


Client Code: ASMJP.270AUS

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

<p>1. Name of conveying party(ies): (List using letters or numbers for multiple parties)</p> <p>1. Akira Shimizu 2. Akiko Kobayashi 3. Hiroki Kanayama</p> <p>Additional name(s) of conveying party(ies) attached?</p> <p>( ) Yes (X) No</p>	<p>2. Name and address of receiving party(ies):</p> <p><b>Name:</b> ASM JAPAN K.K.</p> <p><b>Internal Address:</b></p> <p><b>Street Address:</b> 23-1, 6-chome, Nagayama, Tama-shi, Tokyo, 206-0025, JAPAN</p> <p>Additional name(s) of receiving party(ies) attached?</p> <p>( ) Yes (X) No</p>
<p>3. Nature of conveyance:</p> <p>(X) Assignment ( ) Security Agreement ( ) Merger ( ) Change of Name ( ) Other:</p> <p>Execution Date: (List as in section 1 if multiple signatures) (1) January 14, 2009; (2) January 14, 2009; and (3) January 15, 2009.</p>	<p>4. US or PCT Application number(s) or US Patent number(s):</p> <p>(X) Patent Application No.: 12/353,076 Filing Date: January 13, 2009</p> <p>Additional numbers attached?</p> <p>( ) Yes (X) No</p>
<p>5. Party to whom correspondence concerning document should be mailed:</p> <p><b>Customer No.</b> 20,995</p> <p><b>Address:</b> Knobbe, Martens, Olson &amp; Bear, LLP 2040 Main Street, 14<sup>th</sup> Floor Irvine, CA 92614</p> <p><b>Return Fax:</b> (949) 760-9502</p> <p><b>Attorney's Docket No.:</b> ASMJP.270AUS</p>	<p>6. Total number of applications and patents involved: 1</p>
<p>7. Total fee (37 CFR 1.21(h)): \$40</p> <p>(X) Authorized to be charged to deposit account</p>	<p>8. Deposit account number: 11-1410</p> <p>Please charge this account for any additional fees which may be required, or credit any overpayment to this account.</p>
<p>9. Statement and signature.</p> <p>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.</p> <p><u>Adeel S. Akhtar</u> Name of Person Signing</p> <p><u></u> Signature</p> <p><u>January 26, 2009</u> Date</p> <p>41,394 Registration No.</p> <p>Total number of pages including cover sheet, attachments and document: 3</p>	

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**PATENT**  
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### ASSIGNMENT

WHEREAS, We, Akira Shimizu, a Japanese citizen, residing at Sagamihara-shi, Kanagawa, JAPAN, Akiko Kobayashi, a Japanese citizen, residing in Setagaya-ku, Tokyo, JAPAN and Hiroki Kanayama, a Japanese citizen, residing in Nagaoka-shi, Niigata, JAPAN, have invented certain new and useful improvements in a METHOD FOR CONTROLLING FLOW AND CONCENTRATION OF LIQUID PRECURSOR for which we have filed an application for Letters Patent in the United States, Application No. 12/353,076, Filed on January 13, 2009;

AND WHEREAS, ASM JAPAN K.K. (hereinafter "ASSIGNEE"), with its principal place of business at 23-1, 6-chome, Nagayama, Tama-shi, Tokyo, 206-0025, JAPAN, desires to acquire the entire right, title, and interest in and to said improvements and said Application;

NOW, THEREFORE, in return for good and valuable consideration, the receipt of which is hereby acknowledged, I, said inventor, do hereby acknowledge that I have sold, assigned, transferred and set over, and by these presents do 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, to and under said improvements, and said application including all provisional applications relating thereto, and all divisions, renewals and continuations 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 applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and I hereby authorize and request 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 Letters Patent for said improvements to said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE DO HEREBY sell, assign, transfer, and convey to ASSIGNEE, his 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 WE HEREBY covenant and agree that we will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to us respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

Application No.: 12/353,076  
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IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 14 day of  
January, 2009.

清水 亮  
Akira Shimizu

Junya Morimoto  
Witness Signature

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 14 day of  
January, 2009.

小林 明子  
Akiko Kobayashi

Junya Morimoto  
Witness Signature

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this 15 day of  
January, 2009.

金 山 博 紀  
Hiroki Kanayama

Junya Morimoto  
~~Notary Signature~~  
Witness

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