FORM PTO-1595 (modified)	U.S. DEPARTMENT OF COMMERCE			
(Rev 6-93) R 04-0	6 - 2005 U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office			
4-1-05 (5 APR 0 1 200 B)				
To the Sirector of the United States Pate 1 202974004				
1. Name of conveying party(ies): 2. Name and address of receiving party(ies):				
, 31 , , ,	En Hallo and addition of recoming Party (1997)			
Hong Koo KIM				
Zhijun SUN	UNIVERSITY OF PITTSBURGH			
Christopher C. CAPELLI	200 Gardner Steel Conference Center			
	Thackeray & O'Hara Streets			
	Pittsburgh, PA 15260			
Additional conveying party(ies) attached?				
3. Nature of conveyance:				
ASSIGNMENT Execution Date:				
December 1, 2004, December 3, 2004 and December 1, 2004	Additional name(s) & address(es) attached?			
Application number(s) or patent number(s):				
If this is being filed together with a new application, the execution date of the ap	inlication is:			
·	predict S.			
A. Patent Application Number(s):	B. Patent Number(s):			
11/001,154				
Adless				
Additional numbers. Name and address of party to whom correspondence	ers attached? NO			
concerning document should be mailed:	6. Total number of applications/patents involved:			
Stanhan A. Dant	7. Total fee (37 C.F.R. § 3.41): \$40.00			
Stephen A. Bent FOLEY & LARDNER LLP	Check Enclosed			
Washington Harbour	ur V Channa to dancait account			
3000 K Street, N.W., Suite 500	X Charge to deposit account 8. Deposit account number: 19-0741			
Washington, D.C. 20007-5143	<u></u>			
DO NOT USE THIS SPACE				
9. Statement and signature:				
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. The				
Commissioner is hereby authorized to charge any additional recordation fees which may be required in this matter to the above-identified deposit account.				
Stephen A. Bent / CON YADAWSKY	1/1/05			
Name of person signing	Signature Date			
To	tal number of pages including cover sheet, attachments, and document: 4			

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ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

UNIVERSITY OF PITTSBURGH 200 Gardner Steel Conference Center Thackeray & O'Hara Streets Pittsburgh, PA 15260

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to this invention relating to

METALLIC NANO-OPTIC LENSES AND BEAM SHAPING DEVICES

as set forth in this United States Patent Application

check one	[X] executed concurrently herewith,	
	[] executed on	
	[] Serial No Filed	

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (a) the right to claim for any of said applications the full benefits and priority rights under the International Convention and any other international agreement to which the United States adheres; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

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PATENT REEL: 016441 FRAME: 0094 ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, relasue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, caths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner LLP the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the Interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

NAMES AND SIGNATURES OF INVENTORS				
Name: Hong Koo KIM	Signature:	Date:		
Name: Zhijun SUN	Signeture: Shiptons	Date: 12/3/04		
Name: Christopher C. CAPELLI	Signature:	Date:		
NAMES AND SIGNATURES OF WITNESSES				
Name:	Signature:	Date:		
Name:	Signature:	Date:		

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

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Name: Zhijun SUN	Signature:	Date:		
Name: Christopher C. CAPELLI	Signature:	Date: 12/1/04		
NAMES AND SIGNATURES OF WITNESSES				
Name:	Signature:	Date:		
Name:	Signature:	Date:		

RECORDED: 04/01/2005