			\mathcal{U}/\mathcal{S}
(Rev. 03/01)	3-14-2002	ET	U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
Tab settings	02015214		* _ * _
To the Honorable Commissioner of Patents and		ne attached orig	inal documents or copy thereof.
1. Name of conveying party(ies): Anthony C. Mulligan Mark J. Rigali Manish P. Sutaria Dragan Popovich Additional name of conveying party(ies) attached?	Name: Adv	anced Ceram	receiving party(ies) ics Research, Inc.
3. Nature of conveyance: 2 2 4 € △ Assignment □ Merger	·02 Street Addre	ess: <u>3292 Eas</u>	st Hemisphere Loop
☐ Security Agreement ☐ Change	of Name City: Tucsor		State: <u>AZ</u> Zip: <u>85706</u>
LJ Other Execution Date: December 14, 2001; January 23, 3 January 25, 2002 and February 18	2002;	ame(s) & add	ress(es) attached? ☐ Yes ⊠ No
4. Application number(s) or patent number(s): If this document is being filed together with a ne A. Patent Application No.(s) 10/005,084		on data of the tent No.(s)	application is:
Additional	numbers attached? Ye	s 🛛 No	
Name and address of party to whom correspond concerning this document should be mailed:	dence 6. Total nun	ber of applicat	tions and patents involved: 1
Name: Rebecca P. Rokos, Esq.	7. Total fee	(37 CFR 3.41)	\$ <u>40</u>
Internal Address: Banner & Witcoff, Ltd.	End	closed	
Suite 3000	⊠ Aut	horized to be o	charged to deposit account
	8. Deposit a	account number	or:
Street Address: 10 South Wacker Drive	01-0850		
City: Chicago State: IL Zip: 6	(Attach dup	licate copy of	this page if paying by deposit account)
	DO NOT USE THIS SPAC	E	M-11 No. EL 044246505 LIS
Statement and signature.			Express Mail No. EL 941346505 US
To the best of my knowledge and belief, the foreg the original document.	oing information is true an	d correct and	any attached copy is a true copy of February 26, 2002
Rebecca P. Rokos Name of Person Signing	Signature		Date

Total number of pages including cover sheet, attachments, and documents: 5 Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

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PATENT REEL: 012658 FRAME: 0095

ASSIGNMENT

03248.00038 Case No.:

Inventors: Address(es): ¹ Anthony C. Mulligan 7944 Sombrero Peak Road

² Mark J. Rigali 517 S. Rosemont ³ Manish P. Sutaria

Tucson, Arizona 85743

Tucson, Arizona 85711 U.S.A.

2200 Ben Franklin Parkway, #W809 Philadelphia, Pennsylvania 19130 U.S.A.

U.S.A.

⁴ Dragan Popovich

13601 South 44th Street 5954 WEST GREENLY RO. # 280

Phoenix, Arizona 85044 GLENDALE, A7 85366

U.S.A.

Date of Execution of Application: 12/14/2002, 01/23/2002, 01/25/2002 and 02/18/2002

Filing Date of Application: December 4, 2001

Serial No.: 10/005,084

In consideration of One Dollar (\$1.00) and other good and valuable considerations in hand paid, the receipt and sufficiency whereof are hereby acknowledged, the undersigned hereby assign to:

Advanced Ceramics Research, Inc. of Tucson, Arizona

its successors and assigns, the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States, entitled:

ALIGNED COMPOSITE STRUCTURES FOR MITIGATION OF IMPACT DAMAGE AND RESISTANCE TO WEAR IN DYNAMIC ENVIRONMENTS

and identified as:

Case No. 03248.00038

in the offices of Banner & Witcoff, Ltd. and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any reissue or extension of such patents, and further assigns to said assignee the priority right provided by the International Convention.

The undersigned hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

The undersigned hereby authorize and request the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known, and the date of execution of the application.

The undersigned warrant themselves to be the owners of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrant that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations the undersigned hereby agree, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all divisional, continuation and substitute applications for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, that said assignee, its

Banner & Witcoff, Ltd.

Page 1 of 3

PATENT REEL: 012658 FRAME: 0096 successors or assigns may deem necessary or expedient, and for the said considerations the undersigned authorize said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agree, upon the request of said assignees, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignees, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignees, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date: 77 (4, 2001	Southon Mully
State of Arizona)	Anthony C. Mulligan
County of Pima) ss:	
Date: OFFICIAL SEAL JUDITH A. DRESCHER PINAL GOUNTY State of Arizona State of Arizona State of Pima State of Pima State of Pima OFFICIAL SEAL JUDITH A. DRESCHER PINAL GOUNTY State of Arizona State of Arizona OSS: County of Pima	My Commission Expires: 4-7-2006 Mark J. Rigali
This 23 day of JANUALY Rigali, to me personally known as the individual who that he/she executed the same of his/her own free will OFFICIAL SEAL JUDITH A. DRESCHER Date: PIN 2001 OUNTY PIN 2001 OUNTY State of Pennsylvania) ss: County of Philadelphia	200), before me personally came the above-named, Mark J. executed the foregoing assignment, who acknowledged to me I for the purposes herein set forth. Notary Public My Commission Expires: 4-1-2006 Manish P. Sutaria
	2001, before me personally came the above-named, Manish P. ho executed the foregoing assignment, who acknowledged to me ill for the purposes herein set forth.
	Notary Public My Commission Expires:

successors or assigns may deem necessary or expedient, and for the said considerations the undersigned authorize said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agree, upon the request of said assignees, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignees, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignees, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date: 77 (4, 2001	Suthan Mully
State of Arizona)	Anthony C. Mulligan
) ss: County of Pima)	
This day of C. Mulligan, to me personally known as the indito me that he/she executed the same of his/her or	2001, before me personally came the above-named, Anthony ividual who executed the foregoing assignment, who acknowledged wn free will for the purposes herein set forth.
	Notary Public My Commission Expires:
Date:, 2001	Mark J. Rigali
State of Arizona)) ss: County of Pima)	
This day of Rigali, to me personally known as the individua that he/she executed the same of his/her own fre	2001, before me personally came the above-named, Mark J. I who executed the foregoing assignment, who acknowledged to me se will for the purposes herein set forth.
	Notary Public My Commission Expires:
Date: 125/202, 2001 State of Pennsylvania	Manish P. Sutaria
Middlesex 1 ss.	2001 before me personally came the above-named, Manish P. al who executed the foregoing assignment, who acknowledged to me ree will for the purposes herein set forth.
	My Commission Expires: JANICE CHIN, Notary Public Commonwealth Of Massachussetts My Commission Expires Oct. 18, 2007
Banner & Witcoff, Ltd.	Page 2 of 3

Page 2 of 3

Date:	Feb	18,	, 200 7_
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State of Arizona			

) ss: County of Maricopa

2001, before me personally came the above-named, Dragan day of 上 Popovich, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he/she executed the same of his/her own free will for the purposes herein set forth.

My Commission Expires: (

CLETA M. HAND lotary Public - Artzona Maricopa County ly Comm. Expires Oct 10, 2003

Banner & Witcoff, Ltd.

RECORDED: 02/26/2002

Page 3 of 3

PATENT REEL: 012658 FRAME: 0099