

PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| | |
| Name | Execution Date |
| YUKI KAWANA | 10/05/2018 |
| HIDEO NAKAKO | 10/05/2018 |
| DAI ISHIKAWA | 10/23/2018 |
| CHIE SUGAMA | 10/05/2018 |
| KAZUHIKO KURAFUCHI | 10/16/2018 |
| YOSHINORI EJIRI | 10/09/2018 |
| RECEIVING PARTY DATA | |
| Name: | HITACHI CHEMICAL COMPANY, LTD. |
| Street Address: | 9-2, MARUNOUCHI 1-CHOME, CHIYODA-KU |
| City: | TOKYO |
| State/Country: | JAPAN |
| Postal Code: | 100-6606 |
| PROPERTY NUMBERS Total: 1 | |
| | |
| Property Type | Number |
| Application Number: | 16096807 |
| CORRESPONDENCE DATA | |
| Fax Number: | |
| <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> | |
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| ATTORNEY DOCKET NUMBER: | 20374-144231-US |
| NAME OF SUBMITTER: | ALAN E. SCHIAVELLI |
| SIGNATURE: | /Alan E. Schiavelli/ |
| DATE SIGNED: | 01/11/2019 |
| Total Attachments: 2 | |

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ASSIGNMENT

Whereas, I/we,

| Name | Address |
|-----------------------|---|
| 1) Yuki KAWANA | c/o Hitachi Chemical Company, Ltd., 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6606 Japan |
| 2) Hideo NAKAKO | c/o Hitachi Chemical Company, Ltd., 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6606 Japan |
| 3) Dai ISHIKAWA | c/o Hitachi Chemical Company, Ltd., 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6606 Japan |
| 4) Chie SUGAMA | c/o Hitachi Chemical Company, Ltd., 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6606 Japan |
| 5) Kazuhiko KURAFUCHI | c/o Hitachi Chemical Company, Ltd., 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6606 Japan |
| 6) Yoshinori EJIRI | c/o Hitachi Chemical Company, Ltd., 9-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-6606 Japan |

hereinafter called assignor(s), have invented certain improvements in
**COPPER PASTE FOR JOINING, METHOD FOR MANUFACTURING JOINED BODY, AND METHOD FOR
 MANUFACTURING SEMICONDUCTOR DEVICE**

and executed an application for Letters Patent of the United States of America therefor on even date herewith unless otherwise indicated below:

filed on October 26, 2018, Serial No. 16/096807; and

Whereas

HITACHI CHEMICAL COMPANY, LTD.
 9-2, Marunouchi 1-chome,
 Chiyoda-ku, Tokyo 100-6606 Japan

(assignee), desires to acquire the entire right, title and interest in the application and invention, and to any United States patents to be obtained therefor;

NOW THEREFORE, be it known that, for good and valuable consideration from assignee, the receipt of which is hereby acknowledged, I/WE, as assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, MY/OUR entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and I/WE hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY further covenant and agree that I/WE will, without further consideration, communicate with assignee, its successors and assigns, any facts known to ME/US respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

In the event that the patent application filing date or serial number is not known at the time this Assignment is executed, I/WE hereby grant permission to the attorneys of record in the patent application to fill in the filing date and/or serial number above, and to record this Assignment after such information is added.

INVENTORSDATE SIGNED

1):

Y. KAWANA10/5/2018

Name :

Yuki KAWANA

| | | |
|--------|------------------------|------------------------|
| 2) : | <u>Hideo Nakako</u> | <u>5 October 2018</u> |
| Name : | Hideo NAKAKO | |
| 3) : | <u>Dai Ishikawa</u> | <u>23 October 2018</u> |
| Name : | Dai ISHIKAWA | |
| 4) : | <u>Chie Sugama</u> | <u>5 October 2018</u> |
| Name : | Chie SUGAMA | |
| 5) : | <u>K. Kurafuchi</u> | <u>16 October 2018</u> |
| Name : | Kazuhiko KURAFUCHI | |
| 6) : | <u>Yoshinori Ejiri</u> | <u>9 October 2018</u> |
| Name : | Yoshinori EJIRI | |

(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. § 261)

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