

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4308560

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
3M INNOVATIVE PROPERTIES COMPANY	12/20/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	UMICORE
<b>Street Address:</b>	BROEKSTRAAT 31 RUE DU MARAIS
<b>City:</b>	B-1000 BRUSSELS
<b>State/Country:</b>	BELGIUM
<b>PROPERTY NUMBERS Total: 7</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	6964828
Patent Number:	7078128
Patent Number:	8241791
Patent Number:	8685565
Patent Number:	6660432
Patent Number:	7211237
Patent Number:	7488465
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)273-7684
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<b>NAME OF SUBMITTER:</b>	RONALD E. SHAPIRO
<b>SIGNATURE:</b>	/Ronald E. Shapiro/
<b>DATE SIGNED:</b>	03/08/2017
<b>Total Attachments: 8</b>	
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## **PATENT ASSIGNMENT AGREEMENT**

This Patent Assignment Agreement ("**Patent Assignment**"), effective this 20<sup>th</sup> day of December, 2016 ("**Effective Date**"), is by between UMICORE, a Belgium company with offices located at Broekstraat 31 Rue du Marais, B-1000 Brussels, Belgium, on behalf of its Rechargeable Battery Materials business unit ("**Umicore**"), and 3M Innovative Properties Company, a Delaware corporation with offices located at 3M Center, Saint Paul, Minnesota, 55144-1000, U.S.A. ("**3M IPC**"). For purposes of this Patent Assignment, Umicore and 3M IPC may be referred to individually as a "**Party**" and collectively as the "**Parties**."

### **RECITALS**

**WHEREAS**, Umicore, 3M IPC, and 3M Company entered into that Asset Purchase Agreement dated as of the Effective Date ("**APA**"); and

**WHEREAS**, 3M IPC and 3M Company sold to Umicore, and Umicore purchased from 3M IPC and 3M Company, certain patents, patent applications, and related rights pursuant to the APA; and

**WHEREAS**, the Parties desire to enter into this Patent Assignment pursuant to the APA;

**NOW, THEREFORE**, in consideration of the premises above, the promises contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

### **AGREEMENT**

1. **Definitions.** Capitalized terms used but not defined herein have the meanings given to such terms below:

a. "**Affiliate**" means, with respect to each Party: (i) any person or entity that, directly or indirectly, Controls, is Controlled by, or is under Common Control with such Party, and (ii) its joint ventures;

b. "**Control**" (including "Controlled by" and "under Common Control with") means the power to direct, or cause the direction of, the management and policies of any person or entity, whether through the ownership of voting securities, by contract, or otherwise; and

c. "**Patents**" means those patents and patent applications set forth in Exhibit A, which is attached hereto and incorporated herein.

2. **Assignment.** 3M IPC hereby irrevocably sells, assigns, and transfers to Umicore, and Umicore hereby purchases and accepts from 3M IPC, all of 3M IPC's right, title, and interest in and to the Patents, including any and all:

a. patents that are issued from the patent applications set forth in Exhibit A;

b. all continuations, continuations-in-part, divisions, extensions, substitutions, reissues, reexaminations, and renewals of the Patents;

c. rights and permissions related to the Patents;

d. past, current, and future royalties, fees, income, payments, and other proceeds due

or payable from the Patents, except as set forth in the APA;

e. the right to sue, seek injunctive relief, and any and all other legal and equitable rights associated with the Patents; and

f. claims and causes of action that 3M IPC has instituted against any third-party related to the Patents (collectively, "**Patent Assets**").

3. Use and Enjoyment. All right, title, and interest assigned under Section 2 is for Umicore's own enjoyment, and the enjoyment of its Affiliates, successors, and assigns, as the same would have been enjoyed by 3M IPC if this Patent Assignment had not been made.

4. Right to Record. 3M IPC hereby grants to Umicore and its designated agents powers of attorney for the limited purpose of filing this Patent Assignment with the U.S. Patent and Trademark Office (USPTO) and any country or countries foreign to the United States, if and where applicable, to effectuate the assignment of the Patent Assets in the name of Umicore. 3M IPC hereby authorizes the Commissioner for Patents in the USPTO and the officials of corresponding entities and agencies in any applicable jurisdictions to record and register this Patent Assignment upon request by Umicore.

5. Further Assurances. Following the Effective Date, 3M IPC shall take such steps and actions, and provide such cooperation and assistance to Umicore and its Affiliates, successors, and assigns, including the execution and delivery of any affidavits, declarations, oaths, exhibits, assignments, powers of attorney, or other documents, as may be necessary to effect, evidence, or perfect the assignment of the Patent Assets to Umicore or any of its Affiliates, successors, or assigns.

6. No Further Use. 3M IPC hereby covenants and agrees that, as of the Effective Date, it shall cease and refrain from all use of all right, title, and interests assigned under Section 2 in all countries of the world.

7. Reference to APA. This Patent Assignment is entered into pursuant to the APA, to which reference is made for a further statement of the rights and obligations of the Parties with respect to the Patent Assets. The representations, warranties, covenants, agreements, indemnities, and other provisions contained in the APA are not superseded hereby, but remain in full force and effect to the full extent provided therein. In the event of any conflict or inconsistency between the terms of the APA and the terms hereof, the terms of the APA govern.

8. Entire Agreement. This Patent Assignment and the APA contain the entire understanding of the Parties with respect to the subject matter hereof and supersede all prior oral or written agreements, negotiations, understandings, statements, or proposals with respect to the subject matter hereof and thereof. The Parties have voluntarily agreed to define their rights, liabilities, and obligations respecting the subject matter hereof exclusively in contract pursuant to the express terms and provisions of this Patent Assignment and the APA, and the Parties expressly disclaim that they are owed any duties or are entitled to any remedies not expressly set forth herein or therein. Furthermore, each Party hereby acknowledges that this Patent Assignment and the APA embody the justifiable expectations of sophisticated parties derived from arm's-length negotiations and specifically acknowledge that no party has any special relationship with another party that would justify any expectation beyond that of an ordinary buyer and an ordinary seller in an arm's-length transaction.

9. Governing Law. This Patent Assignment is governed by and construed in accordance with the internal laws of the State of Delaware, without regard to the principles of conflicts of law thereof. Each Party consents to the non-exclusive jurisdiction of the state and federal courts located in the State of Delaware for the purpose of resolving any disputes arising in connection with this Patent Assignment, the related agreements, and the transactions contemplated hereby.

10. Counterparts. This Patent Assignment may be executed in counterparts, each of which will be deemed an original, and it will not be necessary in making proof of this Patent Assignment or the terms of this Patent Assignment to produce or account for more than one such counterparts. All counterparts will constitute one and the same instrument. Each Party may execute this Patent Assignment via a facsimile (or transmission of a PDF file) of a counterpart of this Patent Assignment. In addition, facsimile or PDF signatures of authorized signatories of either Party will be valid and binding and delivery of a facsimile or PDF signature by either Party will constitute due execution and delivery of this Patent Assignment.

*[Signature Page Follows]*

IN WITNESS WHEREOF, each Party has caused this Patent Assignment to be executed on its behalf as of the Effective Date.

3M IPC:

State of Minnesota  
Ramsey County

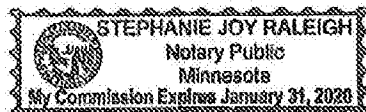
I, Stephanie Raleigh, Notary Public  
for Ramsey County, Minnesota, certify  
that Kevin H. Rhodes personally came before me  
this day and acknowledged that he is the President  
for 3M Innovative Properties Company, a Delaware  
corporation, and that he, as President, being  
authorized to do so, executed the foregoing on  
behalf of 3M Innovative Properties Company.

Witness my hand and official seal this the 17th  
day of December, 2016.

Stephanie Raleigh  
(official signature of notary)

My commission expires: January 31, 2020

(Official Seal)



3M INNOVATIVE PROPERTIES COMPANY

By: [Signature]  
Name: Kevin H. Rhodes  
Title: President  
ACN: 201602177

UMICORE:

UMICORE

By: [Signature]  
Name: Kurt Vandeputte  
Title: Vice-President  
Rechargeable Battery Materials

By: [Signature]  
Name: Géraldine Nolens  
Title: Executive Vice-President

**EXHIBIT A****Patents****Lu-Dahn Patents**

Country	Filing Date	Application No. and Title	Status	Patent No.	Issue Date	Expiration Date
United States	2001-4-27	09/845 178; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	6 964 828	2005-11-15	2022-5-14
United States	2005-2-7	11/052 323; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	7 078 128	2006-7-18	2021-4-27
United States	2006-3-16	11/276 832; Cathode Compositions for Lithium-Ion Batteries	Issued	8 241 791	2012-8-14	2021-4-27
United States	2012-6-29	13/537766; Cathode Compositions for Lithium-Ion Batteries	Issued	8 685 565	2014-4-1	2021-4-27
China	2002-3-11	2002-809014.4; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	CN100403585C	2008-7-16	2022-3-11
China	2002-3-11	200810096518; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	CN101267036A	2010-12-8	2022-3-11

Europe	2002-3-11	09161503.9; Improved Cathode Compositions for Lithium-Ion Batteries	Pending			
Europe	2010-9-28	10181401.0; Improved Cathode Compositions for Lithium-Ion Batteries	Pending			
Japan	2002-3-11	2002-586424; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	4 544 821	2010-7-9	2022-3-11
Japan	2002-3-11	2009-113068; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	5563237	2014-6-20	2022-3-11
Japan	2014-04-17	2014-085404; Improved Cathode Compositions for Lithium-Ion Batteries	Pending			
Japan	2015-12-24	2015-251519; Improved Cathode Compositions for Lithium-Ion Batteries	Pending			
South Korea	2012-2-1	10-2012- 7002785; Improved Cathode Compositions for Lithium-Ion Batteries	Pending			
South Korea	2013-09-05	10-2013- 7023557; Improved Cathode Compositions for Lithium-Ion Batteries	Pending			



Hong Kong	2002-03-11	04105217.2; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	1 063 381	2010-3-26	2022-3-11
Taiwan	2002-4-1	20020106496; Improved Cathode Compositions for Lithium-Ion Batteries	Issued	TW 560097	2003-1-11	2022-4-1

**Paulsen Patents**

Country	Filing Date	Application No. and Title	Status	Patent No.	Issue Date	Expiration Date
United States	2001-3-6	09/799,935; Lithiated Oxide Materials and Methods of Manufacture	Issued	US 6,660,432	2003-12-9	2021-4-10
Japan	2001-6-15	2001-181459; Lithiated Oxide Materials and Methods of Manufacture	Issued	JP 3,571,671	2004-7-2	2021-6-5
Europe*	2001-3-9	01302209.0; Lithiated Oxide Materials and Methods of Manufacture	Issued	EP 1 189 296 B1	2009-12-2	2021-3-9

\* Nationalized in the following countries: Belgium, Finland, France, Germany, and Great Britain

# **Eberman Patents**

Country	Filing Date	Application No. and Title	Status	Patent No.	Issue Date	Expiration Date
United States	2003-11-26	10/723511; Solid State Synthesis of Lithium Ion Battery Cathode Material	Issued	7 211 237	2007-05-01	2024-12-14
United States	2007-08-30	11/742289; Solid State Synthesis of Lithium Ion Battery Cathode Material	Issued	7 488 465	2009-02-10	2024-02-18
South Korea	2004-10-20	10-2006-7010092; Solid State Synthesis of Lithium-Nickel-Cobalt-Manganese Mixed Metal Oxides for use in Lithium Ion Battery Cathode Material	Issued	101206128	2012-11-22	2024-10-20
China	2004-10-20	200480035045.7; Solid State Synthesis of Lithium-Nickel-Cobalt-Manganese Mixed Metal Oxides for use in Lithium Ion Battery Cathode Material	Issued	CN100526222C	2009-8-12	2024-10-20