

PATENT ASSIGNMENT

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SUBMISSION TYPE:

NEW ASSIGNMENT

NATURE OF CONVEYANCE:

ASSIGNMENT

CONVEYING PARTY DATA

| Name             | Execution Date |
|------------------|----------------|
| Toru Imori       | 02/23/2010     |
| Yoshiyuki Hisumi | 02/23/2010     |
| Junichi Ito      | 02/23/2010     |
| Tsukasa Torimoto | 03/09/2010     |
| Kenichi Okazaki  | 03/09/2010     |
| Susumu Kuwabata  | 03/23/2010     |

RECEIVING PARTY DATA

|                   |                                  |
|-------------------|----------------------------------|
| Name:             | Nippon Mining & Metals Co., Ltd. |
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| City:             | Tokyo                            |
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| Postal Code:      | 105-0001                         |

|                   |                        |
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| Street Address:   | 1 Furo-cho, Chikusa-ku |
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| City:             | Aichi                  |
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|                 |                          |
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PROPERTY NUMBERS Total: 1

501133827

PATENT  
REEL: 024157 FRAME: 0967

OP \$40.00 12678509

|  |                  |
|--|------------------|
| Property Type  | Number           |
| Application Number:  | 12678509         |
| <p>CORRESPONDENCE DATA</p> <p>Fax Number: (215)988-2757</p> <p><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 215-988-2700</p> <p>Email: leola.bryant@dbr.com</p> <p>Correspondent Name: DRINKER BIDDLE &amp; REATH ATTN: INTELLECTUA</p> <p>Address Line 1: ONE LOGAN SQUARE, SUITE 2000</p> <p>Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103-6996</p> |                  |
| ATTORNEY DOCKET NUMBER:  | 35706-0311-00-US |
| NAME OF SUBMITTER:   | Leola P. Bryant  |
| <p>Total Attachments: 3</p> <p>source=35706_0311_00_US_Assignment#page1.tif</p> <p>source=35706_0311_00_US_Assignment#page2.tif</p> <p>source=35706_0311_00_US_Assignment#page3.tif</p>  |                  |

A S S I G N M E N T

WHEREAS, we,

|                   |  |
|-------------------|--|
| Toru Imori,       | a citizen of Japan, c/o Isohara Works, Nippon Mining & Metals Co., Ltd., 187-4, Usuba, Hanakawa-cho, Kitaibaraki-shi, Ibaraki 319-1535 Japan |
| Yoshiyuki Hisumi, | a citizen of Japan, c/o Isohara Works, Nippon Mining & Metals Co., Ltd., 187-4, Usuba, Hanakawa-cho, Kitaibaraki-shi, Ibaraki 319-1535 Japan |
| Junichi Ito,      | a citizen of Japan, c/o Isohara Works, Nippon Mining & Metals Co., Ltd., 187-4, Usuba, Hanakawa-cho, Kitaibaraki-shi, Ibaraki 319-1535 Japan |
| Tsukasa Torimoto, | c/o Nagoya University, 1 Furo-cho, Chikusa-ku, Nagoya-shi, Aichi 464-8601, Japan   |
| Kenichi Okazaki,  | c/o Nagoya University, 1 Furo-cho, Chikusa-ku, Nagoya-shi, Aichi 464-8601, Japan   |
| Susumu Kuwabata,  | c/o Osaka University, 1-1 Yamadaoka, Suita-shi, Osaka 565-0871, Japan  |

have invented certain new and useful improvements in

METHOD FOR SUPPORTING METAL NANOPARTICLES  
AND METAL NANOPARTICLES-CARRYING SUBSTRATE

for which we have on February 23, March 9  
and March 23, 2010 executed an application for  
United States Letters Patent under 35 U.S.C. 371 resulting from the  
International Application No. PCT/JP2008/066869 filed on September 18,  
2008; and

WHEREAS, Nippon Mining & Metals Co., Ltd., a Japanese Corporation, located at 10-1, Toranomon 2-chome, Minato-ku, Tokyo, 105-0001, Japan, Nagoya University, a Japanese University, located at 1 Furo-cho, Chikusa-ku, Nagoya-shi, Aichi, 464-8601, Japan and Osaka University, a Japanese University, located at 1-1 Yamadaoka, Suita-shi, Osaka, 565-0871, Japan (hereinafter called the "Assignees"), are desirous of acquiring the entire right, title and interest in and to said application and the inventions and improvements therein disclosed so far as the United States of America is concerned.

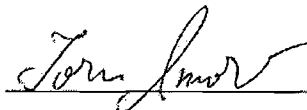
NOW, THEREFORE, in good and valuable consideration paid to us by said Assignees, receipt whereof is hereby acknowledged, we do hereby assign, sell, transfer and set over unto said Assignees the entire right, title and interest in and to said application and the inventions and improvements therein disclosed for the United States and any Letters Patent which may issue therefor in the United States and all divisions, re-issues, continuations, renewals and/or extensions thereof, said Assignees to have and to hold the interests herein assigned to the full ends of the terms of said Letters Patent and any and all divisions, re-issues, continuations, renewals and/or extensions thereof, respectively, a fully and entirely as the same would have been held and enjoyed by us had this Assignment not been made.

The Commissioner of Patents and Trademarks is requested to issue such Letters Patent in accordance herewith. We covenant that we are the lawful owners of the said application, and of the right to make, use or sell the inventions and improvements disclosed therein within the United States and that we have the full right to make this Assignment.

And for the consideration aforesaid, we agree that we will communicate to said Assignees or the representatives thereof any facts known to us respecting the inventions and improvements of the said United States application and will, upon request, but without expense to us, testify in any legal proceedings, sign all lawful papers, execute all divisional, re-issue, continuation, renewal and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts deemed necessary or expedient by said Assignees or by counsel for said Assignees, to assist or enable said Assignees to obtain and enforce full benefits from the rights and interest herein assigned. This Assignment shall be binding upon our heirs, executors, administrators and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of said Assignees.

Executed at Ibaraki,

this 23<sup>th</sup> day of February, 2010

  
Toru Imori

Executed at Ibaraki,

this 23<sup>th</sup> day of February, 2010

Yoshiyuki Hisumi

Yoshiyuki Hisumi

Executed at Ibaraki,

this 23<sup>th</sup> day of February, 2010

Junichi Ito

Junichi Ito

Executed at Aichi,

this 9 day of March, 2010

Tsukasa Torimoto

Tsukasa Torimoto

Executed at Aichi,

this 9 day of March, 2010

Kenichi Okazaki

Kenichi Okazaki

Executed at Osaka,

this 23 day of March, 2010

Susumu Kuwabata

Susumu Kuwabata