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| OMB No. 0651-0027 (exp. 5/31/2002) 101925 | · |
| Tab settings | V V |
| To the Honorable Commissioner of Patents and Trademarks: | Please record the attached original documents or copy thereof. |
| 1. Name of conveying party(ies): | 2. Name and address of receiving party(ies) |
| 1) Mark A. Stan; 5) Paul R. Sharps; 2) Nien Y. Li; 6) Navid S. Fatemi | Name: Emcore Corporation |
| 3) Frank A. Spadafora; 4) Hong Q. Hou; | Internal Address: |
| 4) nong Q. nou. Additional name(s) of conveying party(ies) attached? □ Yes ☒ No | |
| | |
| 3. Nature of conveyance: | |
| ∰: Assignment ☐: Merger | Street Address: 145 Belmont Drive |
| Security Agreement | |
| Gther | |
| 2) 1111 2121 (2) 141 (2) 121 (2) 141 (27 (2) | City: Somerset State: NJ Zip: 08873 |
| 1) 11/16/01; 2) 11/21/01; 3) 11/27/01; Execution Date: 4) 11/16/01; 5) 11/16/01; 6) 11/16/01 | |
| | Additional name(s) & address(es) attached? 🖳 Yes 🖏 No |
| 4. Application number(s) or patent number(s): | |
| | ication, the execution date of the application is: |
| A. Patent Application No.(s) 09/885,319 | B. Patent No.(s) |
| | |
| Additional numbers att | tached? 🖳 Yes 💢 No |
| 5. Name and address of party to whom correspondence concerning document should be mailed: | 6. Total number of applications and patents involved: |
| l | 7. Total fee (37 CFR 3.41)\$_40.00 |
| Name: Warren S. Heit | ∑ Enclosed |
| Internal Address: White & Case LLP | Endused |
| Patent Department | Authorized to be charged to deposit account |
| | |
| | 8. Deposit account number: |
| Street Address: 1155 Avenue of the Americas | |
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| City: New York State: NY Zip: 10036 | (madi suprice supply of the page of page of page of the page of th |
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| Statement and signature. | |
| To the best of my knowledge and belief, the foregoing i | information is true and correct and any attached copy |
| is a true copy of the original document. | -V //////// |
| | 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 |
| Steven Walker, Reg. No. 48,020 Name of Person Signing | Signature Date |

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

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PATENT REEL: 012387 FRAME: 0332

ASSIGNMENT

WHEREAS, WE, Mark A. STAN, residing at 9402 Corona, NE, Albuquerque, New Mexico, 87122, citizen of the United States; Nein Y. LI, residing at 1545 Murre Lane, Sunnyvale, California, 94087, citizen of Taiwan, Frank A. SPADAFORA, residing at 10121 Irbid Road, NE, Albuquerque, New Mexico, 87122, citizen of the United States; Hong Q. HOU, residing at 11533 Woodmar Lane, NE, Albuquerque, New Mexico, 87122, citizen of the Peoples Republic of China; Paul R. SHARPS, residing at 1323 Michael Hughes Drive, NE, Albuquerque, New Mexico, 87112, citizen of the United States; and Navid S. FATEMI, residing at 7709 Eagle Rock Ave., NE, Albuquerque, New Mexico, 87122, citizen of the United States, (hereinafter "ASSIGNORS") are the inventors of the invention entitled AN APPARATUS AND METHOD FOR OPTIMIZING THE EFFICIENCY OF GERMANIUM JUNCTIONS IN MULTI-JUNCTION SOLAR CELLS for which we have executed an application for a Patent of the United States

| | which is executed on even date herewith |
|-------|---|
| X | which was filed on <u>June 19, 2001</u> as United States Patent Application Number <u>09/885,319</u> or PCT International Application Number <u>and was amended on (if applicable).</u> |
| and W | VHEREAS, Emcore Corporation (hereinafter "ASSIGNEE"), a New Jersey Corporation |

and WHEREAS, Emcore Corporation (hereinafter "ASSIGNEE"), a New Jersey Corporation having a business address at 145 Belmont Drive, Somerset, New Jersey 08873, is desirous of obtaining our entire right, title and interest in, to and under the said invention and the said application:

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, WE, the said ASSIGNOR(s), have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, my entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection. including, without limitation, patents, utility models, inventors' certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

AND WE HEREBY authorize and request the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, it successors, legal representatives and assigns, in accordance with the terms of this instrument.

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PATENT REEL: 012387 FRAME: 0333 AND WE HEREBY covenant and agree that I have full right to convey the entire interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that I will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, it successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries. In the event that I am not an employee of ASSIGNEE at the time such aid is required, I agree to render such aid in return for an hourly rate of pay no greater than twice my equivalent regular hourly pay as it stood on the date of my departure from ASSIGNEE.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year opposite my signature.

Date: 11 16 01 Mal 6. St

In the State of New Meyer, county of Remaille on New Meyers, before me Deana Smith, Notary Public, personally appeared Mark A. Stan, personally known to me/proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal

Notary Public

OFFICIAL SEAL
DEAMA M. SMITH
Notary Public
State of New Mexico

L.S.

| my signature. |
|---|
| Date: 11/21/200 |
| In the State of <u>Collegene</u> , county of <u>Santa Mera</u> on <u>//-2/-0/</u> , before me <u>Certa Merathy</u> Notary Public, personally appeared <u>Nien Y. Li</u> , personally known to me/proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal CETA McCARTHY COMM. # 1291126 COMM. # 1291126 SANTA CLARA COUNTY COMM. EXP. FEB. 15, 2005 |
| IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year opposite my signature. Date: 11 27 01 L.S. |
| In the State of, county of, on |
| WITNESS my hand and official seal Notary Public OFFICIAL SEAL DEANA M. SMITH Notary Public State of New Mexico |

My Commission Expires

-3-

| IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year opposite my signature. |
|---|
| Date: 11/16/2001 Hong Q. Hou L.S. |
| In the State of New Meyers county of Bernalillo on Nov. 16, 2001, before me Deana Smith, Notary Public, personally appeared Hong Q. Hou, personally known to me/proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal Notary Public |
| OFFICIAL SEAL DEANA M. SMITH Notary Public State of New Mexido My Commission Expires |
| |
| IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year opposite my signature. |
| Date: 1/16/2001 Paul R. Sharps L.S. Paul R. Sharps |
| In the State of NauNeuco, county of Bernalillo on Noville 2001, before me Deana Smith, Notary Public, personally appeared Paul R. Sharps, personally known to me/proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal Notary Public |
| OFFICIAL SEAL |

Notary Public
State of New Mexico
My Commission Expires

PATENT

REEL: 012387 FRAME: 0336

IN TESTIMONY WHEREOF, I hereunto set my hand and seal the day and year opposite

OFFICIAL SEAL
DEANA M. SMITH
Notary Public
State of New Mexico
My Commission Expires

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PATENT REEL: 012387 FRAME: 0337