



**ASSIGNMENT**

Attorney Docket No.: 003248.00093

Inventors: <sup>1</sup> K. Ranji Vaidyanathan  
Addresses: 2301 N. Sarnoff Drive  
Tucson, Arizona 85715  
U.S.A.

<sup>2</sup> Alfonso Ortega  
4050 E. Bujia Primera  
Tucson, Arizona 85718  
U.S.A.

<sup>2</sup> Marlene Platero  
3600 West Sunbonnet Place  
Tucson, Arizona 85742  
U.S.A.

Inventors: <sup>4</sup> Prathib Skandakumaran  
Addresses: 5420 East Paradise Lane  
Scottsdale, Arizona 85254  
U.S.A.

<sup>5</sup> Chad Bower  
2255 W. Orange Grove Rd.,  
#17206  
Tucson, Arizona 85741  
U.S.A.

Date of Execution of Application:  
Filing Date: January 28, 2004  
U.S. Application No. 10/767,483

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

**Advanced Ceramics Research, Inc. of Tucson, Arizona**, having a place of business at 3292 East Hemisphere Loop, Tucson, Arizona 85706

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:

**MICROCHANNEL HEAT EXCHANGERS AND METHODS OF MANUFACTURING THE SAME**

and identified as:

**Case No. 03248.00093**

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 other, 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

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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 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.

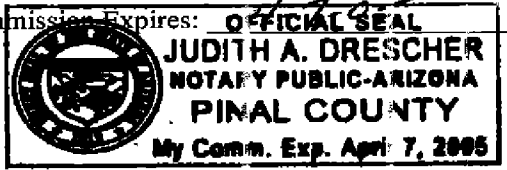
Date: August 1st, 2004

K. Ranji Vaidyanathan  
K. Ranji Vaidyanathan

State of Arizona )  
County of ~~Pima~~ PINAL ) ss:

This 1st day of August 2004, before me personally came the above-named, K. Ranji Vaidyanathan, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

Judith A. Drescher  
Notary Public

My Commission Expires: April 7, 2005  


Date: \_\_\_\_\_, 2004

Alfonso Ortega

State of Arizona )  
County of Pima ) ss:

This \_\_\_\_\_ day of \_\_\_\_\_ 2004, before me personally came the above-named, Alfonso Ortega, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

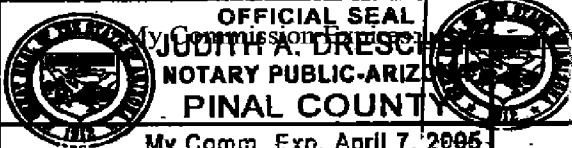
Date: August 1st, 2004

Marlene Platero  
Marlene Platero

State of Arizona )  
County of ~~Pima~~ PINAL ) ss:

This 1st day of August 2004, before me personally came the above-named, Marlene Platero, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that she executed the same of her own free will for the purposes herein set forth.

Judith A. Drescher  
Notary Public

My Commission Expires: April 7, 2005  


Banner & Witcoff, Ltd.

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 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 assignee, 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: \_\_\_\_\_, 2004

\_\_\_\_\_  
K. Ranji Vaidyanathan

State of Arizona )  
                          ) ss:  
County of Pima    )

This \_\_\_\_\_ day of \_\_\_\_\_ 2004, before me personally came the above-named, K. Ranji Vaidyanathan, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

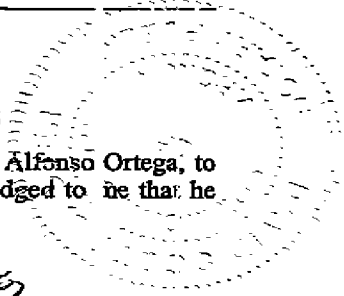
Date: Oct 26, 2004

Alfonso Ortega  
Alfonso Ortega

State of Arizona )  
                          ) ss: 467 04 9315  
County of Pima    )

My Comm. Exps. 4/30/08

This 26 day of October 2004, before me personally came the above-named, Alfonso Ortega, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.



David S. H.  
Notary Public

My Commission Expires: 4/30/08

Date: \_\_\_\_\_, 2004

\_\_\_\_\_  
Marlene Platero

State of Arizona )  
                          ) ss:  
County of Pima    )

This \_\_\_\_\_ day of \_\_\_\_\_ 2004, before me personally came the above-named, Marlene Platero, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that she executed the same of her own free will for the purposes herein set forth.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

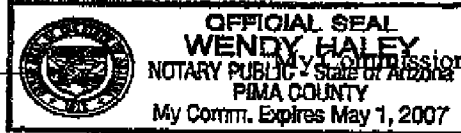
Date: September 26, 2004

Prathib Skandakumaran  
Prathib Skandakumaran

State of Arizona )  
County of Maricopa ) ss:

This 16<sup>th</sup> day of September 2004, before me personally came the above-named, Prathit Skandakumaran, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

Wendy Haley  
Notary Public



Expires: May 1, 2007

Date: \_\_\_\_\_, 2004

\_\_\_\_\_  
Chad Bower

State of Arizona )  
County of Pima ) ss:

This \_\_\_\_\_ day of \_\_\_\_\_ 2004, before me personally came the above-named, Chad Bower, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

Date: \_\_\_\_\_, 2004

\_\_\_\_\_  
Prathib Skandakumaran

State of Arizona )  
                          ) ss:  
County of Maricopa )

This \_\_\_\_\_ day of \_\_\_\_\_ 2004, before me personally came the above-named, Prathib Skandakumaran, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

Date: Oct 11<sup>th</sup>, 2004

Chad Bower  
Chad Bower

State of Arizona )  
                          ) ss:  
County of Pima )



This 11<sup>th</sup> day of October 2004, before me personally came the above-named, Chad Bower, to me personally known as the individual who executed the foregoing assignment, who acknowledged to me that he executed the same of his own free will for the purposes herein set forth.

My Commission Expires: Oct 30, 2006

Marga R. Gamas  
Notary Public