

PATENT ASSIGNMENT

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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>Hee Soo KIM</td> <td>10/11/2012</td> </tr> <tr> <td>Seong Ho LEE</td> <td>10/12/2012</td> </tr> <tr> <td>Young Seek YOON</td> <td>10/15/2012</td> </tr> <tr> <td>Seung Hoon OH</td> <td>10/15/2012</td> </tr> <tr> <td>Young Min CHUNG</td> <td>10/15/2012</td> </tr> <tr> <td>Ok Youn KIM</td> <td>10/15/2012</td> </tr> <tr> <td>Hee Jung JEON</td> <td>10/15/2012</td> </tr> </tbody> </table>		Name	Execution Date	Hee Soo KIM	10/11/2012	Seong Ho LEE	10/12/2012	Young Seek YOON	10/15/2012	Seung Hoon OH	10/15/2012	Young Min CHUNG	10/15/2012	Ok Youn KIM	10/15/2012	Hee Jung JEON	10/15/2012
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Hee Jung JEON	10/15/2012																
RECEIVING PARTY DATA																	
Name:	SK INNOVATION CO., LTD.																
Street Address:	99, Seorin-dong, Jongro-gu																
City:	Seoul																
State/Country:	KOREA, REPUBLIC OF																
Postal Code:	110-110																
PROPERTY NUMBERS Total: 1																	
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13641813</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13641813												
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Application Number:	13641813																
CORRESPONDENCE DATA																	
Fax Number:	2129499190																
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																	
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CH \$40.00 13641813

NAME OF SUBMITTER:

Ralph J. Crispino

Total Attachments: 2

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UNITED STATES

ASSIGNMENT FROM INVENTOR

This is an Assignment of the following rights, title and interest:

- United States of America rights, title and interest in the invention
- United States Patent Application Serial No. _____

Title of the Invention:

NANOMETER-SIZED COPPER-BASED CATALYST, PRODUCTION METHOD THEREOF, AND
ALCOHOL PRODUCTION METHOD USING THE SAME THROUGH DIRECT HYDROGENATION OF
CARBOXYLIC ACID

Inventors (assignors):

KIM, Hee Soo - 408-1204, Yeolmae Maeul 4 Danji, Jijok-dong, Yuseong-gu, Daejeon 305-770, Republic of Korea
 LEE, Seong Ho - 102-607, Daerim e-Pyeonhansang, Banghwa-dong, Gangseo-gu, Seoul 157-220, Republic of Korea
 YOON, Young Seek - 102-1703, Yongbong I-Park Apt., Yongbong-dong, Buk-gu, Gwangju 500-890, Republic of Korea
 OH, Seung Hoon - 3-1408, Sunkyung Apt., Daechi 1-dong, Gangnam-gu, Seoul 135-836, Republic of Korea
 CHUNG, Young Min - 102-903, Cheonggu Narae Apt., Jeonmin-dong, Yuseong-gu, Daejeon 305-729,
 Republic of Korea
 KIM, Ok Youn - 503-1503, Sindong-a Pamillie, Gwanpyeong-dong, Yuseong-gu, Daejeon 305-745, Republic of Korea
 JEON, Hee Jung - CRD Lab., SK R Center, 140-1, Wonchon-dong, Yuseong-gu, Daejeon 305-712, Republic of Korea

Assignee:

SK INNOVATION CO., LTD.
 99, Seorin-dong, Jongro-gu, Seoul 110-110, Republic of Korea

Whereas, we, the above-identified Inventors, have invented certain new and useful improvements in the Invention identified above and described in the above-identified patent application(s) and/or patent(s) (hereinafter referred to as "Invention");

And, whereas we desire to assign our above-identified rights, title and interest in the Invention to the above-identified assignee;

Now, this indenture witnesseth, that for good and valuable consideration, the receipt whereof is hereby acknowledged;

We hereby assign, sell and transfer our above-identified rights, title and interest in said Invention, said applications(s) as identified above, including any divisions, continuations, and continuations-in-part thereof, and in and to any and all Letters Patent of the United States, which may be granted or have granted for said Invention, and in and to any and all reissues and reexaminations thereof, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue to us with respect to the filing of applications for patents or securing of patents in the United States, unto said Assignee.

And we hereby authorize and request the Commissioner of Patents and Trademarks to issue any United States Letters Patent which may issue for said Invention to said Assignee, as assignee of the whole right, title and interest thereto;

And we further agree to sign and execute all necessary and lawful future documents, including applications, for filing divisions, continuations and continuations-in-part of said application for patent, and/or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid Invention, as the Assignee or its Designee(s) may from time to time require and prepare at its own expense.

KIM, Hee Soo
 Signature: KIM, Hee Soo

2012.10.11
 Date

Lee, Seong Ho
Signature: LEE, Seong Ho

2012.10.12
Date

Yoon Young Seek
Signature: YOON, Young Seek

2012.10.15
Date

Oh, Seung Hoon
Signature: OH, Seung Hoon

2012.10.15
Date

Chung, Young Min
Signature: CHUNG, Young Min

2012.10.15
Date

Kim, Ok Youn
Signature: KIM, Ok Youn

2012.10.15
Date

Jeon Hee Jung
Signature: JEON, Hee Jung

2012.10.15
Date