PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| PERRY G. CAIMI | 01/22/2010 |
| MARK EMPTAGE | 01/22/2010 |
| PAUL V. VIITANEN | 01/25/2010 |
| XU LI | 02/01/2010 |

RECEIVING PARTY DATA

| Name: | E. I. DU PONT DE NEMOURS AND COMPANY |
|-------------------|--------------------------------------|
| Street Address: | 4417 LANCASTER PIKE |
| Internal Address: | LEGAL PRC; BMP25 |
| City: | WILMINGTON |
| State/Country: | DELAWARE |
| Postal Code: | 19805 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12641642 |

CORRESPONDENCE DATA

Fax Number: (302)355-3982

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

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Email: COLLEEN.A.TAYLOR@USA.DUPONT.COM

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Address Line 4: WILMINGTON, DELAWARE 19805

ATTORNEY DOCKET NUMBER: CL4364USNA

NAME OF SUBMITTER: COLLEEN A. TAYLOR

PATENT

REEL: 025320 FRAME: 0082

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Total Attachments: 2

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PATENT REEL: 025320 FRAME: 0083

ASSIGNMENT

We, the undersigned

PERRY G. CAIMI, MARK EMPTAGE, XU LI, PAUL V. VIITANEN, YAT-CHEN CHOU, MARY ANN FRANDEN, MIN ZHANG

Hereby declare that

We are the true and first inventors of an invention entitled

ZYMOMONAS WITH IMPROVED XYLOSE UTILIZATION IN STRESS CONDITIONS

which is disclosed in the United States Patent Application No. 12/641642 filed on December 18, 2009 and which is identified as Case Number CL4364USNA.

For valuable consideration, the receipt and adequacy of which is hereby acknowledged and in fulfillment of our pre-existing obligation of assignment, we hereby:

- I. Sell, assign, and transfer unto E. I. DU PONT DE NEMOURS AND COMPANY, a corporation organized and existing under the laws of the State of Delaware in the United States of America and having its principal place of business at Wilmington, Delaware, hereinafter referred to as the assignee, (A) the sole and entire right, title, and interest in and to: (1) the aforesaid application for Letters Patent, (2) any priority rights derived from the aforesaid application for Letters Patent by virtue of the International Convention for the Protection of Industrial Property and any other treaty or understanding for intellectual property for any and all member countries of the aforesaid International Convention or other treaty or understanding, (3) any and all our inventions, whether joint or sole, disclosed in the aforesaid application for Letters Patent, (4) any and all applications for Letters Patent for any such inventions in any country whatsoever, (5) any and all patents for any such inventions in any country whatsoever, (5) any and all patents for any such inventions in any country whatsoever; and (B) the sole right to (1) file such applications in its name or ours, (2) file such applications under the aforesaid International Convention or other treaty or understanding, (3) have said patents granted in its name or ours, and (4) enforce said patents and to sue for and recover profits and damages for any and all infringements thereof whether past or future; and
- II. Agree, whenever requested, to communicate to said assignee, its successors, assigns, and legal representatives, any facts known to us respecting said rights, to testify in any legal proceeding respecting said rights, to execute all applications, papers or instruments necessary or required by said assignee, its successors, assigns and legal representatives, to carry into effect any of the provisions of this instrument, and generally to do everything possible to aid said assignee, its successors, assigns, and legal representatives to obtain and enforce proper patent protection for said inventions in any and all countries.

| | (L.S.) | · | (L.S.) |
|--|--------|------------------------|--------|
| PERRY G. CAIMI DATE: January 20, 20)0 | | YAT-CHEN CHOU DATE: | |
| DATE. 54.0 -7 43, 8070 | - | DATE | |
| Wester Enstage | (L.S.) | | (L.S.) |
| MARK EMPTAGE | , | MARY ANN FRANDEN | , |
| DATE: 1/22/2010 | • | DATE: | |
| | (L.S.) | | (L.S.) |
| XU LI | (, | MIN ZHANG | (, |
| DATE: | _ | DATE: | |
| Rull wat | (L.S.) | • | |
| PAUL V. VIITANEN | (2.0.) | | |
| DATE: 1 25 10 | _ | | , |
| ' | | | |

PATENT REEL: 025320 FRAME: 0084

ASSIGNMENT

We, the undersigned

PERRY G. CAIMI, MARK EMPTAGE, XU LI, PAUL V. VIITANEN, YAT-CHEN CHOU, MARY ANN FRANDEN, MIN ZHANG

Hereby declare that

We are the true and first inventors of an invention entitled

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- II. Agree, whenever requested, to communicate to said assignee, its successors, assigns, and legal representatives, any facts known to us respecting said rights, to testify in any legal proceeding respecting said rights, to execute all applications, papers or instruments necessary or required by said assignee, its successors, assigns and legal representatives, to carry into effect any of the provisions of this instrument, and generally to do everything possible to aid said assignee, its successors, assigns, and legal representatives to obtain and enforce proper patent protection for said inventions in any and all countries.

| | (L.S.) | | (L.S.) |
|----------------------|--------|---------------------------|--------|
| PERRY G. CAIMI DATE: | | YAT-CHEN CHOU DATE: | , |
| | (L.S.) | · | (L.S.) |
| MARK EMPTAGE DATE: | | MARY ANN FRANDEN DATE: | |
| XULI Andi | (L.S.) | MIN ZHANG | (L.S.) |
| DATE: 02-01-2010 | _ | DATE: | |
| PAUL V. VIITANEN | (L.S.) | | |
| DATE: | _ | | |

PATENT REEL: 025320 FRAME: 0085

RECORDED: 11/08/2010