

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT5711774

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JIAWANG LIU	07/31/2019
KAIWU DONG	08/14/2019
ROBERT FRANKE	07/26/2019
HELFRIED NEUMANN	07/31/2019
RALF JACKSTELL	07/31/2019
MATTHIAS BELLER	08/07/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EVONIK DEGUSSA GMBH
<b>Street Address:</b>	RELLINGHAUSER STRASSE 1-11
<b>City:</b>	ESSEN
<b>State/Country:</b>	GERMANY
<b>Postal Code:</b>	45128
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16269940
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(202)263-4329
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	202.263.4300
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<b>ATTORNEY DOCKET NUMBER:</b>	032301 R 1151
<b>NAME OF SUBMITTER:</b>	DENNIS C. RODGERS
<b>SIGNATURE:</b>	/Dennis C. Rodgers/
<b>DATE SIGNED:</b>	09/10/2019

**Total Attachments: 18**

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**ASSIGNMENT**

WHEREAS I/We, the below named inventor(s) (hereinafter referred to as ASSIGNOR(S)) have made an invention entitled:

**PROPYL-BRIDGED DIPHOSPHINE LIGANDS FOR ALKOXYCARBONYLATION**

for which an application was filed on **07 February 2019** as U.S. Application No. **16/269,940** (Attorney Docket No. 032301.1151); and

WHEREAS, **Evonik Degussa GmbH**, a corporation of Germany, whose post office address is **Rellinghauser Straße 1-11, 45128 Essen, Germany** (hereinafter referred to as ASSIGNEE), is desirous of securing the entire right, title, and interest in and to the aforesaid invention and/or any improvements thereon in all countries throughout the world, and in and to the application(s) for Letters Patent on the aforesaid invention and/or any improvements thereon and the Letters Patent to be issued upon the aforesaid U.S. and/or International application(s);

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR(S), by these presents do hereby sell, assign and transfer to ASSIGNEE, the full and exclusive right, title and interest in and to the aforesaid invention and any improvements thereon, the aforesaid application(s) and all corresponding and/or counterpart foreign patent applications, all divisional, continuation, continuation-in-part, reissue, reexamination, extension, substitution, registration, renewal, extension, Supplementary Protection Certificates or the like, and any additional patent applications which claim priority to the aforesaid application(s), and all Letters Patent or comparable rights issuing thereon in the United States and in all foreign countries, and all applications for Letters Patent which may hereafter be filed for the aforesaid invention and/or any improvements thereon in the United States and/or in any foreign country and all Letters Patent which may be granted on the aforesaid invention and/or any improvements thereon in the United States and/or in any foreign country, together with the right(s) to claim priority to the aforesaid patent application(s) and/or any improvements thereon, and the ASSIGNOR(S) hereby authorize and request the United States Commissioner of Patents and Trademarks and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent or comparable rights issuing on any application as aforesaid to ASSIGNEE, or to its successors, assigns or legal representatives;

ASSIGNOR(S) hereby covenant that ASSIGNOR(S) have full right to convey the entire interest herein assigned, and that ASSIGNOR(S) have not executed, and will not execute, any agreement in conflict herewith;

ASSIGNOR(S) agree to communicate to ASSIGNEE or to its successors, assigns or legal representatives any and all facts known to them or any of them respecting said invention, and without further remuneration to testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and reexamination applications, make all rightful oaths and generally do all lawful acts to aid ASSIGNEE or its successors, assigns or legal representatives to obtain and enforce proper patent protection for said invention in all countries and to enhance or perfect ASSIGNEE's title in and to the invention and patent rights therein.

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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of 31.07 2019.

Jiawang Liu

Jiawang LIU

Xiaojiamiao 327  
Shisanliquiao Town  
464137 City Henan  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_

Kaiwu DONG

11 Dong 1 Dan Yuan 1002 Shi, He Huan Yuan  
Xiao Qu  
236800 Bo Zhou  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_

Robert FRANKE

Uerdinger Str. 3  
45772 Marl  
Germany

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\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

---

Helfried NEUMANN

Amberg 4A  
18055 Rostock  
Germany

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---

Ralf JACKSTELL

Dostojewskistrasse 6  
10106 Rostock  
Germany

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Matthias BELLER

Kliffstr. 11  
18211 Ostseebad Nienhagen  
Germany

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**PROPYL-BRIDGED DIPHOSPHINE LIGANDS FOR ALKOXYCARBONYLATION**

for which an application was filed on **07 February 2019** as U.S. Application No. **16/269,940** (Attorney Docket No. 032301.1151); and

WHEREAS, **Evonik Degussa GmbH**, a corporation of Germany, whose post office address is **Rellinghauser Straße 1-11, 45128 Essen, Germany** (hereinafter referred to as ASSIGNEE), is desirous of securing the entire right, title, and interest in and to the aforesaid invention and/or any improvements thereon in all countries throughout the world, and in and to the application(s) for Letters Patent on the aforesaid invention and/or any improvements thereon and the Letters Patent to be issued upon the aforesaid U.S. and/or International application(s);

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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Jiawang LIU

Xiaojiamiao 327  
Shisanliquiao Town  
464137 City Henan  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
14th day of August 2019.

Kaiwu Dong  
\_\_\_\_\_  
Kaiwu DONG

11 Dong 1 Dan Yuan 1002 Shi, He Huan Yuan  
Xiao Qu  
236800 Bo Zhou  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Robert FRANKE

Uerdinger Str. 3  
45772 Marl  
Germany

(Sheet 2 of 3)

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

---

Helfried NEUMANN

Amberg 4A  
18055 Rostock  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

---

Ralf JACKSTELL

Dostojewskistrasse 6  
10106 Rostock  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
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Matthias BELLER

Kliffstr. 11  
18211 Ostseebad Nienhagen  
Germany



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Jiawang LIU

Xiaojiamiao 327  
Shisanliquiao Town  
464137 City Henan  
China

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\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

---

Kaiwu DONG

11 Dong 1 Dan Yuan 1002 Shi, He Huan Yuan  
Xiao Qu  
236800 Bo Zhou  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
26 day of July 2019.

---

Robert FRANKE

Uerdinger Str. 3  
45772 Marl  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

---

Helfried NEUMANN

Amberg 4A  
18055 Rostock  
Germany

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---

Ralf JACKSTELL

Dostojewskistrasse 6  
10106 Rostock  
Germany

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Matthias BELLER

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Kaiwu DONG

11 Dong 1 Dan Yuan 1002 Shi, He Huan Yuan  
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236800 Bo Zhou  
China

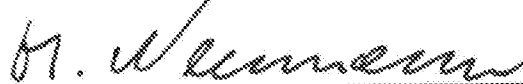
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Robert FRANKE

Uerdinger Str. 3  
45772 Marl  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
31 day of July 2019.



Helfried NEUMANN

Amberg 4A  
18055 Rostock  
Germany

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Ralf JACKSTELL

Dostojewskistrasse 6  
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Jiawang LIU

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Kaiwu DONG

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Robert FRANKE

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31. 7. 19

  
\_\_\_\_\_

Ralf JACKSTELL

Dostojewskistrasse 6  
10106 Rostock  
Germany

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for which an application was filed on **07 February 2019** as U.S. Application No. **16/269,940** (Attorney Docket No. 032301.1151); and

WHEREAS, **Evonik Degussa GmbH**, a corporation of **Germany**, whose post office address is **Rellinghauser Straße 1-11, 45128 Essen, Germany** (hereinafter referred to as ASSIGNEE), is desirous of securing the entire right, title, and interest in and to the aforesaid invention and/or any improvements thereon in all countries throughout the world, and in and to the application(s) for Letters Patent on the aforesaid invention and/or any improvements thereon and the Letters Patent to be issued upon the aforesaid U.S. and/or International application(s);

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNOR(S), by these presents do hereby sell, assign and transfer to ASSIGNEE, the full and exclusive right, title and interest in and to the aforesaid invention and any improvements thereon, the aforesaid application(s) and all corresponding and/or counterpart foreign patent applications, all divisional, continuation, continuation-in-part, reissue, reexamination, extension, substitution, registration, renewal, extension, Supplementary Protection Certificates or the like, and any additional patent applications which claim priority to the aforesaid application(s), and all Letters Patent or comparable rights issuing thereon in the United States and in all foreign countries, and all applications for Letters Patent which may hereafter be filed for the aforesaid invention and/or any improvements thereon in the United States and/or in any foreign country and all Letters Patent which may be granted on the aforesaid invention and/or any improvements thereon in the United States and/or in any foreign country, together with the right(s) to claim priority to the aforesaid patent application(s) and/or any improvements thereon, and the ASSIGNOR(S) hereby authorize and request the United States Commissioner of Patents and Trademarks and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent or comparable rights issuing on any application as aforesaid to ASSIGNEE, or to its successors, assigns or legal representatives;

ASSIGNOR(S) hereby covenant that ASSIGNOR(S) have full right to convey the entire interest herein assigned, and that ASSIGNOR(S) have not executed, and will not execute, any agreement in conflict herewith;

ASSIGNOR(S) agree to communicate to ASSIGNEE or to its successors, assigns or legal representatives any and all facts known to them or any of them respecting said invention, and without further remuneration to testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, continuation-in-part, reissue and reexamination applications, make all rightful oaths and generally do all lawful acts to aid ASSIGNEE or its successors, assigns or legal representatives to obtain and enforce proper patent protection for said invention in all countries and to enhance or perfect ASSIGNEE's title in and to the invention and patent rights therein.

ASSIGNOR(S) hereby authorize attorneys for ASSIGNEE to enter on this document any applicable serial numbers and filing dates after ASSIGNOR(S)' execution of this document.

(Sheet 1 of 3)

ASSIGNOR(S) hereby acknowledge an obligation to assign and do hereby assign all right, title and interest in and to the aforesaid invention and any improvements thereon to ASSIGNEE at the time the invention was made.

This Assignment may be executed in one (1) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

---

Jiawang LIU

Xiaojiamiao 327  
Shisanliquiao Town  
464137 City Henan  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

---

Kaiwu DONG

11 Dong 1 Dan Yuan 1002 Shi, He Huan Yuan  
Xiao Qu  
236800 Bo Zhou  
China

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

---

Robert FRANKE

Uerdinger Str. 3  
45772 Marl  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

-----  
Helfried NEUMANN

Amberg 4A  
18055 Rostock  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

-----  
Ralf JACKSTELL

Dostojewskistrasse 6  
10106 Rostock  
Germany

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this  
7<sup>th</sup> day of August 2019.

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Matthias BELLER

Kliffstr. 11  
18211 Ostseebad Nienhagen  
Germany