

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

Assignment ID: PAT117134

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	CARBON TECHNOLOGY HOLDINGS, LLC	02/09/2024
<b>RECEIVING PARTY DATA</b>		
<b>Company Name:</b>	FORTRESS CREDIT CORP.	
<b>Street Address:</b>	1345 Avenue of the Americas	
<b>Internal Address:</b>	46th Floor	
<b>City:</b>	New York	
<b>State/Country:</b>	NEW YORK	
<b>Postal Code:</b>	10105	
<b>PROPERTY NUMBERS Total: 139</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	12347845
	Application Number:	14599020
	Application Number:	15654262
	Application Number:	15697659
	Application Number:	15802716
	Application Number:	16059008
	Application Number:	16199653
	Application Number:	16199705
	Application Number:	16574544
	Application Number:	16840813
	Application Number:	16883951
	Application Number:	16914692
	Application Number:	17100144
	Application Number:	17205605
	Application Number:	17247362
	Application Number:	13154213
	Application Number:	13308801
	Application Number:	13308934
	Application Number:	13446764

PATENT

<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13798001
<b>Application Number:</b>	14111226
<b>Application Number:</b>	14111240
<b>Application Number:</b>	14111281
<b>Application Number:</b>	14286261
<b>Application Number:</b>	14385986
<b>Application Number:</b>	14548874
<b>Application Number:</b>	14599058
<b>Application Number:</b>	14599089
<b>Application Number:</b>	14873053
<b>Application Number:</b>	14922829
<b>Application Number:</b>	15156256
<b>Application Number:</b>	15172358
<b>Application Number:</b>	15180650
<b>Application Number:</b>	15180763
<b>Application Number:</b>	15184763
<b>Application Number:</b>	15213122
<b>Application Number:</b>	15263227
<b>Application Number:</b>	15348464
<b>Application Number:</b>	15350920
<b>Application Number:</b>	15393176
<b>Application Number:</b>	15393214
<b>Application Number:</b>	15419976
<b>Application Number:</b>	15423563
<b>Application Number:</b>	15474709
<b>Application Number:</b>	15612784
<b>Application Number:</b>	15641040
<b>Application Number:</b>	15792486
<b>Application Number:</b>	15973191
<b>Application Number:</b>	16035177
<b>Application Number:</b>	16044391
<b>Application Number:</b>	16356925
<b>Application Number:</b>	16406986
<b>Application Number:</b>	16422955
<b>Application Number:</b>	16548194
<b>Application Number:</b>	16550506
<b>Application Number:</b>	16550980
<b>Application Number:</b>	16865894

<b>Property Type</b>	<b>Number</b>
Application Number:	17390567
Application Number:	17391162
Application Number:	17485362
Application Number:	17674022
Application Number:	16922556
Application Number:	17060293
Application Number:	17250179
Application Number:	17314759
Application Number:	17364089
Application Number:	17485356
Application Number:	17534213
Application Number:	17564335
Application Number:	17579985
Application Number:	17673998
Application Number:	17674651
Application Number:	17699864
Application Number:	17731194
Application Number:	17749035
Application Number:	17835900
Application Number:	17835916
Application Number:	17859059
Application Number:	17859088
Application Number:	17879003
Application Number:	17900820
Application Number:	17982676
Application Number:	18071066
Application Number:	18121046
Application Number:	14523358
Application Number:	17357702
Application Number:	17390330
Application Number:	17390377
Application Number:	17390458
Application Number:	17390491
Application Number:	17390524
Application Number:	17390607
Application Number:	17390633
Application Number:	17390665
Application Number:	17390687

<b>Property Type</b>	<b>Number</b>
Application Number:	17390704
Application Number:	17485365
Application Number:	17530677
Application Number:	17530734
Application Number:	17530765
Application Number:	17530778
Application Number:	17531428
Application Number:	17580012
Application Number:	17580035
Application Number:	17731202
Application Number:	17742434
Application Number:	17859115
Application Number:	17859592
Application Number:	17879010
Application Number:	17879033
Application Number:	17982697
Application Number:	18121047
Application Number:	18158522
Application Number:	18325397
Application Number:	18356704
Application Number:	18362470
Application Number:	18392465
Application Number:	18392615
Application Number:	18414956
Application Number:	18453003
Application Number:	18491908
Application Number:	18491925
Application Number:	18535226
Application Number:	18543750
Application Number:	18544336
Application Number:	63541997
PCT Number:	US2236282
PCT Number:	US2236292
PCT Number:	US2236294
PCT Number:	US2239113
PCT Number:	US2239116
PCT Number:	US2239119
PCT Number:	US2249237

Property Type	Number
PCT Number:	US2249240
PCT Number:	US2315148
PCT Number:	US2315149
PCT Number:	US2335676
PCT Number:	US2385438
PCT Number:	US2385470

**CORRESPONDENCE DATA**

**Fax Number:** 4696804299  
*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*  
**Phone:** (469)6804264  
**Email:** zcallarman@reedsmith.com  
**Correspondent Name:** Zackary Callarman  
**Address Line 1:** 2850 N. Harwood Street  
**Address Line 2:** Suite 1500  
**Address Line 4:** Dallas, TEXAS 75201

<b>ATTORNEY DOCKET NUMBER:</b>	504141.60028
<b>NAME OF SUBMITTER:</b>	JACEENE MARGOLIN
<b>SIGNATURE:</b>	JACEENE MARGOLIN
<b>DATE SIGNED:</b>	02/12/2024
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 18**

- source=Fortress\_Aymium - Patent Security Agreement (CTH) [Executed 02.09.24]#page1.tif
- source=Fortress\_Aymium - Patent Security Agreement (CTH) [Executed 02.09.24]#page2.tif
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**PATENT SECURITY AGREEMENT**

This **PATENT SECURITY AGREEMENT** (this “**Agreement**”) is made this February 9, 2024, by **CARBON TECHNOLOGY HOLDINGS, LLC**, a Delaware limited liability company (the “**Grantor**”) for the benefit of **FORTRESS CREDIT CORP.** (“**Fortress**”), as administrative agent and collateral agent for the Lenders as defined below (in such capacity, together with its successors and assigns in such capacity, the “**Collateral Agent**”) acting pursuant to this Agreement for the benefit of the Secured Parties (as defined in the Credit Agreement referred to below). All capitalized terms not defined herein shall have the meaning ascribed to them in the Credit Agreement or the Security Agreement, as applicable.

**RECITALS**

**WHEREAS**, **NCT HOLDCO, LLC**, a Delaware limited liability company, as borrower (the “**Borrower**” and together with the Subsidiaries of the Borrower from time to time party thereto as Guarantors, each a “**Loan Party**” and, collectively the “**Loan Parties**”), the lenders from time to time party thereto (each a “**Lender**” and, collectively, the “**Lenders**”) and Fortress in its capacity as the Collateral Agent, are party to a Credit Agreement, dated as of February 9, 2024 (as amended, amended and restated, restated, supplemented or otherwise modified, extended, replaced, or refinanced from time to time, the “**Credit Agreement**”);

**WHEREAS**, in connection with the Credit Agreement, certain of the Loan Parties are party to a Security Agreement, dated as of February 9, 2024 (as amended, amended and restated, restated, supplemented or otherwise modified, extended, replaced or refinanced from time to time, the “**Security Agreement**”) in favor of the Collateral Agent, for the benefit of the Secured Parties; and

**WHEREAS**, pursuant to the Security Agreement, the Grantor is required to execute and deliver to the Collateral Agent, for the benefit of the Secured Parties, this Agreement.

**NOW, THEREFORE, IT IS AGREED:**

1. **GRANT OF SECURITY INTEREST IN PATENT COLLATERAL.** The Grantor hereby pledges, collaterally assigns and transfers to the Collateral Agent, and hereby grants to the Collateral Agent, for the benefit of the Secured Parties, a security interest in, all of the following, whether now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest, wherever located (collectively, the “**Patent Collateral**”), as collateral security for the prompt and complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) of the Secured Obligations:

(a) all rights, priorities and privileges relating to Patents and Patent Licenses, whether arising under United States, multinational or foreign laws or otherwise, including, without limitation, the Patents and the Patent Licenses referred to on Schedule I, and all rights to sue at law or in equity for any past, present and future infringement or other impairment thereof, including the right to receive all proceeds and damages therefrom;

(b) all books, records, and information pertaining to the Patent Collateral, and all rights of access to such books, records, and information; and

(c) to the extent not otherwise included, all proceeds and products of, and all past, present and future income, royalties and any other payments associated with the foregoing, now or hereafter due and payable with respect to, and supporting obligations relating to, any and all of the foregoing and all collateral security, liens, guarantees, rights, remedies and privileges given by any Person with respect to any of the foregoing.

Notwithstanding the foregoing, the Patent Collateral shall not include any Excluded Assets.

2. SECURITY FOR OBLIGATIONS. This Agreement and the security interest created hereby secures the payment and performance of all the Secured Obligations, whether now existing or arising hereafter. Without limiting the generality of the foregoing, this Agreement secures the payment of all amounts which constitute part of the Secured Obligations and would be owed by the Grantors to the Collateral Agent or any Secured Party, whether or not they are unenforceable or not allowable due to the existence of an insolvency proceeding under the Bankruptcy Code involving the Grantor.

3. SECURITY AGREEMENT. The security interest granted pursuant to this Agreement is granted in conjunction with the security interests granted to the Collateral Agent, for the benefit of the Secured Parties, pursuant to the Security Agreement. The Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the security interest in the Patent Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. To the extent there is any inconsistency between this Agreement and the Security Agreement, the Security Agreement shall control.

4. AUTHORIZATION TO SUPPLEMENT. If the Grantor shall obtain rights to any new patentable inventions or become entitled to the benefit of any Patent application or Patent including any reissue, division, or continuation or any Patent License, the provisions of this Agreement shall automatically apply thereto. Without limiting the Grantor's obligations under this Section 4, the Grantors hereby authorize the Collateral Agent unilaterally to modify this Agreement by amending Schedule I to include any such Patent rights or Patent Licenses of the Grantor. Notwithstanding the foregoing, no failure to so modify this Agreement or amend Schedule I shall in any way affect, invalidate or detract from the Collateral Agent's continuing security interest in all Collateral, whether or not listed on Schedule I.

5. COUNTERPARTS. This Agreement may be executed by one or more of the parties to this Agreement on any number of separate counterparts (including by telecopy, facsimile or other electronic transmission), and all of said counterparts taken together shall be deemed to constitute one and the same instrument. The effectiveness of this Agreement, the counterparts hereof and the signatures hereto shall have the same force and effect as manually signed originals and shall be binding on all parties hereto.

6. CONSTRUCTION. The rules of construction specified in Section 1.3 of the Credit Agreement also apply to this Agreement.

7. **GOVERNING LAW.** THIS AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK, WITHOUT REFERENCE TO CONFLICTS OF LAW PROVISIONS EXCEPT SECTION 5-1401 OF THE NEW YORK GENERAL OBLIGATIONS LAW.

[SIGNATURE PAGE FOLLOWS]



IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

**GRANTOR:**

**CARBON TECHNOLOGY HOLDINGS,  
LLC**

By: 

Name: James A. Menell

Title: Chief Executive Officer

**SCHEDULE I**  
**to**  
**PATENT SECURITY AGREEMENT**

Patent Registrations and Applications:

**Issued Patents**

<b>Name of Grantor</b>	<b>Jurisdiction</b>	<b>Patent number</b>	<b>Application number</b>	<b>Title</b>
CARBON TECHNOLOGY HOLDINGS, LLC	United States	8197573	12347845	METHOD AND APPARATUS FOR DEPOSITING AGENTS UPON AND WITHIN BIO-CHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9475031	14599020	CARBON MICRO-PLANT
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11091716	15654262	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11213801	15697659	METHODS AND APPARATUS FOR PRODUCING ACTIVATED CARBON FROM BIOMASS THROUGH CARBONIZED ASH INTERMEDIATES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10611977	15802716	METHODS AND APPARATUS FOR ENHANCING THE ENERGY CONTENT OF CARBONACEOUS MATERIALS FROM PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11426350	16059008	REDUCING THE ENVIRONMENTAL IMPACT OF FARMING USING BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10982161	16199653	PROCESS FOR PRODUCING HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10889775	16199705	SYSTEMS AND APPARATUS FOR PRODUCTION OF HIGH-CARBON BIOGENIC REAGENTS

CARBON TECHNOLOGY HOLDINGS, LLC	United States	11285454	16574544	BIOGENIC ACTIVATED CARBON AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11286440	16840813	METHODS AND APPARATUS FOR ENHANCING THE ENERGY CONTENT OF CARBONACEOUS MATERIALS FROM PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11384031	16883951	BIOCHAR AS A MICROBIAL CARRIER
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11312666	16914692	MINERAL SOLUBILIZING MICROORGANISM INFUSED BIOCHARS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11739031	17100144	BIOCHAR ENCASED IN A BIODEGRADABLE MATERIAL
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11674101	17205605	PROCESS FOR PRODUCING HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11359154	17247362	SYSTEMS AND APPARATUS FOR PRODUCTION OF HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	8317891	13154213	METHOD FOR ENHANCING SOIL GROWTH USING BIO-CHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	8236085	13308801	METHOD FOR ENHANCING SOIL GROWTH USING BIO-CHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	8317892	13308934	METHOD FOR ENHANCING SOIL GROWTH USING BIO-CHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	8920525	13446764	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9493379	13798001	METHOD FOR THE BIOACTIVATION OF BIOCHAR FOR USE AS A SOIL AMENDMENT

CARBON TECHNOLOGY HOLDINGS, LLC	United States	9388355	14111226	PROCESS FOR PRODUCING HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9845440	14111240	METHODS AND APPARATUS FOR ENHANCING THE ENERGY CONTENT OF CARBONACEOUS MATERIALS FROM PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9388046	14111281	SYSTEMS AND APPARATUS FOR PRODUCTION OF HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9527780	14286261	ENHANCING BIOCHAR PERFORMANCE USING PYROLYSIS ACID STREAM
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9493380	14385986	METHOD FOR ENHANCING SOIL GROWTH USING BIO-CHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9752090	14548874	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11358119	14599058	CARBON MICRO-PLANT
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9724667	14599089	CARBON MICRO-PLANT
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10252951	14873053	BIOCHARS AND BIOCHAR TREATMENT PROCESSES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11413601	14922829	HALOGENATED ACTIVATED CARBON COMPOSITIONS AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9809502	15156256	ENHANCED BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11458452	15172358	HIGHLY MESOPOROUS ACTIVATED CARBON

CARBON TECHNOLOGY HOLDINGS, LLC	United States	10174267	15180650	PROCESS FOR PRODUCING HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10167437	15180763	SYSTEMS AND APPARATUS FOR PRODUCTION OF HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10392313	15184763	METHOD FOR APPLICATION OF BIOCHAR IN TURF GRASS AND LANDSCAPING ENVIRONMENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10023503	15213122	BIOCHARS AND BIOCHAR TREATMENT PROCESSES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10233129	15263227	METHODS FOR APPLICATION OF BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10273195	15348464	METHOD FOR THE BIOACTIVATION OF BIOCHAR FOR USE AS A SOIL AMENDMENT
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10093588	15350920	METHOD FOR ENHANCING SOIL GROWTH USING BIO-CHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10118870	15393176	ADDITIVE INFUSED BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10173937	15393214	BIOCHAR AS A MICROBIAL CARRIER
CARBON TECHNOLOGY HOLDINGS, LLC	United States	9980912	15419976	BIOCHARS FOR USE WITH ANIMALS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10322389	15423563	BIOCHAR AGGREGATE PARTICLES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10106471	15474709	BIOCHARS AND BIOCHAR TREATMENT PROCESSES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10696603	15612784	MINERAL SOLUBILIZING MICROORGANISM INFUSED BIOCHARS

CARBON TECHNOLOGY HOLDINGS, LLC	United States	11214528	15641040	TREATED BIOCHAR FOR USE IN WATER TREATMENT SYSTEMS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10301228	15792486	ENHANCED BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10543173	15973191	BIOCHARS FOR USE WITH ANIMALS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10556838	16035177	BIOCHARS AND BIOCHAR TREATMENT PROCESSES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10870608	16044391	BIOCHAR ENCASED IN A BIODEGRADABLE MATERIAL
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10640429	16356925	METHODS FOR APPLICATION OF BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11111185	16406986	ENHANCED BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	10864492	16422955	METHOD FOR PRODUCING BIOCHAR AGGREGATE PARTICLES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11053171	16548194	BIOCHARS FOR USE WITH ANIMALS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11053172	16550506	METHOD FOR APPLICATION OF BIOCHAR IN TURF GRASS AND LANDSCAPING ENVIRONMENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11279662	16550980	METHOD FOR APPLICATION OF BIOCHAR IN TURF GRASS AND LANDSCAPING ENVIRONMENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11390569	16865894	METHODS FOR APPLICATION OF BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11891582	17390567	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11879107	17391162	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF

CARBON TECHNOLOGY HOLDINGS, LLC	United States	11753698	17485362	BIO-REDUCTION OF METAL ORES INTEGRATED WITH BIOMASS PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	11851723	17674022	CARBON-NEGATIVE METALLURGICAL PRODUCTS

**Pending Patent Applications**

<b>Name of Grantor</b>	<b>Jurisdiction</b>	<b>Patent number</b>	<b>Application number</b>	<b>Title</b>
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	16922556	BIOGENIC ACTIVATED CARBON AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17060293	CARBON MICRO-PLANT
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17250179	BIOGENIC POROUS CARBON SILICON DIOXIDE COMPOSITIONS AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17314759	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17364089	METHOD FOR APPLICATION OF BIOCHAR IN TURF GRASS AND LANDSCAPING ENVIRONMENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17485356	BIO-REDUCTION OF METAL ORES INTEGRATED WITH BIOMASS PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17534213	METHODS AND APPARATUS FOR PRODUCING ACTIVATED CARBON FROM BIOMASS THROUGH CARBONIZED ASH INTERMEDIATES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17564335	TREATED BIOCHAR FOR USE IN WATER TREATMENT SYSTEMS

CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17579985	BIOCARBON PELLETS WITH ADJUSTABLE GRINDABILITY INDEX
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17673998	CARBON-NEGATIVE METALLURGICAL PRODUCTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17674651	METHODS AND APPARATUS FOR ENHANCING THE ENERGY CONTENT OF CARBONACEOUS MATERIALS FROM PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17699864	MINERAL SOLUBILIZING MICROORGANISM INFUSED BIOCHARS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17731194	BIOCARBON BLENDS WITH OPTIMIZED FIXED CARBON CONTENT, AND METHODS FOR MAKING AND USING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17749035	SYSTEMS AND APPARATUS FOR PRODUCTION OF HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17835900	REDUCING THE ENVIRONMENTAL IMPACT OF FARMING USING BIOCHAR
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17835916	BIOCHAR AS A MICROBIAL CARRIER
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17859059	LOW-WATER-INTENSITY BIOCARBON PRODUCTS, AND PROCESSES FOR PRODUCING LOW-WATER-INTENSITY BIOCARBON PRODUCTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17859088	PRODUCING BIOCARBON PELLETS WITH HIGH FIXED-CARBON CONTENT AND OPTIMIZED REACTIVITY, AND BIOCARBON PELLETS OBTAINED THEREFROM



CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17879003	PROCESSES AND SYSTEMS FOR RECAPTURING CARBON FROM BIOMASS PYROLYSIS LIQUIDS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17900820	HIGHLY MESOPOROUS ACTIVATED CARBON
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17982676	BIOCARBON COMPOSITIONS WITH OPTIMIZED COMPOSITIONAL PARAMETERS, AND PROCESSES FOR PRODUCING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18071066	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18121046	PROCESSES AND SYSTEMS FOR PRODUCING BIOCOKE IN A KINETIC INTERFACE REACTOR, AND BIOCOKE PRODUCED THEREFROM
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	14523358	METHODS AND APPARATUS FOR PRODUCING ACTIVATED CARBON FROM BIOMASS THROUGH CARBONIZED ASH INTERMEDIATES
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17357702	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390330	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390377	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390458	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390491	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390524	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF

CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390607	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390633	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390665	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390687	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17390704	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17485365	BIO-REDUCTION OF METAL ORES INTEGRATED WITH BIOMASS PYROLYSIS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17530677	BIOMASS PYROLYSIS INTEGRATED WITH BIO-REDUCTION OF METAL ORES, HYDROGEN PRODUCTION, AND/OR ACTIVATED-CARBON PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17530734	BIOMASS PYROLYSIS INTEGRATED WITH BIO-REDUCTION OF METAL ORES, HYDROGEN PRODUCTION, AND/OR ACTIVATED-CARBON PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17530765	BIOMASS PYROLYSIS INTEGRATED WITH BIO-REDUCTION OF METAL ORES, HYDROGEN PRODUCTION, AND/OR ACTIVATED-CARBON PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17530778	BIOMASS PYROLYSIS INTEGRATED WITH BIO-REDUCTION OF METAL ORES, HYDROGEN PRODUCTION, AND/OR ACTIVATED-CARBON PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17531428	BIOMASS PYROLYSIS INTEGRATED WITH BIO-REDUCTION OF METAL

				ORES, HYDROGEN PRODUCTION, AND/OR ACTIVATED-CARBON PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17580012	REACTIVITY-MODERATED BIOCARBON PELLETS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17580035	PROCESSES FOR PRODUCING BIOCARBON PELLETS WITH ADJUSTABLE GRINDABILITY INDEX
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17731202	BIOCARBON BLENDS WITH OPTIMIZED FIXED CARBON CONTENT, AND METHODS FOR MAKING AND USING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17742434	HALOGENATED ACTIVATED CARBON COMPOSITIONS AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17859115	PROCESSES FOR PRODUCING BIOCARBON PELLETS WITH HIGH FIXED-CARBON CONTENT AND OPTIMIZED REACTIVITY, AND BIOCARBON PELLETS OBTAINED THEREFROM
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17859592	HALOGENATED ACTIVATED CARBON COMPOSITIONS AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17879010	PROCESSES AND SYSTEMS FOR RECAPTURING CARBON FROM BIOMASS PYROLYSIS LIQUIDS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17879033	PROCESSES AND SYSTEMS FOR RECAPTURING CARBON FROM BIOMASS PYROLYSIS LIQUIDS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	17982697	BIOCARBON COMPOSITIONS WITH OPTIMIZED

				COMPOSITIONAL PARAMETERS, AND PROCESSES FOR PRODUCING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18121047	PROCESSES AND SYSTEMS FOR PRODUCING BIOCOKE IN A KINETIC INTERFACE REACTOR, AND BIOCOKE PRODUCED THEREFROM
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18158522	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18325397	PROCESS FOR PRODUCING HIGH-CARBON BIOGENIC REAGENTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18356704	BIOCARBON BLENDS WITH OPTIMIZED FIXED CARBON CONTENT, AND METHODS FOR MAKING AND USING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18362470	CARBON-NEGATIVE METALLURGICAL PRODUCTS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18392465	PROCESS AND SYSTEMS FOR CARBON-NEGATIVE AND WATER-POSITIVE HYDROGEN PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18392615	PROCESS AND SYSTEMS FOR CARBON-NEGATIVE AND WATER-POSITIVE HYDROGEN PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18414956	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18453003	BIOGENIC ACTIVATED CARBON AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18491908	BIOMEDIA COMPOSITIONS FOR PEAT-REPLACEMENT PRODUCTS, AND PROCESSES FOR

				PRODUCING BIOMEDIA COMPOSITIONS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18491925	BIOMEDIA COMPOSITIONS FOR PEAT-REPLACEMENT PRODUCTS, AND PROCESSES FOR PRODUCING BIOMEDIA COMPOSITIONS
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18535226	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18543750	BIOGENIC ACTIVATED CARBON AND METHODS OF MAKING AND USING SAME
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	18544336	HIGH-CARBON BIOGENIC REAGENTS AND USES THEREOF
CARBON TECHNOLOGY HOLDINGS, LLC	United States	NONE	63541997	WATER-RESISTANT AND DURABLE BIOCARBON PELLETS, AND METHODS FOR MAKING AND USING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2236282	LOW-WATER-INTENSITY BIOCARBON PRODUCTS, AND PROCESSES FOR PRODUCING LOW-WATER-INTENSITY BIOCARBON PRODUCTS
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2236292	PROCESSES FOR PRODUCING BIOCARBON PELLETS WITH HIGH FIXED-CARBON CONTENT AND OPTIMIZED REACTIVITY, AND BIOCARBON PELLETS OBTAINED THEREFROM
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2236294	PROCESSES FOR PRODUCING BIOCARBON PELLETS WITH HIGH FIXED-CARBON CONTENT AND OPTIMIZED REACTIVITY, AND BIOCARBON PELLETS OBTAINED THEREFROM

CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2239113	PROCESSES AND SYSTEMS FOR RECAPTURING CARBON FROM BIOMASS PYROLYSIS LIQUIDS
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2239116	PROCESSES AND SYSTEMS FOR RECAPTURING CARBON FROM BIOMASS PYROLYSIS LIQUIDS
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2239119	PROCESSES AND SYSTEMS FOR RECAPTURING CARBON FROM BIOMASS PYROLYSIS LIQUIDS
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2249237	BIOCARBON COMPOSITIONS WITH OPTIMIZED COMPOSITIONAL PARAMETERS, AND PROCESSES FOR PRODUCING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2249240	BIOCARBON COMPOSITIONS WITH OPTIMIZED COMPOSITIONAL PARAMETERS, AND PROCESSES FOR PRODUCING THE SAME
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2315148	PROCESSES AND SYSTEMS FOR PRODUCING BIOCOKE IN A KINETIC INTERFACE REACTOR, AND BIOCOKE PRODUCED THEREFROM
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2315149	PROCESSES AND SYSTEMS FOR PRODUCING BIOCOKE IN A KINETIC INTERFACE REACTOR, AND BIOCOKE PRODUCED THEREFROM
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2335676	BIOMEDIA COMPOSITIONS FOR PEAT-REPLACEMENT PRODUCTS, AND PROCESSES FOR PRODUCING BIOMEDIA COMPOSITIONS

CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2385438	PROCESS AND SYSTEMS FOR CARBON-NEGATIVE AND WATER-POSITIVE HYDROGEN PRODUCTION
CARBON TECHNOLOGY HOLDINGS, LLC	PCT	NONE	PCTUS2385470	PROCESS AND SYSTEMS FOR CARBON-NEGATIVE AND WATER-POSITIVE HYDROGEN PRODUCTION