	MRD	11-22-2000
1-31-	PECORDA RECORDA	U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
	et No. 1613312-2604.00US01 he Honorable Commissioner of Patents and Trac	101524142 documents or copy thereof.
	Name of conveying party(ies):	2 Name and address of receiving party:
	Michael L. Roukes; Franklin G. Monzon; and Michael J.	Name: California Institute of Technology QCT 3 20
	Murphy Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No	Internal Address: 1200 E. California Blvd., Mail Code 2007 ADEM
3.	Nature of conveyance:	City: Pasadena State: CA Zip: 91125
	Security Agreement Change of Name	Street Address: Same as above
	Other	City:State: Zip:
	Execution Date: 10/24/00; 10/4/00; 10/10/00	Additional name(s) & address(es) attached? Yes No
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:
A.	Patent Application No(s).: 09/612,828	B. Patent No(s).:
	Additional numbers	attached? ☐ Yes ☒ No
5.	Name and address of party to whom correspondence	6. Total number of applications and patents involved: 1
	concerning document should be mailed:	2.40.00
	Name: Robert C. Laurenson	7. Total fee (37 CFR 3.41): \$40.00 The Commissioner is authorized to charge our Deposit
Inter	nal Address: HOWREY SIMON ARNOLD & WHITE, LLP	Account No. 08-3038, Referencing Docket No.
	Box No. 34 1299 Pennsylvania Avenuc, N.W.	01339.0004.00US01
	Washington, D.C. 20004-2402	Charge this Deposit Account if any additional fee is required
		8. Deposit Account Number: 08-3038
		JSE THIS SPACE
9.	Statement and signature:	
	To the best of my knowledge and belief, the foregoing information original document.)	mation is true and correct and any attached copy is a true copy of the
	WAS I C. MULLEROON	Date: October 27, 2000
Roh	ert C. Laurenson, Reg No. 34,206	Date. October 7, 2000
-100		es including cover sheet: 6
ОМ	B No. 0651-0011 (exp. 4/94)	
		etach this portion
	Mail documents to be recorded with required cover sheet i	
/02/2	000 GTEFFERA 00000012 083038 09612828 Commissioner of	
FC:5	81 40.00 CH	Assignments
	washing	pton, D.C. 20231
	including time for reviewing the document and gathering the Send comments regarding this burden estimate to the U.S.	nated to average about 30 minutes per document to be recorded, and data needed, and completing and reviewing the sample cover sheet. Patent and Trademark Office, Office of Information Systems, PK2-gement and Budget, Paperwork Reduction Project, (0651-0011),

PATENT REEL: 011253 FRAME: 0240

ASSIGNMENT

WHEREAS, we, MICHAEL L. ROUKES, a citizen of the United States, residing at 1420 San Pasqual, Pasadena, CA 91106, FRANKLIN G. MONZON, a citizen of the United States, residing at 14800 NW Cornell Road, No. 5F, OR 97229, and MICHAEL J. MURPHY, a citizen of the United States, residing at 12 Lincoln Mill Road, Mullica, NJ 08062, have made new and useful improvements in LOCAL HALL DISPLACEMENT TRANSDUCER FOR MEMS AND NEMS, for which an application for Letters Patent of the United States was filed on July 7, 2000, as Application No. 09/612,828.

WHEREAS, CALIFORNIA INSTITUTE OF TECHNOLOGY, having a place of business at 1200 East California Boulevard, Mail Code 201-85, Pasadena, CA 91125, and who, together with its successors and assigns ("Assignee") is desirous of acquiring the title, rights, benefits, and privileges hereinafter recited.

NOW, THEREFORE, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservations:

1. Assign, transfer, and convey to Assignee the entire right, title, and interest in and to said application for Letters Patent of the United States, including all claims, if any, for infringement prior to the date of this assignment, the inventions and discoveries described therein, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications, and said Letters Patent.

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Howrey Docket No. 01339.0004.00US01 CalTech Reference No. CIT-3025

- 2. Authorize Assignee to file patent applications in any or all countries for any or all of said inventions and discoveries in our name or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise.
- 3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title, and interest therein or otherwise as Assignee may direct.
- 4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications, or patents or any license to use the same or to make, use, or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same to Assignee without encumbrance.
- 5. Bind our heirs, legal representatives, and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications, and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, our heirs, legal representatives, and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; to furnish Assignee with any and all documents, photographs, models, samples, and other physical exhibits in our control or in the control of our heirs, legal representatives, or assigns which may be useful for establishing the facts of our conception, disclosures, and reduction to practice of said inventions and discoveries; and to testify as to the same in any interference or other litigation.

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	REOF, I have hereunto set my hand and seal this 24th day of			
October, 2000.				
	Michael L. Roukes			
25				
	1			
STATE OF CALIFORNIA	GG.			
COUNTY OF LOS ANGELES	SS:			
COUNTY OF EAST INCEPEED	l			
On this day of /_	, 2000, before me personally appeared Michael			
	own to me to be the individual described in and who executed			
	duly acknowledged to me to have executed the foregoing			
instrument, and who duly acknowledged to me to have executed the same for the purpose				
therein set forth.	Tording 2			
(SEAL)				
(SEAL)				
NOTARY PUBLIC				
My Commission Expires: Feb. 27, 2002				
STATE OF CALIFORNIA				
COUNTY OF LOS ANGELES				
On October 24, 2000, before me, Penelope Wolfe, Notary Public, personally appeared Michael L. Roukes, proved to me on the basis of satisfactory evidence to be the person whose name 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 office	ial seal.			

PENELOPE WOLFE
Commission # 1172725
Notary Public - California
Los Angeles County
My Comm. Expires Feb 27, 2002

IN TESTIMONY WHEREOF, I have October. 2000.	hereunto set my hand and seal this 4 th day of		
$\vec{\overline{F}}_1$	Tanklin G. Monzon		
STATE OF OREGON COUNTY OF <u>Washington</u>	SS: 521-59-6024		
On this			
MARJENE FREILEY NOTARY PUBLIC-OREGON COMMISSION NO. 330793 MY COMMISSION EXPIRES JAN 20, 2004 NO My Commission Expires: Jan 30, 2004	TY LANSENC Treiley		

IN TESTIMONY WHEREOF I have hereunto set my hand and seal this 10 th day of October, 2000, at Cambridge, England.

Michael J. Murphy

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RECORDED: 10/30/2000

PATENT REEL: 011253 FRAME: 0245