U.S. PTO 12/461147

08-11-2009 08/03/2009 **U.S. DEPARTMENT OF COMMERCE** Fon United States Patent and Trademark Office <u>OMI</u> IN FORM COVER SHEET **ENTS ONLY** 103570250 To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below. 1. Name of conveying party(ies): 2. Name and address of receiving party(les) Toshiyuki Ishii (07/13/2009), Eiji Komai Name: MITSUBISHI MATERIALS CORPORATION (07/12/2009), and Harumi Satoh (07/13/2009) Internal Address: Additional name(s) of conveying party(ies) attached? Street Address: 3. Nature of conveyance/Execution Date(s): 5-1. Otemachi 1-Chome, Chiyoda-ku Execution Date(s): in parentheses after inventor name Tokyo, JAPAN Change of Name Merger x Assignment Security Agreement Joint Research Agreement City: Government Interest Assignment State: Executive Order 9424, Confirmatory License Zip: Country: Additional name(s) & address(es) Yes x No Other attached? X This document is being filed together with a new application. 4. Application or patent number(s): A. Patent Application No.(s) B. Patent No.(s) 12 461147 Yes X No Additional numbers attached? 6. Total number of applications and 5. Name and address to whom correspondence 1 concerning document should be mailed: patents involved: Name: James E. Armstrong, IV **EDWARDS ANGELL PALMER & DODGE** 40.00 LLP 7. Total fee (37 CFR 1.21(h) & 3.41) Internal Address: Atty. Dkt.: 84433(306720) Street Address: P.O. Box 55874 Authorized to be charged to deposit account **Enclosed** None required (government interest not affecting title) **Boston** 8. Payment Information City: 02205 State: Zip: (202) 478-7375 Phone Number: (866) 658-1050 04-1105 Deposit Account Number Fax Number: Authorized User Name James E. Armstrong, IV jarmstrong@eapdlaw.com Email Address:

James E. Armstrong, IV - 42,266

Name of Person Signing

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9. Signature:

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PATENT REEL: 023080 FRAME: 0631

ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made by <u>Toshiyuki Ishii</u>; <u>Eiji Komai</u>; and <u>Harumi Satoh</u> (hereinafter referred to as Assignors), residing at <u>c/o MITSUBISHI MATERIALS</u>

<u>CORPORATION</u>, <u>Yokkaichi Plant</u>, <u>5</u>, <u>Mita-cho</u>, <u>Yokkaichi-shi</u>, <u>Mie-ken</u>, <u>JAPAN</u>; <u>c/o MITSUBISHI MATERIALS CORPORATION</u>, <u>Yokkaichi Plant</u>, <u>5</u>, <u>Mita-cho</u>, <u>Yokkaichi Plant</u>, <u>5</u>, <u>Mita-cho</u>, <u>Yokkaichi Plant</u>, <u>5</u>, <u>Mita-cho</u>, <u>Yokkaichi-shi</u>, <u>Mie-ken</u>, <u>JAPAN</u>, respectively;

WHEREAS, Assignors have invented certain new and useful improvements in <u>METHOD AND APPARATUS FOR MANUFACTURING TRICHLOROSILANE</u>, set forth in a Patent application for Letters Patent of the United States, filed herewith; and

WHEREAS, MITSUBISHI MATERIALS CORPORATION, a corporation organized under and pursuant to the laws of <u>Japan</u> having its principal place of business at <u>5-1</u>, <u>Otemachi 1-Chome, Chiyoda-ku, Tokyo, JAPAN</u> (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as

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fully and entirely as the same would have been held and enjoyed by Assignors, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals the power to insert on this Assignment any further identification which may be necessary or desirable in order

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to comply with the rules of the United States Patent and Trademark Office for recordation of this document:

EDWARDS ANGELL PALMER & DODGE LLP

All practitioners at Customer Number 21874

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Date: 13/07/2009 Signature: Joshiyuki Ishii

Date: 12/07/2009 Signature: Eiji Komai

Date: 13/07/2009 Signature: Harumi Satoh

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RECORDED: 08/03/2009