PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

| Doan Lieu | | | 03/04/2013 | |
|---|--|---|------------|--|
| Qingyuan Hu | | | 03/11/2013 | |
| Michael P Galligan | | | 03/18/2013 | |
| Ye Liu | | | 03/18/2013 | |
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| RECEIVING PARTY | (DATA | | | |
| Name: | BASF Corporation | | | |
| Street Address: | 100 Park Avenue | | | |
| City: | Florham Park | | | |
| State/Country: | NEW JERSEY | | | |
| | 07932 | | | |
| Postal Code: | | | | |
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Total Attachments: 9

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COMBINED ASSIGNMENT AND DECLARATION

WHEREAS, Xiaolin David Yang, being a citizen of the United States, residing at 48 Netherwood Circle, Edison, NJ 08820; ; Pascaline Harrison Tran, being a citizen of the United States, residing at 11 Galloping Hill Road, Holmdel, NJ 07733; Qingyuan Hu, being a citizen of the United States, residing at 104 Windsong Circle, East Brunswick, NJ 08816; and Doan Lleu, being a citizen of the United States, residing at 728 Pompton Avenue, Cedar Grove, NJ 07009; Michael P. Galligan, being a citizen of the United States, residing at 4 Victoria Court, Cranford, NJ 07016; and Ye Llu, being a citizen of the United States residing at 136 Northampton Drive, Holmdel, NJ 07733; are the inventors of an invention in and believe that 1 (we) am (are) the sole (joint) inventor(s) of the subject matter in

Hollow Microsphere Catalyst Support and Methods of Making Same

for which I (we) have executed an application for Letters Patent of the United States on December 20, 2012, having the serial number of 13/722,374; and

. WHEREAS, the latest effective date of this Assignment for each of us listed inventors is the date of our signature below;

WHEREAS, said effective date of this Assignment for each inventor is within one (1) year of the filing date listed above;

WHEREAS, BASF Corporation, a Delaware Corporation having a place of business at 100 Park Avenue, Florham Park, New Jersey 07932, is desirous of obtaining the entire right, title and interest in, to and under the said improvements and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me/us in hand paid, and other good and valuable consideration the receipt of which is hereby acknowledged, IAVE, the said Inventor(s) have sold, assigned, transferred and set over and by these presents do hereby sell, assign, transfer and set over unto said BASF Corporation, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the invention, as described and claimed in the abovereferenced patent application, the said improvements, and the said application, all applications derived therefrom and all continuing prosecution and RCE applications, conversions, divisions, renewals and continuations, in whole or in part, thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all applications including PCT applications for Letters Patent or Inventor's Certificates which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent or Inventor's Certificates which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof including the right to claim priority under any international treaty or convention of the above-

referenced patent application; and We hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to said BASF Corporation, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

WE HEREBY authorize the above-mentioned assignee, BASF Corporation, to insert/have inserted into this instrument the serial number and filing date of said patent application.

WE HEREBY covenant that We have full right to convey the entire interest herein assigned, and that WE have not executed and will not execute any agreement in conflict herewith.

AND I/WE HEREBY further covenant and agree that I/We will communicate to said BASF Corporation, its successors, legal representatives and assigns, any facts known to me/us respecting said invention and said improvements, and testify in any legal proceeding, sign all lawful papers, execute all continuing prosecution, divisional, continuing, reexamination and reissue applications, make all rightful oaths, and generally do everything possible to aid said BASF Corporation, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for and defend said inventions and improvements in all countries, it being understood that this Assignment shall bind and inure to the benefit of the assigns and legal representatives of all parties hereto.

WHEREAS, BASF Corporation has no obligation to any of the listed inventors to maintain this Assignment in confidence and thus, BASF Corporation may disclose it to third parties including recording it with patent offices and use it in any public way including litigation.

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AS A DECLARATION UNDER 37 CFR 1.63, for a utility or design application using an Application Data Sheet (37 CFR 1.76), each below-named inventor for which a signature has been provided hereby declares that:

This Declaration is directed to:

The attached application, or

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x United States application or PCT international application number 13/722,374 filed on December 20, 2012.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Note: An Application Data Sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.

PATENT REEL: 030050 FRAME: 0144

3

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my respective signature.

Xiaolin David Yang

Notary Public

State of New Jorsey) County of Widd Veseo

03

MM/DD/Y

Date:

On this day of <u>March</u>, <u>3013</u>, before me, a Notary Public In and for the State and County aforesaid, personally appeared, Xlaolin David Yang, to me known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

> JANE T. SZEG NOTARY PUBLIC OF NEW JERSEY 1, D, # 2362758 My Commission Expires 8/2/2017

> > PATENT REEL: 030050 FRAME: 0145

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my respective signature.

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Date: 03/18/2013

Notary Public

Pascaline Harrison Tran

State of New JORSey) ss.: County of NZ, Jd/45pd

On this <u>1</u>² day of <u>CCarch</u>, <u>2013</u> before me, a Notary Public in and for the State and County aforesaid, personally appeared, <u>Pascaline Harrison Tran</u>, to me known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

JANE T. SZEG NOTARY PUBLIC OF NEW JERSEY I.D. # 2362758 My Commission Expires 8/2/2017

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my respective signature.

Date: 3 MM/DD/YYY)

Docket No.

o. PF72538/PF71668 Serial No. 13/722,374

County of MiddleSet) On this 11 day of 2

2

State of New Jersen

On this \underline{N} day of $\underline{MRCLOD3}$, before me, a Notary Public in and for the State and County aforesaid, personally appeared, **Qingyuan Hu**, to me known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

Notary Public



88.:

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my respective signature.

Date: 03-04-20 MM/DD/

Doan Lieu

State of New Texsol

County of Midd laceal

On this $\underline{\square}$ day of $\underline{\square}$

Notary Pub

JANE T. SZEG NOTARY PUBLIC OF NEW JERSEY I.D. # 2362758 My Conjmission Expires 8/2/2017

Notary Public

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my respective signature.

8

Date: 03/18/2013 MM/DD/YYYY

Michael P. Galligan

State of New Jersey county of Ridd (Sex)

On this 18 day of <u>Carb A 2013</u>, before me, a Notary Public in and for the State and County aforesaid, personally appeared, Michael P. Galligan, to me known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

> JANE T. SZEG NOTARY PUBLIC OF NEW JERSEY I.D. # 2362758 My Commission Expires 8/2/2017

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Docket No. PF72538/PF71668 Serial No. 13/722,374

Notary Public

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year set opposite my respective signature.

03/18/ 620/3 Date:

Ye Llu

State of New Jersey Sounty of Widd (1992)

On this $\underline{18}$ day of $\underline{1200200}$ before me, a Notary Public in and for the State and County aforesaid, personally appeared, Ye Liu, to me known to me to be the person of that name, who signed and sealed the foregoing instrument, and he acknowledged the same to be his free act and deed.

JANE T. SZEG NOTARY PUBLIC OF NEW JERSEY I.D. # 2362758 My Commission Expires 8/2/2017

PATENT REEL: 030050 FRAME: 0150

RECORDED: 03/20/2013