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03-12-2004 241712US90PCT Atty Docket No.: U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office FORM PTO-1595 102691876 To the Director of the United States Patent and Ta original documents or copy thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): 3.9-6 Y Naohisa HIGASHIYAMA Name: SHOWA DENKO K.K. Address: 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518 Japan Additional name(s) of conveying party(ies) attached?

Yes No 3. Nature of Conveyance: Assignment ☐ Merger ☐ Change of Name ☐ Security Agreement ☐ Other Additional name(s) and address(es) attached?

Yes No Execution Date: 06/19/2003 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: B. Patent No.(s) A. Patent Application No.(s) 10/468153 Additional numbers attached?

Yes No 5. Name and address of party to whom correspondence 6. Total applications and patents involved: 1 concerning document should be mailed: 7. Total fee (37 CFR 3.41): \$40.00 Customer Number Enclosed ☐ Authorized to be charged to deposit account Tel. (703) 413-3000 8. Deposit account number: 15-0030 Fax. (703) 413-2220 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 9. Statement and signature To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. March 8 2004 Date Masayasu Mori Name of Person Signing Surinder Sachar Registration Number: 47,301 Registration No. 34,423 Total number of pages including this cover sheet: 3

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PATENT REEL: 015053 FRAME: 0575

Assignment of Application

Page 1 of 2

| WHEREAS, I (WE) | Naohisa HIGASHIYAMA | , c/o SHO | WA DENKO K.K., | |
|--------------------------|---------------------------------|---------------|----------------------------------|-----------------|
| | OYAMA REGIONAL OF | FICE, 48 | 0, Inuzuka 1-chome, Oyama-shi, 1 | Госhigi |
| | 323-8678 Japan | | | |
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| | | | | , respectively, |
| have invented certain n | new and useful improvements i | n: HEA | T EXCHANGER | |
| | - | | | |
| for which an applicatio | on for Letters Patent was execu | ted on | June 19, 2003 | |
| (Application No. 10 | /468,153 | , filed | August 27, 2003 |), and |
| WHEREAS, SI | HOWA DENKO K.K. | | | |
| (hereinafter referred to | as "ASSIGNEE") having a pl | ace of bus | siness at: | |
| 13-9, Shiba Daimon 1 | 1-chome, Minato-ku, Tokyo 10 | 05-8518 | Japan | |
| | | | 44 14 14 | |

is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

03/03

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

The undersigned hereby grant(s) the firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. of 1940 Duke Street Alexandria, Virginia 22314 the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

| Date: | June 19, 2003 | Machisa Higashiyama (Signature of Inventor) Nachisa HIGASHIYAMA |
|-------|---------------|---|
| Date: | | (Signature of Inventor) |

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

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