PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5059776

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------------------|----------------|
| JOHANNES A. LERCHER | 05/24/2018 |
| DANIELA HARTMANN | 06/26/2018 |
| ANDRE CORNELIS VAN VEEN | 07/18/2018 |
| MARIA CRUZ SANCHEZ-SANCHEZ | 05/29/2018 |

RECEIVING PARTY DATA

| Name: | TECHNISCHE UNIVERSITAT MUNCHEN |
|-----------------|--------------------------------|
| Street Address: | ARCISTR. 21 |
| City: | MUNCHEN |
| State/Country: | GERMANY |
| Postal Code: | D-80333 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14914035 |

CORRESPONDENCE DATA

Fax Number: (703)243-6410

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.

Phone: 703-243-6333 Email: mail@mwzb.com **Correspondent Name:** TIMIKA SNOWDEN

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. Address Line 1: Address Line 2: 2200 CLARENDON BLVD., SUITE 1400

Address Line 4: ARLINGTON, VIRGINIA 22201

| ATTORNEY DOCKET NUMBER: | LINDE-0837 |
|-------------------------|--|
| NAME OF SUBMITTER: | TIMIKA SNOWDEN |
| SIGNATURE: | /Timika Snowden/ |
| DATE SIGNED: | 07/20/2018 |
| | This document serves as an Oath/Declaration (37 CFR 1.63). |
| | • |

Total Attachments: 4



| Title of Invention | OXIDATIVE DEHYDROGENATION OF HYDROCARBONS |
|--|---|
| As the below nam | ed inventor, I hereby declare that: |
| This declaration | The attached application, or |
| is directed to: | United States Application or PCT International Application number 14/914,035 filed on 2/24/2016 |
| The above-identif | ied 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. |
| all patent(s) listed | TECHNISCHE UNIVERSITÄT MÜNCHEN Arcistr. 21 D-80333 München GERMANY d to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof. |
| NOW, V ASSIGNOR herel right, title and inte and all Letters Pat thereof, and in and to accrue with res invention, SAID a including any and which may be gra right to sue for da arlsing from or ap renewals, reissues representatives, in enjoyed the same, AND A and foreign count | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions of to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or peet to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent need therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the mages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the form or terms of any and all such Letters Patent, including any and all as anaple and beneficial a manner to all intents and purposes as the ASSIGNEE and its assigns and legal as anaple and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and if the assignment had not been made. SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States ries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon. |
| AND A any and all division | SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith. |
| The uncassignment inform properly record the | dersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this nation which may be necessary or desirable in order for the United States Patent and Trademark Office to its document. |
| | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR |
| I hereby fine or imprisonm | vacknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by nent of not more than five (5) years, or both. |
| LEGAL NAME (| |
| Inventor: J Signature: | ohannes A. LERCHER Date: 2.9.05.2010 |
| | |
| <i>~</i> | Micros Wings Zer and & Dr. andan D.C. |

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
Arlington Courthouse Plaza
2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201
Telephone: 703,243,6333 | Pax: 703,243,6410
Email: Mail@mwzb.com

Effective, September 16, 2012

| Title of Invention | PROCESS FOR PREPARING A CATALYST, CATALYST AND PROCESS FOR THE OXIDATIVE DEHYDROGENATION OF HYDROCARBONS |
|---|--|
| As the below nam | ned inventor, I hereby declare that: |
| This declaration | The attached application, or |
| is directed to: | United States Application or PCT International Application number 14/914,035 filed on 2/24/2016 |
| The above-identif | fied application was made or authorized to be made by me. |
| I believe that I an | the original inventor or an original joint inventor of a claimed invention in the application. |
| all patent(s) listed | TECHNISCHE UNIVERSITÄT MÜNCHEN Arcistr. 21 D-80333 München GERMANY ed to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and it above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, |
| including any and | I all renewals, reissues, reexaminations and extensions thereof. |
| ASSIGNOR here right, title and int and all Letters Pathereof, and in an to accrue with resinvention, SAID including any and which may be gright to sue for draising from or a renewals, reissue representatives, i enjoyed the same | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive terest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or spect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, d all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent anted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the amanges occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pretaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all se, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal n as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and a first the assignment had not been made. |
| and foreign coun | ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States stricts for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to a papers that may be needed in connection with securing Letters Patents thereon. |
| AND any and all divis | ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on ions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith. |
| The ur assignment infor properly record | ndersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this rmation which may be necessary or desirable in order for the United States Patent and Trademark Office to this document. |
| | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR |
| I herel fine or imprison | by acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by ment of not more than five (5) years, or both. |
| LEGAL NAME | OF INVENTOR Daniela HARTMANN Date: 26.06.18 |
| Signature | Donale H.L. |

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
Arlington Courthouse Plaza
2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201
Telephone: 703.243.6333 | Fax: 703.243.6410
Email; mail@mwzb.com

Effective, September 16, 2012

| Title of Finvention | PROCESS FOR PREPARING A CATALYST, CATALYST AND PROCESS FOR THE DXIDATIVE DEHYDROGENATION OF HYDROCARBONS |
|---|--|
| As the below named | I inventor, I hereby declare that: |
| This declaration | The attached application, or |
| is directed to: | United States Application or PCT International Application number 14/914,035 filed on 2/24/2016 |
| | d application was made or authorized to be made by me. |
| I believe that I am t | he original inventor or an original joint inventor of a claimed invention in the application. |
| all natent(s) listed a | TECHNISCHE UNIVERSITÄT MÜNCHEN Arcistr. 21 D-80333 München GERMANY to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof. |
| ASSIGNOR hereby right, title and inter and all Letters Pate thereof, and in and to accrue with resp invention, SAID A including any and a which may be gran right to sue for dan arising from or apprenewals, reissues, representatives, in enjoyed the same, | VITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive test in and to said invention and patent(s), including any and all divisions and continuations thereof, and any and the twick may be granted therefor, including any and all renewals, reissues, reexaminations and extensions to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or ect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said SSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent and therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the mages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and if the assignment had not been made. |
| and foreign countr execute any other | SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States its for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon. |
| any and all divisio | SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith. |
| The und assignment inform properly record th | ersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this nation which may be necessary or desirable in order for the United States Patent and Trademark Office to is document. |
| | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR |
| fine or imprisonm | acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by tent of not more than five (5) years, or both. |
| LEGAL NAME C | OF INVENTOR Andre Cornelis VAN VEEN Date: July 18 th 2018 |
| | And si ora See |

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
Arlington Courthouse Plaza
2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201
Telephone: 703.243.6333 | Fax: 703.243.6410
Email: mail@mwzb.com

Effective, September 16, 2012

| Title of Invention | PROCESS FOR PREPARING A CATALYST, CATALYST AND PROCESS FOR THE OXIDATIVE DEHYDROGENATION OF HYDROCARBONS |
|--|--|
| As the below nam | ned inventor, I liereby declare that: |
| This declaration | The attached application, or |
| is directed to: | United States Application or PCT International Application number 14/914,035 filed on 2/24/2016 |
| The above-identif | fied application was made or authorized to be made by me. |
| I believe that I an | n the original inventor or an original joint inventor of a claimed invention in the application. |
| AND WHEREAS | TECHNISCHE UNIVERSITÄT MÜNCHEN Arcistr. 21 D-80333 München GERMANY ed to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and |
| all patent(s) listed | l above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, i all renewals, reissues, reexaminations and extensions thereof. |
| ASSIGNOR here right, title and int and all Letters Pathercof, and in an to accrue with resinvention, SAID including any and which may be graight to sue for draising from or a renewals, reissue representatives, it enjoyed the same | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive lerest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any stent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions at to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or spect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, and ill earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent anted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the amages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise popertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all s, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and e, if the assignment had not been made. |
| and foreign coun | ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States tries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to r papers that may be needed in connection with securing Letters Palents thereon. |
| AND A | ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on ions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith. |
| The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document. | |
| | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR |
| 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. | |
| LEGAL NAME | OF INVENTOR Maria Cruz SANCHEZ Date: 29. 05. 79. 18 |
| Inventor: | MININ CIUZ ONI CIUZ O |
| Signature: | 1147 |

Millen, Wiite, Zelanó & Branigan, P.C. Attorneys at Law Arlington Courthouse Plaza 2200 Clarendon Bouleyard | Suite 1400 | Arlington VA 22201 Telephone: 703.243.6333 | Fax: 703.243.6410 Email: mail@mwzb.com

Effective, September 16, 2012

PATENT REEL: 046411 FRAME: 0442

RECORDED: 07/20/2018