

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>John G. Nunan</td> <td>03/29/2012</td> </tr> <tr> <td>Raoul Klingmann</td> <td>05/03/2012</td> </tr> <tr> <td>Ryan Andersen</td> <td>03/29/2012</td> </tr> <tr> <td>Davion Clark</td> <td>04/12/2012</td> </tr> <tr> <td>David H. Moser</td> <td>04/11/2012</td> </tr> </tbody> </table>		Name	Execution Date	John G. Nunan	03/29/2012	Raoul Klingmann	05/03/2012	Ryan Andersen	03/29/2012	Davion Clark	04/12/2012	David H. Moser	04/11/2012
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RECEIVING PARTY DATA													
<table border="1"> <tr> <td>Name:</td> <td>Umicore AG & Co. KG</td> </tr> <tr> <td>Street Address:</td> <td>Rodenbacher Chaussee 4</td> </tr> <tr> <td>City:</td> <td>Hanau-Wolfgang</td> </tr> <tr> <td>State/Country:</td> <td>GERMANY</td> </tr> <tr> <td>Postal Code:</td> <td>63457</td> </tr> </table>		Name:	Umicore AG & Co. KG	Street Address:	Rodenbacher Chaussee 4	City:	Hanau-Wolfgang	State/Country:	GERMANY	Postal Code:	63457		
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CORRESPONDENCE DATA													
<p> Fax Number: (202)263-4352 Phone: 202.263.4332 Email: ssundby@sgrlaw.com <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i> </p> <p> Correspondent Name: Suzannah K. Sundby, Esq. Address Line 1: 1130 Connecticut Avenue, N.W. #1130 Address Line 2: Smith, Gambrell & Russell, LLP Address Line 4: Washington, DISTRICT OF COLUMBIA 20036 </p>													
ATTORNEY DOCKET NUMBER:	034166.115A												
NAME OF SUBMITTER:	Suzannah K. Sundby												
Total Attachments: 2 source=20120518_034166_115A_Assign#page1.tif source=20120518_034166_115A_Assign#page2.tif													

OP \$40.00 12951301

Inventors-to-Assignee

ASSIGNMENT

This assignment agreement is applicable to an invention entitled
THREE-WAY CATALYST HAVING AN UPSTREAM SINGLE-LAYER CATALYST
(Title)

The PATENT PROPERTY referred to in this agreement is:
(check one)

- ☐ a patent application for this invention, executed by the ASSIGNOR(S) concurrently with this assignment.
- ☒ U.S. Patent Application Serial No. 12/951,301, filed 22 November 2010 (date).
- ☐ a U.S. Patent Application based on PCT International Application No. ☐ filed on ☐ (date) (U.S. Application Serial No. ☐ if known).
- ☐ U.S. Patent No. ☐ issued ☐ (date).

The PATENT PROPERTY also includes all divisions, reissues, continuations and extensions of the patents and patent applications identified above.

The PATENT PROPERTY assigned under this agreement is:
(check one)

- ☒ U.S. patent property only.
- ☐ Worldwide patent property. In this case, the ASSIGNEE shall have the right to claim the benefit of the filing date of any U.S. or foreign patent application for this invention.

The term ENTIRE PATENT RIGHTS identifies the following rights:
the full and exclusive right to the invention;
the entire right, title and interest in and to the PATENT PROPERTY;
the right to sue and recover for any past infringement; and,
the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable provisions, based on any earlier patent applications for this invention.

The ASSIGNOR(S) referred to in this agreement are identified on page 2 of this Assignment.

The following ASSIGNEE is the recipient of the entire rights assigned herein:

**Umicore AG & Co. KG
Rodenbacher Chaussee 4
63457 Hanau-Wolfgang
GERMANY**

Inventors-to-Assignee

This ASSIGNEE is:

- (check one) ☐ An Individual.
☐ A Partnership.
☒ A Corporation/Entity of DE (specify state or country)

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign to the ASSIGNEE, its successors and assigns, the ENTIRE PATENT RIGHTS.

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize and request the Commissioner of Patents and Trademarks to issue all Letters Patent to the ASSIGNEE as the assignee of the right, title and interest, for the use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree to communicate to said ASSIGNEE, or its representatives, any facts known to the ASSIGNOR(S) respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize any attorneys and agents who have a power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Signature: John G. Nunan

Date: 3/29/2012

Name: John G. Nunan

Signature: Raoul Klingmann

Date: 3rd May 2012

Name: Raoul Klingmann

Signature: Ryan Andersen

Date: 29-March-2012

Name: Ryan Andersen

Signature: Davlon Clark

Date: 4/12/12

Name: Davlon Clark

Signature: David H. Moser

Date: 4-11-2012

Name: David H. Moser