

## PATENT ASSIGNMENT COVER SHEET

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|---|--------------------------------------|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                       |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                           |
| <b>CONVEYING PARTY DATA</b>   |                                      |
| <b>Name</b>   | <b>Execution Date</b>                |
| EIJI ITOH   | 02/20/2019                           |
| YOSHINORI YAMAGUCHI   | 02/20/2019                           |
| TATSUYA NISHIDA   | 02/20/2019                           |
| KOUSUKE MATSUBARA   | 02/20/2019                           |
| <b>RECEIVING PARTY DATA</b>   |                                      |
| <b>Name:</b>  | HOKURIKU ELECTRIC INDUSTRY CO., LTD. |
| <b>Street Address:</b>  | 3158, SHIMO-OKUBO                    |
| <b>City:</b>  | TOYAMA-SHI, TOYAMA                   |
| <b>State/Country:</b>   | JAPAN                                |
| <b>Postal Code:</b>   | 939-2292                             |
| <b>Name:</b>  | SHINSHU UNIVERSITY                   |
| <b>Street Address:</b>  | 3-1-1, ASAHI                         |
| <b>City:</b>  | MATSUMOTO-SHI, NAGANO                |
| <b>State/Country:</b>   | JAPAN                                |
| <b>Postal Code:</b>   | 390-8621                             |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                      |
| <b>Property Type</b>  | <b>Number</b>                        |
| <b>Application Number:</b>  | 16331701                             |
| <b>CORRESPONDENCE DATA</b>  |                                      |
| <b>Fax Number:</b>  | (216)566-9711                        |
| <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> |                                      |
| <b>Phone:</b>   | 2165669700                           |
| <b>Email:</b>   | almasy@rankinhill.com                |
| <b>Correspondent Name:</b>  | RANKIN HILL AND CLARK LLP            |
| <b>Address Line 1:</b>  | 38210 GLENN AVENUE                   |
| <b>Address Line 4:</b>  | WILLOUGHBY, OHIO 44094               |
| <b>ATTORNEY DOCKET NUMBER:</b>  | NIS-45483                            |
| <b>NAME OF SUBMITTER:</b>   | DAVID E. SPAW                        |

|  |                 |
|--|-----------------|
| <b>SIGNATURE:</b>  | /David E. Spaw/ |
| <b>DATE SIGNED:</b>  | 03/08/2019      |
| <b>Total Attachments: 3</b><br>source=45483-Assignment#page1.tif<br>source=45483-Assignment#page2.tif<br>source=45483-Assignment#page3.tif |                 |

## ASSIGNMENT

WHEREAS, new and useful improvements have been made by the undersigned  
in

### CAPACITIVE GAS SENSOR

that are the subject of an application for a U.S. Patent, (Application No. 16/331701,  
filed 03/08/2019), which application is further identified as Rankin, Hill &  
Clark LLP Docket No. NIS-45483.

WHEREAS,

HOKURIKU ELECTRIC INDUSTRY CO., LTD., a corporation of Japan, and having a  
place of business at 3158, Shimo-okubo, Toyama-shi, Toyama, Japan and

SHINSHU UNIVERSITY, a corporation of Japan, and having a place of business at  
3-1-1, Asahi, Matsumoto-shi, Nagano, Japan,

hereinafter referred to as "assignee", are desirous of acquiring all right, title, and  
interest throughout the world in, to, and under said improvements and inventions and  
patent rights therefor.

NOW, THEREFORE, be it known that, for valuable consideration, the receipt  
and sufficiency of which are hereby acknowledged, all right, title, and interest, in the  
United States and throughout the world, in, to and under said improvements and  
inventions and all patents, patent applications, patent rights, and inventor's certificates  
thereof, therefor, and therein, including without limitation said application for patent in  
the United States, all divisions and continuations thereof, all patents which may be  
granted thereon, all reissues and extensions thereof, all right to sue for past  
infringement thereunder, all patents which may be granted for said improvements and  
inventions by states or nations other than the United States, or by other authority,  
entity, or organization, and all applications therefor, have been and are hereby sold,  
assigned, transferred, and delivered unto assignee, its successors and assigns; and it  
is covenanted and agreed by the undersigned, and for executors, administrators, and  
legal representatives of the undersigned, that at assignee's request any and all  
applications, affidavits, assignments, and other instruments will be made, executed,  
and delivered as may be necessary, or desirable to secure for or vest in assignee, its  
successors or assigns, any improvement, inventions, right, title, interest, application,  
patent, patent right or other right or property covered by this assignment, and the  
United States Commissioner of Patents and Trademarks is hereby requested and  
authorized to issue any and all United States patents granted on any of said  
applications to assignee as owner of the entire right, title, and interest in, to, and under  
the same, and appropriately empowered officials of foreign countries are hereby  
authorized to issue any letters patent granted on any of said applications to assignee  
as owner of the entire right, title and interest in, to, and under the same.

The undersigned hereby grants the firm of Rankin, Hill & Clark LLP the power to  
insert on this assignment any identification that may be necessary or desirable in order  
to comply with the rules of the United States Patent and Trademark Office for  
recording of this document.

IN WITNESS WHEREOF, this assignment has been executed below by the undersigned:

(1) Inventor Name (sole or joint): ITOH, Eiji

Signature: Eiji Itoh

Today's Date : Feb. 20, 2019

Witness: Hiro Maruyama

Witness: \_\_\_\_\_

(2) Inventor Name (joint): YAMAGUCHI, Yoshinori

Signature: \_\_\_\_\_

Today's Date : \_\_\_\_\_

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_

(3) Inventor Name (joint): NISHIDA, Tatsuya

Signature: \_\_\_\_\_

Today's Date : \_\_\_\_\_

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_

(4) Inventor Name (joint): MATSUBARA, Kousuke

Signature: \_\_\_\_\_

Today's Date : \_\_\_\_\_

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_

IN WITNESS WHEREOF, this assignment has been executed below by the undersigned:

(1) Inventor Name (sole or joint): ITOHI, Eiji

Signature: \_\_\_\_\_

Today's Date : \_\_\_\_\_

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_

(2) Inventor Name (joint): YAMAGUCHI, Yoshinori

Signature: Yoshinori Yamaguchi

Today's Date : 20 February 2019

Witness: Koichi Kawaguchi

Witness: Rintaro Nomura

(3) Inventor Name (joint): NISHIDA, Tatsuya

Signature: Tatsuya Nishida

Today's Date : 20 February 2019

Witness: Koichi Kawaguchi

Witness: Rintaro Nomura

(4) Inventor Name (joint): MATSUBARA, Kousuke

Signature: Kousuke Matsubara

Today's Date : 20 February 2019

Witness: Koichi Kawaguchi

Witness: Rintaro Nomura