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OMB No. 0651-0027 To the Honorable Commissioner of Patents ar	nd Trademarks: Please record the attached original documents or copy thereof.			
1. Name of conveying party(ies) PE	2. Name and address of receiving party(ies):			
Tetsuo TSUCHIYA	National Institute of Advanced Industrial Science and Technology,			
Susumu MIZUTA Toshiya KUMAGAI MAR 25 7002	1-3-1, Kasumigaseki,			
	Chiyoda-ku, Tokyo 100-8921 Japan			
Tsutomu YOSHITAKE Yuichi SHIMAKAWA	NEC CORPORATION			
Yuichi SHIMAKAWA Yoshimi KUBO	7-1, Shiba 5-chome			
3.75.0	Minato-ku, Tokyo, Japan			
Additional name(s) of conveying party(ies) attached? Yes				
3. Nature of conveyance:				
☑ Assignment ☐ Merger				
☐ Security Agreement ☐ Change of Name				
☐ Other				
Execution Date: March 13, 2002 and March 14, 20	002 Additional name(s) & address(es) attached? ☐ Yes ☑ No			
4. Application number(s) or patent number(s):	1.1.2.1.5			
If this document is being filed together with a new application, the execution date of the application is: March 14, 2002				
A. Patent Application No.(s)	B. Patent No.(s)			
09/984,846				
Additional	numbers attached?			
5. Name and address of party to whom corresponde				
concerning document should be mailed:	1			
SUGHRUE MION, PLLC	7. Total fee (37 CFR 3.41): \$40.00			
2100 Pennsylvania Avenue, N.W.	☑ Enclosed. Please charge any underpayment in connection with this Assignment to Deposit Account No. 19-4880.			
Suite 800	Authorized to be charged to deposit account			
Washington, D.C. 20037-3213				
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9. Statement and signature.	egoing information is true and correct and any attached copy is a true copy of the			
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original document.	March 25, 2002			
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J. Frank Osha				
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04/18/2002 DBYRNE 00000066 09984846 40.00 DP 01 FC:581

> **PATENT REEL: 12810 FRAME: 0816**

Assianment

Whereas, I / We,

Witness:

TETSUO TSUCHIYA, SUSUMU MIZUTA, TOSHIYA KUMAGAI, TSUTOMU YOSHITAKE, YUICHI SHIMAKAWA, and YOSHIMI KUBO Ibaraki, Japan; Ibaraki, Japan; Ibaraki, Japan; Tokyo, Japan; Tokyo, Japan; and Tokyo, Japan, respectively, hereinafter called assignor(s), have invented certain improvements in METHOD OF MANUFACTURING OXIDE THIN FILM FOR BOLOMETER and executed an application for Letters Patent of the United States of America therefor on March 13, 2002 Whereas. National Institute of Advanced Industrial Science and Technology, 1-3-1, Kasumigaseki, Chiyoda-ku, Tokyo 100-8921 Japan, **NEC Corporation**, 7-1, Shiba 5-chome, Minato-ku, Tokyo, Japan (assignee(s)), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor; Now therefore, for valuable consideration, receipt whereof is hereby acknowledged, I/We, the above-named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America, including the right to claim priority under 35 U. S. C. § 119, and I/we request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee. I / We hereby authorize and request my attorneys SUGHRUE, MION, ZINN, MACPEAK & SEAS of 2100 Pennsylvania Avenue, N.W. Washington, D.C. 20037-3213 to insert here in parentheses (Application ____, filed October 31, 2001) the filing date and application 09/984,846 number ___ number of said application when known. March 13, 2002 Date: ____ SUSUMU MIZUTA TETSUO TSUCHIYA TOSHIYA KUMAGAI

> PATENT REEL: 12810 FRAME: 0817

Funitako Watas

Assignment

Whereas, I / We,

TETSUO TSUCHIYA, SUSUMU MIZUTA, TOSHIYA KUMAGAI, TSUTOMU YOSHITAKE, YUICHI SHIMAKAWA, and YOSHIMI KUBO of Ibaraki, Japan; Ibaraki, Japan; Tokyo, Japan; Tokyo, Japan; and

Tokyo, Japan, respectively, hereinafter called assignor(s), have invented certain improvements in

RECORDED: 03/25/2002

referrance called assignor(s), have invented certain improvements in
METHOD OF MANUFACTURING OXIDE THIN FILM FOR BOLOMETER
and executed an application for Letters Patent of the United States of America therefor on
March 14, 2002 ; and
Whereas,
National Institute of Advanced Industrial Science and Technology, 1-3-1, Kasumigaseki, Chiyoda-ku, Tokyo 100-8921 Japan, and NEC Corporation,
7-1, Shiba 5-chome, Minato-ku, Tokyo, Japan (assignee(s)), desires to acquire the entire right, title, and interest in the application and invention, and to
any United States patents to be obtained therefor;
Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,
I/We, the above-named assignor(s), hereby sell, assign and transfer to the above named assignee, its
therein for the United States of America, including the right to claim priority under 35 U. S. C. § 119, and lower equest the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States application when called upon to do so by the assignee. I / We hereby authorize and request my attorneys SUGHRUE, MION, ZINN, MACPEAK & SEAS or 2100 Pennsylvania Avenue, N.W. Washington, D.C. 20037-3213 to insert here in parentheses (Application number
Date:March 14, 2002
Tetsuo Tsuchiya Susumu Mguta TETSUO TSUCHIYA SUSUMU MIZUTA
TETSUO TSUCHIYA SUSUMO MIZOTA
Jesliya Kumagai TSUTOMU YOSHITAKE
YUICHI SHIMAKAWA YOSHIMI KUBO
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