Form PTO-1595 (Rev. 10/02)				U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office		
OMB No. 0651-0027 (exp. 6/30/2005)	102907	737	-	-	-	
Tab settings ⇒ → , To the Honorable Commissioner of Pa	V	<u> </u>	ttached original do	cuments or copy f	hereof.	
1. Name of conveying party(ies):			address of rece			
Dun-Nian Yaung		Name:Taiwan Semiconductor Manufacturing				
		Internal Address: Co., Ltd.				
Additional name(s) of conveying party(ies) attac	hed? Yes 🖌 No					
3. Nature of conveyance:						
Assignment Merger		Street Address: No. 8, Li-Hsin Road 6				
Security Agreement Change of Name		Science Based Industrial Park, Hsin-Chu				
Other						
		City: Taiwan State: Zip: ROC 300-77				
Execution Date:12/6/04		Additional name(s) & address(es) attached? Yes 🖌 No				
	Additional numbers att		No			
5. Name and address of party to whom correspondence concerning document should be mailed: Name: Howard Chen		6. Total number of applications and patents involved:				
		7. Total fee (37 CFR 3.41)\$40.00				
Internal Address:		Enclosed				
		Authorized to be charged to deposit account				
Duane Morris LLP				·		
		8. Deposit account number:				
Street Address:		04-1679				
	Spear Tower, Suite 2000					
	94105-1104					
Spear Tower, Suite 2000 City:_San Francisco State:_CA_Zip:		THIS SPACE				
Spear Tower, Suite 2000		THIS SPACE				
Spear Tower, Suite 2000 City: San Francisco State: CA Zip:		THIS SPACE		12/9	////	
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PATENT REEL: 016073 FRAME: 0660

Express Mail ER 740516383 US [PATENT] ATTY DOCKET NO.: TSMC2004-0656(N1280-1280)

ASSIGNMENT AND AGREEMENT

For value received, I/we, Dun-Nian Yaung hereby sell(s), assign(s) and transfer(s) to Taiwan Semiconductor Manufacturing Co., Ltd., with its principal place of business located at No. 8, Li-Hsin Road 6, Science-Based Industrial Park, Hsin-Chu, Taiwan 300-77, Republic of China, and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to PINNED PHOTODIODE FABRICATED WITH SHALLOW TRENCH ISOLATION described in an application for Letters Patent of the United States filed on _, 2004 and assigned U.S. Application Number and all the rights and privileges in said application and under any and all Letters Patent and any divisions, continuations, continuations-in-part, reexamination certificates, reissues, and extensions thereof that may be granted in the United States for said inventions; and I/we also concurrently hereby sell, assign and transfer to Taiwan Semiconductor Manufacturing Co., Ltd. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

I/We authorize Taiwan Semiconductor Manufacturing Co., Ltd. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from me/us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

I/We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Taiwan Semiconductor Manufacturing Co., Ltd. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

I/We request that any and all patents for said inventions be issued to Taiwan Semiconductor Manufacturing Co., Ltd. in the United States and in all countries foreign to the United States, or to such nominees as Taiwan Semiconductor Manufacturing Co., Ltd. may designate.

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PATENT REEL: 016073 FRAME: 0661 Express Mail ER 740516383 US [PATENT] ATTY DOCKET NO.: TSMC2004-0656(N1280-1280)

I/We agree that, when requested, I/we shall, without charge to Taiwan Semiconductor Manufacturing Co., Ltd. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

Inventor No. 1: Dated: $\sqrt{\frac{12}{6}}$

V Slun-Nian Young Dun-Nian Yaung

Residence:

TSMC2004-0656 Assignment

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PATENT REEL: 016073 FRAME: 0662

RECORDED: 12/09/2004