504491582 08/07/2017

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JIN HU	05/19/2017
HEONPYO HONG	05/19/2017
JENS PAULSEN	05/18/2017
JINDOO OH	05/24/2017
DANIEL NELIS	06/02/2017
ERIC ROBERT	06/07/2017

RECEIVING PARTY DATA

Name:	UMICORE
Street Address:	RUE DU MARAIS 31
City:	BRUSSELS
State/Country:	BELGIUM
Postal Code:	B-1000
Name:	UMICORE KOREA LTD.
Street Address:	410, CHAAM-DONG
Internal Address:	CHEONAN
City:	CHUNGNAM
State/Country:	KOREA, REPUBLIC OF
Postal Code:	330-200

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15517276	

CORRESPONDENCE DATA

Fax Number: (919)998-5701

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Phone: 9199985700

mcapozzi@brinksgilson.com Email: **BRINKS GILSON & LIONE Correspondent Name:**

Address Line 1: P.O. BOX 110285

Address Line 4: RESEARCH TRIANGLE PK, NORTH CAROLINA 27709

> PATENT **REEL: 043216 FRAME: 0188**

504491582

ATTORNEY DOCKET NUMBER:	13810-157
NAME OF SUBMITTER:	ALLYN B. ELLIOTT, REG. NO. 56745
SIGNATURE:	/Allyn B. Elliott/
DATE SIGNED:	08/07/2017
Total Attachments: 6	

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ASSIGNMENT

WHEREAS, I/we, Jin HU, residing at De Roest d'Aldemadelaan 2/51,
Antwerpen, B-2600, Belgium; HeonPyo HONG, residing at Blooming Apt. 101-204,
Cheonan, BaekSeokDong, Chungcheongnam-do, Korea, Jens PAULSEN, residing at Hanul
Apt. 108-201, 160-1 ShinSeong Dong, Yuseong-Gu, Daejeon, 305-707, Korea, JinDoo OH,
residing at 71, Seobukgu 3Gongdan 2Ro, Cheonan, Chungcheongnam-do, Korea, Daniël
NELIS, residing at Witte Steenstraat 2, Peer B-3900, Belgium, and Eric ROBERT, residing
at rue Fond Pirette 142, Liège, B-4000, Belgium, respectively, have made certain new and
useful inventions and improvements in:

<u>CarbonateCarbonateCarbonateCarbonate Precursors for Lithium Nickel</u>

<u>Manganese Cobalt Oxide Cathode Material and the Method ofofofof Making Same;</u>
set forth in:

rth in:		
(1)		United States provisional patent application
	(a)	bearing Application No, filed on; or
	(b)	to be filed herewith;
(2)	\boxtimes	United States nonprovisional patent application
	(a)	filed herewith; or
	(b)	bearing Application No.15/517,276, filed on April
		6, 2017, and
(3)		International Patent Application No, designating the United
		States and filed on;

AND WHEREAS, 1) <u>Umicore</u>, a corporation, having an office and place of business at <u>Rue du Marais 31</u>, <u>B-1000</u>, <u>Brussels</u>, <u>Belgium</u>; and 2) <u>Umicore Korea</u>, <u>Ltd.</u>, a corporation, having an office and place of business at <u>410</u>, <u>Chaam-Dong</u>, <u>Cheonan</u>, <u>Chungnam</u>, <u>Korea 330-200</u>, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, I/we have sold, assigned, set over, and transferred, and by these presents do sell, assign, set over and transfer unto said Assignee, its successors or assigns, the entire right, title and interest in and to said inventions and improvements, the right to file applications for all countries in and to all inventions and improvements disclosed in the aforesaid application, the entire right, title and interest in and to the said application, any and all other applications for Letters

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Patent on said inventions and improvements, including all provisional, nonprovisional, divisional, continuation, continuation-in-part, and renewal applications based in whole, or in part, upon said inventions or improvements, or upon said applications, and all Letters Patent which may be granted therefrom, and all reissues, reexaminations, or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and I/we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, I/we do hereby agree that I/we and my/our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore, I/we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by me/us.

AND, I/we hereby authorize and request the attorneys of Brinks, Gilson & Lione to insert in the spaces provided above the filing date, application number, and attorney's docket number of said application when known.

IN TESTIMONY W	HEREOF, I have hereunto set my	hand this	_day of	,
	Jin HU			

IN TESTIMONY WHEREOF, I have hereunto set my hand thisday of
HeonPyo HONG
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of
Jens PAULSEN
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of
JinDoo OH
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of day
Daniël NELIS
de de la companya de
IN TESTIMONY WHEREOF, I have hereunto set my hand this the day of whe, 2017
Eric ROBERT

ASSIGNMENT

WHEREAS, I/we, Jin HU, residing at De Roest d'Aldemadelaan 2/51, Antwerpen, B-2600, Belgium; HeonPyo HONG, residing at Blooming Apt. 101-204, Cheonan, BaekSeokDong, Chungcheongnam-do, Korea, Jens PAULSEN, residing at Hanul Apt. 108-201, 160-1 ShinSeong Dong, Yuseong-Gu, Daejeon, 305-707, Korea, JinDoo OH, residing at 71, Seobukgu 3Gongdan 2Ro, Cheonan, Chungcheongnam-do, Korea, Daniël NELIS, residing at Witte Steenstraat 2, Peer B-3900, Belgium, and Eric ROBERT, residing at rue Fond Pirette 142, Liège, B-4000, Belgium, respectively, have made certain new and useful inventions and improvements in:

Carbonate Precursors for Lithium Nickel Manganese Cobalt Oxide Cathode

Material and the Method of Making Same;

		Material and the Method of Making Same;
set forth in:		
(1)		United States provisional patent application
	(a)	bearing Application No, filed on; or
	(b)	to be filed herewith;
(2)	\boxtimes	United States nonprovisional patent application
	(a)	filed herewith; or
	(b)	bearing Application No. 15/517,276, filed on April 6, 2017, and
(3)		International Patent Application No, designating the United
		States and filed on;

AND WHEREAS, 1) <u>Umicore</u>, a corporation, having an office and place of business at <u>Rue du Marais 31</u>, <u>B-1000</u>, <u>Brussels</u>, <u>Belgium</u>; and 2) <u>Umicore Korea</u>, <u>Ltd.</u>, a corporation, having an office and place of business at <u>410</u>, <u>Chaam-Dong</u>, <u>Cheonan</u>, <u>Chungnam</u>, <u>Korea 330-200</u>, (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, I/we have sold, assigned, set over, and transferred, and by these presents do sell, assign, set over and transfer unto said Assignee, its successors or assigns, the entire right, title and interest in and to said inventions and improvements, the right to file applications for all countries in and to all inventions and improvements disclosed in the aforesaid application, the entire right, title and interest in and to the said application, any and all other applications for Letters Patent on said inventions and improvements, including all provisional, nonprovisional, divisional, continuation, continuation-in-part, and renewal applications based in whole, or in

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Patent on said inventions and improvements, including all provisional, nonprovisional, divisional, continuation, continuation-in-part, and renewal applications based in whole, or in part, upon said inventions or improvements, or upon said applications, and all Letters Patent which may be granted therefrom, and all reissues, reexaminations, or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the said inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and I/we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the said Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the said Assignee, its successors and assigns.

AND, for the consideration aforesaid, I/we do hereby agree that I/we and my/our executors and legal representatives will make, execute and deliver any and all other instruments in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the said improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore, I/we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me/us and that full right to convey the same as herein expressed is possessed by me/us.

AND, I/we hereby authorize and request the attorneys of Brinks, Gilson & Lione to insert in the spaces provided above the filing date, application number, and attorney's docket number of said application when known.

IN TESTIMONY WHEREOF, I have hereunto set my hand this 19 day of May, 1017.

Jin HU

IN TESTIMONY WHEREOF, I have hereunto set my hand this 19 day of May, 2	<u>01</u> .7
HeonPyo HONG	
IN TESTIMONY WHEREOF, I have hereunto set my hand this 18 day of 1949, 2	012
Jens PAULSEN	
IN TESTIMONY WHEREOF, I have hereunto set my hand this 24 day of May, 2	<u>011</u> .
JinDoo OH	<u> </u>
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of,,	_·
Daniël NELIS	
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of,	<u>_</u> .
Eric ROBERT	

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RECORDED: 08/07/2017