Form PTO-1595 (Rev. 07/05)
OMB No. 0651-0027 (exp. 6/30)

11-15-2006

U.S. DEPARTMENT OF COMMERCE ited States Patent and Trademark Office

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To the Director of the U.S. Patents and Trademark Office: Please record the attached documents or the new address(es) below.				
Name of conveying party(ies)	2. Name and address of receiving party(ies):			
Edward S. Boyden and Karl Deisseroth	Name: The Board of Trustees Leland Stanford Junior University			
Additional name(s) of conveying party(ies) attached? Yes No	Internal Address:			
3. Nature of conveyance/Execution Date(s): Execution Date(s) Sept. 15, 2006 & Sept. 21, 2006 ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Joint Research Agreement ☐ Government Interest Assignment ☐ Executive Order 9424, Confirmatory License Other 4. Application number(s) or patent number(s): ☐ T	Street Address: _1705 El Camino Real City: _Palo Alto State: CA Country _USA			
A. Patent Application No.(s) 11/459,636	B. Patent No.(s):			
Additional numbers atta	ched? ☐ Yes ☒ No 6. Total number of applications and patents			
concerning document should be mailed:	involved: 1			
Name: Albert P. Halluin, Esq.	7. Total fee (37 CFR 1.21(h) & 3.41) 40.00			
Internal Address: Wilson Sonsini Goodrich & Rosati	Authorized to be charged by credit card			
Street Address: 650 Page Mill Road	Authorized to be charged to deposit account			
City: Palo Alto	☐ Enclosed			
State: CA Zip: 94304-1050	None required (government interest not affecting title)			
Phone Number: (650) 493-9300	8. Payment Information			
Fax Number: (650) 493-6811	Attorney Docket Number 13279-709.201			
Email Address: aroche@wsgr.com	Deposit account number: _23-2415 Authorized User Name Wilson Sonsini Goodrick & Rosati			
9. Signature. Signature	N/7/06 % OF			
Albert P. Halluin, Esq., Reg. No. 25,227	Total number of pages including cover — sheet, attachments, and documents:			
Name of Person Signing	· • · · · ·			
Documents to be recorded (including cover sheet) Mail Stop Assignment Recordation Services, Director of				

PATENT REEL: 018542 FRAME: 0248

		,			
· A	SSIGNMENT OF APPLICAT	rion	Docket Number 13279-709.201		
Whereas, the undersigned:					
1. Boyden, Edward S.	2. Deisseroth, Karl	3.	4.		
3477 Kenneth Drive Palo Alto, CA 94303	258 Charles Marx Way Palo Alto, CA 94304	,			
hereinafter termed "Inventors",	have invented certain new and us	eful improvements in			
	LIGHT-ACTIVATED CA	ATION CHANNEL AN	D USES THEREOF		
for which an application for United States Patent was filed on <u>July 24, 2006</u> , Application No. <u>11/459,636</u> . for which a United States Patent issued on, U.S. Patent No					
WHEREAS, The Board of Trustees Leland Stanford Junior University, having a place of business at 1705 El Camino Real, Palo Alto, California 94306, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.					
NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventors to have been received in full from said Assignee:					
1. Said Inventors do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.					
2. Said Inventors hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventors shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.					
3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, their respective heirs, legal representatives and assigns.					
4. Said Inventors hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.					
IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below:					
Date: Sep 15	2006		ed -		
		Edward S.	Boyden		

Karl Deisseroth

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PATENT REEL: 018542 FRAME: 0249

A	SSIGNMENT OF APPLICATI	ON	Docket Number 13279-709.201		
Whereas, the undersigned:		, , , , , , , , , , , , , , , , , , ,			
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for which an application for United States Patent was filed on <u>July 24, 2006</u> , Application No. <u>11/459,636</u> . for which a United States Patent issued on, U.S. Patent No					
94306, (hereinafter termed "As disclosed therein, and in and to (all collectively hereinafter term (hereinafter termed "patents") to	signee"), is desirons of acquiring the all embodiments of the invention, h ned "said invention"), and in and to thereon granted in the United States	e entire right, title and i eretofore conceived, m any and all patents, inv and foreign countries.	ousiness at 1705 El Camino Real, Palo Alto, Catifornia neerest in and to said application and the invention add or discovered jointly or severally by said Inventors centor's certificates and other forms of protection nowledged by said Inventors to have been received in full		
from said Assignee:					
1. Said Inventors do hereby sell, assign, transfer and convey unto said Assignee the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a divisional, substitution, continuation, or continuation-in-part of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.					
2. Said Inventors hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjuy to the fullest extent the right, title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventors shall include prompt production of pertinent facts and documents, giving of testimony, execution of pertinent, souths, specifications, declarations or other papers, and other assistance all to the extent decined necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation reissues and reexaminations, opposition proceedings, cancellation proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.					
3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, their respective heirs, legal representatives and assigns.					
4. Said inventors hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.					
IN WITNESS WHEREOF, said Inventors have executed and delivered this instrument to said Assignee as of the dates written below:					
Date:					
0/21/	ol.	Edward S. I	Plyson Derson		

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RECORDED: 11/07/2006

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