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	Name Donald K. Smith 08/21/1997							
	Name	Name Xing Chen				08/22/1997		
	Name	William M. Holber				08/25/1997		
	Name	Eric Georgelis				08/22/1997		
	Name	[						
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Area Code and Telephone Number       [617] 526-9600         Name       Patent Administrator         Address (line 1)       Proskauer Rose LLP         Address (line 2)       One International Place         Address (line 3)       14 <sup>th</sup> Floor         Address (line 4)       Boston, MA 02110-2600         Pages       Enter the total number of pages of the attached conveyance document including any attachments.         Application Number(s) or Patent Number(s)       Mark if additional numbers for the same property).         Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).         Patent Application Number (S)       Patent Number(s)         Patent Application Number (PCT)       Patent Number(s)         Patent Xooperation Treaty (PCT)       PCT         Enter PCT application number       PCT         Only if a U.S. Application Number       PCT         Port       PCT         Port       PCT         Pottart Cooperation Treaty (PCT)       PCT         Enter PCT application number       PCT         Pottart Cooperation Treaty (PCT)       PCT         Enter the total number of properties listed (37 CFR 3.41):       \$ 40.00         Method of Payment:       Enclosed       Deposit Account Mumber         Core of Properties	-	PATENT						
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> PATENT REEL: 015962 FRAME: 0989



## **ASSIGNMENT**

WHEREAS, We, Donald K. Smith, Xing Chen, William M. Holber and Eric Georgelis have invented one or more improvements in:

## TOROIDAL LOW-FIELD REACTIVE GAS SOURCE

described in an application (or provisional application) for Letters Patent of the United States:

identified by Attorney Docket No. , and/or executed by us of even date herewith and about to be filed in the United States Patent Office;

Serial No. <u>08/883,281</u> filed in the United States Patent Office on June 26, 1997; and State of Delaware (ac 9/46) WHEREAS, Applied Science and Technology, Inc. (hereinafter "ASSIGNEE"), a corporation

WHEREAS, Applied Science and Technology, Inc. (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having a usual place of business at 35 Cabot Road, Woburn, Massachusetts 01801 desires to acquire an interest therein, in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the inventions described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue thereon or claim priority under international convention; said inventions, applications and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all of our rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said inventions, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all Letters Patent to ASSIGNEE for its own name as assignee of our entire right, title and interest therein.

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns, and legal representatives, but at its or their expense and charges, including: the execution of applications for patents in foreign countries; the execution of substitution, reissue, divisional or continuation applications; and preliminary or other statements or the giving of testimony in any interference or other proceeding in which said inventions or any application or patent directed thereto may be involved; and we further hereby authorize ASSIGNEE or its attorneys or agents to insert the correct serial number and filing date into this assignment, if none is indicated on that date of our execution of this assignment;

## PATENT REEL: 015962 FRAME: 0990

Joint Assignment Page 2

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor: Donald K. Smith

Commonwealth of Massachusetts ) County of Midlebuck ) ss

Subscribed and sworn to before me, by the above-named Donald K. Smith this  $21^3$  day of  $41^3$  day of 1997.

Notary Public Han Calogger My Commission E Polary Public Commission Expires May 22,11 958 Inventor: Xing Ch

Commonwealth of Massachsetts ) County of Hiddlauge ) ss

Subscribed and sworn to before me, by the above-named Xing Chen this <u>22</u> day of <u>August</u>, 1997.

Area Ann Calopporo Holary Public My Commission Expires May 22, 1998

**Joint Assignment** Page 3

Inventor:

. Ah

William M. Holber

**Commonwealth of Massachusetts** County of Hiddlesey

) ) ss

Subscribed and sworn to before me, by the above-named William M. Holber this  $25^{rh}$  day of \_\_\_\_\_, 1997.

alog Notary Public My Commission Expires: My Commission Expires: My Commission Expires May 22, 1998 Inventor: <u>Unic</u> <u>Inory</u> <u>Inory</u>

**Commonwealth of Massachsetts** ) County of Middle Sex ) ss

Subscribed and sworn to before me, by the above-named Eric Georgelis this \_\_\_\_\_ nd day of , 1997. ust chaloggero C otary Biblic Ann ŧ, My Commiss BatEspiles lie

My Commission Expires May 22, 1998

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**RECORDED: 11/10/2004**