Client Code: ASMEX.639A

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To the Director, U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

·	
Name of conveying party(ies): (List using letters	Name and address of receiving party(ies):
or numbers for multiple parties)	Name: ASM AMERICA, INC.
1. Nyles W. Cody	Internal Address:
2. Shawn G. Thomas 3. Pierre Tomasini	Street Address: 3440 East University Drive
	City: Phoenix State: AZ
Additional name(s) of conveying party(ies) attached?	ZIP: 85034-7200
() Yes (X) No	Additional name(s) of receiving party(ies) attached?
Nature of conveyance: (X) Assignment	() Yes (X) No
() Other: Execution Date: (List as in section 1 if multiple	US or PCT Application number(s) or US Patent number(s):
signatures) (1) December 20, 2011; (2) December 14,	(X) Patent Application No.: 13/332,211 Filing Date: December 20, 2011
2011; and (3) December 20, 2011.	Additional numbers attached?
	() Yes (X) No
Party to whom correspondence concerning document should be mailed:	Total number of applications and patents involved: 1
Customer No. 20,995	
Address: Knobbe, Martens, Olson & Bear, LLP 2040 Main Street, 14 th Floor Irvine, CA 92614 Return Fax: (949) 760-9502	
Attorney's Docket No.: ASMEX.639A	
7. Total fee (37 CFR 1.21(h)): \$40	8. Deposit account number: 11-1410
(X) Authorized to be charged to deposit account	Please charge this account for any additional fees which may be required, or credit any overpayment to this account.
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.	
Adeel S. Akhtar Odul Syd Oldha December 72, 2011	
Adeel S. Akhtar Name of Person Signing Signs	ature December 72, 2011 Date
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> **PATENT REEL: 027484 FRAME: 0673**

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ASSIGNMENT

WHEREAS, Nyles W. Cody, a U.S. citizen, residing in Tempe, AZ, Shawn G. Thomas, a U.S. citizen, residing in Gilbert, AZ, and Pierre Tomasini, a French citizen, residing in Tempe, AZ, (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, Ideas or discoveries related to IN-SITU PRE-CLEAN PRIOR TO EPITAXY (collectively hereinafter referred to as the "Work") for which we have executed a non-provisional U.S. patent application (the "Application") of the same title on even date herewith (application number and filling date to be filled in at a later date);

AND WHEREAS, ASM AMERICA, INC., a Delaware Corporation, with its principal place of business at 3440 East University Drive, Phoenix, AZ 85034-7200 (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all provisional applications relating thereto, and all nonprovisional applications claiming priority thereto, including, all divisions, continuations, continuations-in-part, reissues, and reexaminations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under international Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other provisional or non-provisional applications relating to the Application and the Work or any improvements made thereto, sign all lawful papers, execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

I hereby authorize the registrants of Knobbe, Martens, Olson & Bear, LLP, having a place of business at 2040 Main Street, 14th Floor, Irvine, California 92614, to fill in the application number and filing date of the Application in the header of this document after such information becomes available.

PATENT

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IN TESTIMONY WHEREOF, ! hereunto set my hand and seal this 20

Nyles W. Cody

ingas Signature

Witness Printed Name

PATENT

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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 14 day of DECEMBER , 20 11.

Shawn G. Thomas

Witness Signature

Witness Printed Name

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Pierre Tomasini

Witness Signature

Witness Printed Name

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> PATENT REEL: 027484 FRAME: 0677

RECORDED: 12/22/2011