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PATENT ASSIGNMENT COVER SHEET

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

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------------|----------------|
| XIABO SHI | 10/01/2013 |
| JOHN EDWARD QUINCY HUGHES | 10/03/2013 |
| HONGJUN ZHOU | 10/01/2013 |
| DANIEL HERNANDEZ CASTILLO II | 10/03/2013 |
| JAE OUK CHOO | 10/29/2013 |
| JAMES ALLEN SCHLUETER | 10/01/2013 |
| JO-ANN THERESA SCHWARTZ | 10/01/2013 |
| LAURA LEDENBACH | 10/08/2013 |
| STEVEN CHARLES WINCHESTER | 10/02/2013 |
| SAIFI USMANI | 10/02/2013 |
| JOHN ANTHONY MARSELLA | 10/22/2013 |
| MARTIN K. MUNGAI | 02/07/2014 |

RECEIVING PARTY DATA

| Name: | Air Products and Chemicals, Inc. | |
|-------------------|----------------------------------|--|
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| Internal Address: | Patent Dept. | |
| City: | Allentown | |
| State/Country: | PENNSYLVANIA | |
| Postal Code: | 18195-1501 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14030657 |

CORRESPONDENCE DATA

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> PATENT REEL: 032195 FRAME: 0594

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| ATTORNEY DOCKET NUMBER: | 07699ZP USA |
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| NAME OF SUBMITTER: | LINA YANG |
| Signature: | /Lina Yang/ |
| Date: | 02/11/2014 |
| | This document serves as an Oath/Declaration (37 CFR 1.63). |

Total Attachments: 1

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PATENT REEL: 032195 FRAME: 0595

ASSIGNMENT & DECLARATION

For value received, I, MARTIN K. MUNGAI, hereby sell, assign, and transfer to AIR PRODUCTS AND CHEMICALS, INC., a corporation of the State of Delaware, having an office at 7201 Hamilton Boulevard, Allentown, PA 18195-1501, the entire right, title, and interest in and to the invention relating to

CHEMICAL MECHANICAL POLISHING (CMP) COMPOSITION FOR SHALLOW TRENCH ISOLATION (STI) APPLICATIONS AND METHODS OF MAKING THEREOF

described in our application for Letters Patent of the United States (identified by Application Serial No. 14/030657) executed of even date herewith, in and to all Letters Patent which may be issued upon said application, in and to any divisional or reissue applications based thereon, and in and to all Letters Patent upon said invention or improvements which may be granted in We hereby also assign and convey to said AIR PRODUCTS AND foreign countries. CHEMICALS, INC., all the rights accruing to us by virtue of the International Convention for the Protection of Industrial Property (Art. 4), including the right to apply for and to have patents issued in its own name.

And I hereby authorize and request the Commissioner of Patents and Trademarks of the United States and the Officials of the Patent Offices of all other countries to issue the Letters Patent of their respective countries to said AIR PRODUCTS AND CHEMICALS, INC., as assignee of the entire right, title, and interest in and to the same.

And I hereby promise and agree to execute all papers and perform all acts necessary to secure to and vest in said AIR PRODUCTS AND CHEMICALS, INC., its successors and assigns, the rights conveyed as herein set forth.

And I hereby authorize the above-mentioned Assignee or its legal representative to insert in the instrument the application serial number of aforesaid application or any other information that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office.

And I hereby declare that the above-identified application was made or authorized to be made by me. I believe 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.

Martin K. Mungai (L.S.)

Feb 07, 2014

Date

PATENT **REEL: 032195 FRAME: 0596**

RECORDED: 02/11/2014