived from Woody Biomass. <b>2012</b> , 17, 54-61	1
61	Potential Annual and Cumulative Carbon Dioxide Removal via Biochar. <b>2014</b> , 59-80	
60	CO <sub>2</sub> -Abtrennung und -Nutzung. <b>2015</b> , 511-567	
59	Model of Fast Pyrolysis of a Small Volume-Fraction of Biomass Within an Gas of Transient Temperature and Pressure. <b>2015</b> ,	
58	Production Method of Biochar-bead from Biochar Powder and Its Application for the Removal of Heavy Metal. <b>2015</b> , 20, 127-132	
57	Growing Rice ( <i>Oriza sativa</i> L.) in the Sulphate Acid Soils of West Kalimantan, Indonesia. <b>2015</b> , 11, 13-22	2
56	Biochar application and no-tillage practices to minimize the residues of herbicides in the seeding hole. <b>2019</b> , 43,	
55	Biochar Application for Greenhouse Gases Mitigation. <b>2020</b> , 39-68	0

54	Biochar Coupled Rehabilitation of Cyanobacterial Soil Crusts: A Sustainable Approach in Stabilization of Arid and Semiarid Soils. <b>2020</b> , 167-191	
53	Intelligent Predictive Maintenance (IPdM) in Forestry: A Review of Challenges and Opportunities. <b>2021</b> , 12, 1495	1
52	Biochar and its twin benefits: Crop residue management and climate change mitigation in India. <b>2022</b> , 156, 111959	2
51	Co-application of biochar with non-pyrolyzed organic material accelerates carbon accrual and nutrient availability in soil. <b>2021</b> , 25, 102128	0
50	Rubberized Geopolymer Composites: Value-Added Applications. <b>2021</b> , 5, 312	2
49	Valorisation of Anaerobic Digestate: Towards Value-Added Products. <b>2022</b> , 227-262	0
48	Pyrolysis liquids from lignocellulosic biomass as a potential tool for insect pest management: A comprehensive review. <b>2022</b> , 177, 114533	0
47	Biochar increases soil carbon pools: Evidence from a global meta-analysis.. <b>2022</b> , 305, 114403	5
46	Short-term biochar effect on soil physicochemical and microbiological properties of a degraded alpine grassland. <b>2022</b> , 32, 426-437	1
45	Assessment of Biochar from Chicken Litter and Sawdust for Soil Amendment.	
44	Biochar supported manganese based catalyst for low-temperature selective catalytic reduction of nitric oxide. 1	0
43	A holistic overview on corn cob biochar: A mini-review.. <b>2022</b> , 734242X211069741	0
42	A critical review on production, modification and utilization of biochar. <b>2022</b> , 161, 105405	4
41	Effect of controlled temperature and biomass addition on the formed environmental persistent free radicals (EPFRs) in sewage sludge-based biochar from pyrolysis treatment. <b>2022</b> , 162, 105460	0
40	Influence of biochar remediation on Eisenia fetida in Pb-contaminated soils.. <b>2022</b> , 295, 133954	0
39	BIOCHAR PRODUCTION AND AMENDMENT. <b>2022</b> , 259-296	
38	Biomass-derived biochar: From production to application in removing heavy metal-contaminated water. <b>2022</b> , 160, 704-733	8
37	Thermochemical Conversion of Lignocellulosic Biomass into Mass-Produced Fuels: Emerging Technology Progress and Environmental Sustainability Evaluation. <b>2022</b> , 2, 98-114	0

- 36 Global soil organic carbon changes and economic revenues with biochar application. **2022**, 14, 364-377 0
- 35 Investigating the Impacts of Feedstock Variability on a Carbon-Negative Autothermal Pyrolysis System Using Machine Learning. **2022**, 4, 0
- 34 Effects of Biochar on the Growth and Development of Tomato Seedlings and on the Response of Tomato Plants to the Infection of Systemic Viral Agents. **2022**, 13, 1
- 33 Carbon balance analysis of sewage sludge biochar-to-soil system. **2022**, 358, 132057 0
- 32 Production of biochar using sustainable microwave pyrolysis approach. **2022**, 323-332
- 31 Value-added products from waste: Slow pyrolysis of used polyethylene-lined paper coffee cup waste. 0
- 30 Thermodynamic analysis of biomass and plastic feedstock circulation using pyrolysis technology. **2022**, 100006
- 29 Biochar from microalgae. **2022**, 613-637
- 28 Biochar Impregnated Nanomaterials for Environmental Cleanup. **2022**, 331-345
- 27 Large-scale pyrolysis of oil palm frond using two-box chamber pyrolyzer for cleaner biochar production. 1
- 26 Biochar: Production, Application and the Future.
- 25 A review of pyrolysis technologies and feedstock: A blending approach for plastic and biomass towards optimum biochar yield. **2022**, 167, 112715 7
- 24 Produçã de biocarvõs para utilizaçã como condicionadores do solo.
- 23 Biochar Development as a Catalyst and Its Application.
- 22 Potential of land-neutral negative emissions through biochar sequestration. 1
- 21 Pyrolysis of Biosolids to Produce Biochars: A Review. **2022**, 14, 9626 5
- 20 Sustainable carbon materials from the pyrolysis of lignocellulosic biomass. **2022**, 19, 100209 0
- 19 Application of Engineered Biochars for Soil Amelioration. **2022**, 331-351 0

18	Effects of biochar-based silicate fertilizer on iron reduction by bacteria and root iron plaque formation in subtropical paddy soils.	0
17	Highly Selective Production of Valuable Aromatic Hydrocarbons/Phenols from Forestry and Agricultural Residues Using Ni/ZSM-5 Catalyst. <b>2022</b> , 10, 1970	0
16	Effects of Biochar Application on Soil Hydrothermal Environment, Carbon Emissions, and Crop Yield in Wheat Fields under Ridge-Burrow Rainwater Harvesting Planting Mode. <b>2022</b> , 12, 1704	0
15	Techno-economic and greenhouse gas emission assessment of carbon negative pyrolysis technology.	1
14	Biobased Kapok Fiber Nano-Structure for Energy and Environment Application: A Critical Review. <b>2022</b> , 27, 8107	1
13	Biochar as a Soil Amendment for Restraining Greenhouse Gases Emission and Improving Soil Carbon Sink: Current Situation and Ways Forward. <b>2023</b> , 15, 1206	0
12	Actual Trends in the Usability of Biochar as a High-Value Product of Biomass Obtained through Pyrolysis. <b>2023</b> , 16, 355	0
11	Short-term responses of soil carbon and nitrogen pools as well as their isotopic compositions to biochar applications in a suburban forest in subtropical Australia subjected to prescribed burning.	0
10	Microalgae for biofuel: Isothermal pyrolysis of a fresh and a marine microalga with mass and energy assessment. <b>2023</b> , 14, 100474	0
9	Adsorption of CO <sub>2</sub> using biochar - Review of the impact of gas mixtures and water on adsorption. <b>2023</b> , 11, 109643	0
8	Performance analysis of sustainable technologies for biochar production: A comprehensive review. <b>2023</b> , 9, 4574-4593	0
7	Forces Governing the Transport of Pathogenic and Nonpathogenic Escherichia coli in Nitrogen and Magnesium Doped Biochar Amended Sand Columns. <b>2023</b> , 14, 218-228	0
6	Improving Pharmaceuticals Removal at Wastewater Treatment Plants Using Biochar: A Review.	0
5	Recent Progress and Future Directions of Biomass-Derived Hierarchical Porous Carbon: Designing, Preparation, and Supercapacitor Applications. <b>2023</b> , 37, 3523-3554	0
4	A Systematic Review of Carbon Capture, Utilization and Storage: Status, Progress and Challenges. <b>2023</b> , 16, 2865	1
3	Techno-economic analysis and life cycle assessment of hydrogenation upgrading and supercritical ethanol upgrading processes based on fast pyrolysis of cornstalk for biofuel.	0
2	Biochar as an Additive for Enhancement of Anaerobic Digestion Process.	0
1	Energy properties of agricultural biomass after the pyrolysis. <b>2023</b> , 27, 39-44	0

