

03-24-2000



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TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

**Submission Type**

☒ New  
☐ Resubmission (Non-Recordation)  
Document ID#   
☐ Correction of PTO Error  
Reel #  Frame #   
☐ Corrective Document  
Reel #  Frame #

**Conveyance Type**

☒ Assignment ☐ Security Agreement  
☐ License ☐ Change of Name  
☐ Merger ☐ Other   
**U.S. Government**  
(For Use ONLY by U.S. Government Agencies)  
☐ Departmental File ☐ Secret File

**Conveying Party(ies)**

☐ Mark if additional names of conveying parties attached  
Execution Date  
Month Day Year

Name (line 1) UCAR Carbon Technology Corporation

Name (line 2)

**Second Party**

Name (line 1)

Name (line 2)

Execution Date  
Month Day Year

**Receiving Party**

☐ Mark if additional names of receiving parties attached

Name (line 1) UCAR Carbon Company Inc.

Name (line 2)

Address (line 1) 3102 West End Ave., Suite 1100

Address (line 2)

Address (line 3) Nashville

TN

37203

City

State/Country

Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name

Address (line 1)

Address (line 2)

Address (line 3)

Address (line 4)

FOR OFFICE USE ONLY

03/23/2000 VBROWN 00000094 210010 4155755

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Mail documents to be recorded with required cover sheet(s) information to:  
Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20503

REEL: 010609 FRAME: 0001

**Correspondent Name and Address**

**Area Code and Telephone Number** 615-760-7722

**Name** James R. Cartiglia

**Address (line 1)** UCAR Carbon Company Inc.

**Address (line 2)** 3102 West End Ave., Suite 1100

**Address (line 3)** Nashville, TN 37203

**Address (line 4)**

**Pages**

Enter the total number of pages of the attached conveyance document including any attachments.

# 19

**Application Number(s) or Patent Number(s)**

☒ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

**Patent Application Number(s)**

**Patent Number(s)**


4155755	4192730	4251272
4159184	4194673	4252856
5175022	4243169	4290709

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

**Patent Cooperation Treaty (PCT)**

Enter PCT application number only if a U.S. Application Number has not been assigned.

PCT PCT PCT  
PCT PCT PCT

**Number of Properties**

Enter the total number of properties involved.

#

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$ 2,400.00

**Method of Payment:**  
**Deposit Account**

Enclosed ☐ Deposit Account ☒

(Enter for payment by deposit account or if additional fees can be charged to the account.)

**Deposit Account Number:**

# 21-0010

**Authorization to charge additional fees:**

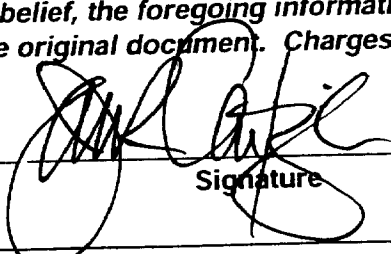
Yes ☒ No ☐

**Statement and Signature**

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

James R. Cartiglia

**Name of Person Signing**



**Signature**

2/16/00  
**Date**

RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT

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Patent Application Number(s)

Patent Number(s)


4347083	4435816	4476002
4349910	4438216	4483840
4357210	4453253	4544641
4379812	4455527	4679206
4402744	4472460	4725161

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Patent Application Number(s)

Patent Number(s)


4726995	4844740	5019426
4729689	4847021	5099438
4773980	4875979	5107437
4787965	4946502	5110359
4813805	5002981	5115447

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Patent Application Number(s)

Patent Number(s)


5117439	5280063	5420084
5118287	5336015	5476679
5143749	5373051	5478442
5167796	5413738	5534133
5167868	5415755	5550176

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Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

5607770

5843298

5631919

5639707

5688155

5751759

## **ASSIGNMENT OF U.S. PATENTS**

WHEREAS, UCAR Carbon Technology Corporation, a Delaware corporation, having an office at 3102 West End Avenue, Nashville, Tennessee, 37203, is the owner of the United States Patents set forth in SCHEDULE "A", U.S. PATENTS, (identified by country code "US"), Owned Exclusively by UCAR Carbon Technology Corporation, attached hereto and made a part hereof;

WHEREAS, UCAR Carbon Company Inc., a Delaware corporation, having an office at 3102 West End Avenue, Nashville, Tennessee, 37203, desires to acquire the entire right, title and interest of UCAR Carbon Technology Company in and to the above-identified United States Patents and the inventions covered thereby;

NOW, THEREFORE, to all whom it may concern, be it known that for valuable consideration, the receipt of which is hereby acknowledged, that UCAR Carbon Technology Corporation has sold, assigned and transferred to UCAR Carbon Company Inc. the entire right, title and interest of UCAR Carbon Technology Corporation in and to the United States Patents set forth in SCHEDULE "A" (identified by the country code "US"), and the inventions covered thereby, the same to be held and enjoyed by UCAR Carbon Company Inc., for its own use and benefit, and for the use and benefit of its successors, assigns or other legal representatives, to the end of the term or terms for which each of said United States Patents and any reissues thereof are granted, as fully and entirely as the same would have been held and enjoyed by UCAR Carbon Technology Corporation if this assignment and sale had not been made; all claims for profits and damages by reason of past infringement of said United States Patents, with the right to

sue for and collect the same for its own use and benefit, and for the use and benefit of its successors, assigns or other legal representatives.

IN TESTIMONY WHEREOF, UCAR Carbon Technology Corporation has caused this instrument to be signed by its duly authorized representatives, and its corporate seal to be hereto affixed and attested, this 28th day of December, 1999.

UCAR Carbon Technology Corporation

By: Karen G. Narwold  
Title: Vice President

ATTEST:

[Signature], Attorney

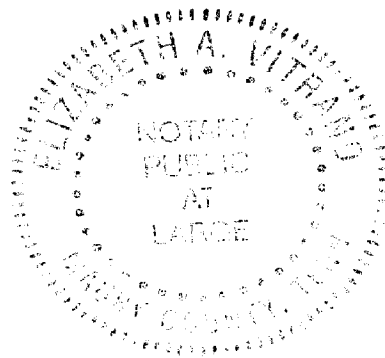
State of Tennessee)

ss.: Nashville

County of Davidson

This 28th day of December, 1999, before me personally came the above-named Karen G. Narwold to me personally known as the individual who executed the foregoing assignment on behalf of the corporation whose name is affixed thereto and who has acknowledged to me that he executed the same for the purposes therein set forth as his own free act and deed and as the free act and deed of such corporation.

Elizabeth A. Vitano  
Notary Public





## UCAR CARBON COMPANY INC. - U.S. PATENTS

January 27, 2000

Patent #	Title	Inventors
4155755	OXIDATION RESISTANT POROUS ABRADABLE SEAL MEMBER FOR HIGH TEMPERATURE SERVICE	SARA, RV
4159184	FRIABLE SOCKET THREAD ELECTRODE JOINT	BURWELL, WH
4175022	ELECTROLYTIC CELL BOTTOM BARRIER FORMED FROM EXPANDED GRAPHITE	WILDER, HJ VADLA, JJ
4192730	CARBONACEOUS LUTING PASTE AND AMBIENT TEMPERATURE LUTING PROCESS (US)	VALLON, J DUMAS, D LACROIX, S LATARD, JM MONTILLOT, AM
4194673	STRESS RELIEVING OF METALS/CERAMIC ABRADABLE SEALS	SARA, RV ELBERT, RJ

4243169	DEFORMATION PROCESS FOR PRODUCING STRESS RELIEVED METAL/CERAMIC ABRADABLE SEALS	SARA, RV
4251272	OXIDATION RESISTANT POROUS ABRADABLE SEAL MEMBER FOR HIGH TEMPERATURE SERVICE	SARA, RV
4252856	CHEMICALLY BONDED ALUMINUM COATING FOR CARBON AND PROCESS THEREFOR	SARA, RV
4290709	HIGH TAPER ANGLE CONNECTING PIN FOR GRAPHITE ELECTRODE JOINTS	WENG, TL
		SELDIN, EJ
4347083	CHEMICALLY BONDED ALUMINUM COATING FOR CARBON AND PROCESS THEREFOR	SARA, RV
4349910	METHOD AND APPARATUS FOR ORIENTATION OF ELECTRODE JOINT THREADS	BELZ, HM
4357210	ELECTRIC FURNACE FOR THE CALCINATION OF CARBONACEOUS MATERIALS (US)	PHILIPON, P
		AUBRY, M
		BERNARD, JC
		GEORJON, P
		LATARD, JM

4379812	DEFORMATION PROCESS FOR PRODUCING STRESS RELIEVED METAL/CERAMIC ABRADABLE SEALS	SARA, RV
4402744	CHEMICALLY BONDED ALUMINUM COATING FOR CARBON AND PROCESS THEREFOR	SARA, RV
4435816	METHOD & ARTICLE FOR PROTECTING TAPERED THREADED ELECTRODE JOINTS BY USE OF AN ALIGNMENT MECHANISM	BELZ, HM
		STIEBER, HC
4438216	PROCESS FOR IMPROVED ACTIVATED CARBON	SARANGAPANI, S
		KAMPE, DJ
4453253	IMPROVED ELECTRIC ARC FURNACE COMPONENT	VOISINET, LJ
		LAURIA, AT
4455527	MAGNETIC RESONANCE APPARATUS	SINGER, LS
4472460	IMPROVED GAS DIFFUSION ELECTRODE	DOWELL, MB
		KAMPE, DJ
4476002	METAL CURRENT CARRIER FOR ELECTROCHEMICAL CELL ELECTRODES	EDWARDS, LG
		SARANGAPANI, S

4483840	SYNTHETIC CARBONACEOUS GRANULES HAVING HIGH MECHANICAL CHARACTERISTICS (US)	HOWARD, RA
		GEORJON, P
		DUMAS, D
		DELHAY, JP
		LATARD, JM
		LACROIX, P
4544641	REFRACTORY PRODUCTS FORMED BY GRAINS BOUND BY CARBON RESIDUES AND METAL SILICON IN POWDER FORM AND PROCESS	LATARD, MN
		MONTILLOT, AM
		MICHEL, C
		DUMAS, D
		MESNILDOT, DB
4679206	ELECTRODE JOINT THREAD FORM	BURWELL, WH
4725161	ELECTRODE JOINT	DAGATA, FJ
4726995	OXIDATION RETARDED GRAPHITE OR CARBON ELECTRODE AND METHOD FOR PRODUCING THE ELECTRODE	CHIU, CC

4729689	ELECTRODE MEMBER AND PROCESS FOR THE PRODUCTION THEREOF	LEWIS, IC NAZEM, F CHRYSSOMALLIS, GS SINGER, LS
4773980	PROCESS AND APPARATUS FOR SEALING CATHODIC BARS IN A PRESTRESSED CONDITION (US)	AUDRAS, G LATARD, JM MICHARD, L MONTILLOT, AM
4787965	PROTECTIVE COATING FOR THE CARRIER BARS OF PREBAKED ANODES AND THE EMERGING PART OF SAID ANODES (US)	LATARD, JM AUDRAS, G MIGNOT, F SAMANOS, B
4813805	JOINT FOR CARBON ELECTRODES	DAGATA, FJ
4844740	HIGH COKING VALUE BINDER SYSTEM	WELCH, RR
4847021	PROCESS FOR PRODUCING HIGH DENSITY CARBON AND GRAPHITE ARTICLES	MONTGOMERY, LC

4875979 TREATMENT OF PETROLEUM COKES TO INHIBIT COKE PUFFING

ORAC, TH

QUANDT, HC

BALL, DR

4946502 PROTECTIVE COATINGS FOR THE CARRIER BARS OF PRE-BAKED ANODES AND THE EMERGING PART OF THE ANODES (US)

MIGNOT, F

LATARD, JM

SAMANOS, B

AUDRAS, G

5002981 HIGH STRENGTH CARBONACEOUS CEMENT

CHIU, CC

5019426 TOPICAL TREATMENT FOR SEALING CARBON AND GRAPHITE SURFACES

NOE, JB

5099438 METHOD OF ON-LINE MONITORING OF AN ELECTRIC ARC FURNACE AND METHOD OF CONTROL

GULDEN, G

PENKAL, KW

5107437 A PROCESS FOR ISOSTATIC MOLDING

MILLER, DJ

5110359	TREATMENT OF PETROLEUM COKES TO INHIBIT COKE PUFFING	ORAC, TH QUANDT, HC BALL, DR
5115447	IMPROVEMENT IN ARC FURNACE REGULATOR PERFORMANCE	BOWMAN, BB
5117439	METHOD FOR OPERATING AN ELECTRODE GRAPHITIZATION FURNACE	DAGATA, FJ POLITOWICZ, KG
5118287	TREATMENT OF PETROLEUM COKES TO INHIBIT COKE PUFFING	ORAC, TH BALL, DR QUANDT, HC
5143749	METHOD FOR TREATING A GRAPHITE OR CARBON BODY TO FORM A PROTECTIVE COATING	WISE, FE COLEMAN, PD
5167796	METHOD FOR PRODUCING LOW SULFUR PREMIUM COKE FROM HIGH SULFUR DECANT OILS	DIDCHENKO, R LEWIS, IC
5167868	CONDUCTIVE EXPANDABLE CARBONACEOUS PASTE MATERIAL	CLARK, WR

KING, HL

WILLEY, HE

ROOM TEMPERATURE SETTING CARBONACEOUS CEMENT WITH INCREASED ELECTRICAL CONDUCTIVITY  
AND FLEXURAL STRENGTH

5280063

LEWIS, IC

GREINKE, RA

BRETZ, RI

KAMPE, DJ

PIRRO, TA

SELF CENTERING ELECTRODE JOINT

5336015

FULGENZI, CF

KLOTZ, JA

COLEMAN, PD

STEWART, JR

ROOM TEMPERATURE SETTING CARBONACEOUS CEMENT WITH INCREASED ELECTRICAL CONDUCTIVITY  
AND FLEXURAL STRENGTH

5373051

KAMPE, DJ

LEWIS, IC

GREINKE, RA

BRETZ, RI

PIRRO, TA



CARBON-CARBON COMPOSITES CONTAINING POORLY GRAPHITIZING PITCH AS A BINDER AND/OR  
IMPREGNANT HAVING A REDUCED COEFFICIENT OF THERMAL EXPANSION AND IMPROVED FLEXURAL

LEWIS, IC

HOWARD, RA

FASTENING ELEMENT FOR SECURING ELECTRODE JOINTS

HOTCHKISS, OW

MONCRIEF, HC

BJORNESTAD, JL

SMITH, RE

WISE, FE

FRASTACI, M

COATING TO PROTECT MATERIAL FROM REACTION WITH AIR AT HIGH TEMPERATURE

MOREL, B

MIGNOT, F

FIGUERES, R

FARGE, Y

A GLASSY CARBON COATED GRAPHITE COMPONENT FOR USE IN THE PRODUCTION OF SILICON CRYSTAL  
GROWTH

PIRRO, TA

MILLER, DJ

LEWIS, IC

APPARATUS FOR TREATMENT OF PETROLEUM COKES WITH A PUFFING INHIBITOR IN A ROTARY CALCINER

ORAC, TH

CONTINUOUS METHOD FOR INCREASING THE Q.I. CONCENTRATION OF LIQUID TAR WHILE  
CONCURRENTLY PRODUCING A Q.I. FREE TAR

5534133

LEWIS, IC

SHAO, RL

KELLER, GE

GILLESKIE, GL

CHANG, CF

ROOM TEMPERATURE SETTING CARBONACEOUS CEMENT WITH INCREASED ELECTRICAL CONDUCTIVITY  
AND FLEXURAL STRENGTH

5550176

BRETZ, RI

KAMPE, DJ

LEWIS, IC

PIRRO, TA

GREINKE, RA

CARBON-CARBON COMPOSITES CONTAINING POORLY GRAPHITIZING PITCH AS A BINDER AND/OR  
IMPREGNANT HAVING A REDUCED COEFFICIENT OF THERMAL EXPANSION AND IMPROVED FLEXURAL

5607770

LEWIS, IC

HOWARD, RA

APPARATUS FOR LENGTHWISE GRAPHITIZATION (LWG) OF CARBON ELECTRODE BODIES

5631919

WISE, FE

INTERMILL, AW

LEHR, DA

5639707	HIGH SURFACE AREA SULFUR-CONTAINING ACTIVATED CARBON	GREINKE, RA LEWIS, IC
5688155	CARBON-CARBON COMPOSITES CONTAINING POORLY GRAPHITIZING PITCH AS A BINDER AND/OR IMPREGNANT HAVING A REDUCED COEFFICIENT OF THERMAL EXPANSION AND IMPROVED FLEXURAL	HOWARD, RA LEWIS, IC
5751759	PRE-HEATING FURNACE FOR BAKED AMORPHOUS CARBON BODIES	INTERMILL, AW NAGY, CC
5843298	PRODUCTION OF SOLIDS-FREE COAL TAR PITCH	CHANG, CF LEWIS, IC ORAC, TH SHAO, RL