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(Rev 6-93)

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U.S. DEPARTMENT OF COMMERCE

RECORDATION FORM COVER SHEET

Patent and Trademark Office

7.29.01 **PATENTS ONLY** To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copies thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): Gary J. Stiegel Arun C. Bose Argonne National Laboratory Uthamalingam Balachandran 9700 South Cass Avenue Stephen E. Dorris Argonne, IL 60439 Tae-Hyun Lee Additional conveying party(ies) NO 3. Nature of conveyance: ASSIGNMENT **Execution Date:** NO 4/6, 5/9 and 6/1/00Additional name(s) & address(es) attached? 4. Application number(s) or patent number(s): If this is being filed together with a new application, the execution date of the application is: B. Patent Number(s): A. Patent Application Number(s): 09/590,460 Additional numbers attached? NO 5. Name and address of party to whom correspondence 6. Total number of applications/patents involved: concerning document should be mailed: \$40.00 7. Total fee (37 C.F.R. § 3.41): Mark A. Kassel Check Enclosed Х FOLEY & LARDNER Charge to deposit account 150 East Gilman Street 06-1447 Madison, Wisconsin 53703-1481 8. Deposit account number:

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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.

Mark A. Kassel

March 27, 2001

Name of person signing 2001 April 12 19000 2 (9090) Signature

Date

Total number of pages including cover sheet, attachments, and document:

ASSIGNMENT

We, Uthamalingam Balachandran of Hinsdale, Stephen E. Dorris of LaGrange Park, and Tae-Hyun Lee of Naperville, all in the State of Illinois, for good and valuable consideration to us in hand paid, the receipt and sufficiency whereof is hereby acknowledged, have sold, assigned, conveyed and set over, and do hereby sell, assign, convey and set over unto THE UNIVERSITY OF CHICAGO, an Illinois corporation, organized under the laws of the State of Illinois, having a place of business at 5801 South Ellis Avenue, Chicago, Illinois 60637, its successors and assigns, the entire right, title and interest in and to all subject matter invented or designed by us and disclosed in the patent application for the "METHOD OF GENERATING HYDROGEN BY CATALYTIC DECOMPOSITION OF WATER", ANL Case No. ANL-IN-99-015, executed by us on the date hereinafter set forth, and any divisions and continuations thereof and in and to all Letters Patent of the United States, including any reissues and extensions thereof that may be obtained therefor, and the right, where such right can be legally exercised, in its own name to apply for and obtain Letters Patent, Inventor's Certificates, Utility Models and Designs, in countries foreign to the United States, including the full right to claim for any such application the benefits of the International Convention as fully and entirely as we could have done if the application had been in our names, and the entire interest in any Letters Patent, Inventor's Certificate, Utility Model or Design which may be granted on any such application in such foreign country; and we hereby authorize and request the Commissioner of Patents and Trademarks of the United States, and any official of any country or countries foreign to the United States whose duty it is to issue Letters Patent, Inventors Certificates, Utility Models or Designs, on applications as aforesaid, to issue any and all Letters Patent, Inventor's Certificates, Utility Models and Designs that may be granted for said invention to said UNIVERSITY OF CHICAGO, its successors and assigns.

And for the above-named considerations, we hereby agree that we will without additional compensation but without cost to ourselves, promptly communicate to said UNIVERSITY OF CHICAGO, its successors and assigns, any facts known to us respecting said invention whenever requested, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications for Letters Patent, Inventor's Certificates, Utility Models and Designs and assignments thereof, make all rightful oaths and generally do everything possible to aid said assignee, its successors and assigns, as and when requested by them, in obtaining and enforcing proper Letters Patents, Inventor's Certificate, Utility Model and Design protection for said invention or inventions and improvements, in the United States and in all other countries.

Dated: Jus	ne 01,200	Undgen Barran.
Dated: <u>∠</u>	,	Ataphon E. Devo
Dated: 6/		The Lea
STATE OF IL	LINOIS)) ss DU PAGE)	
On this	_ day of	_, 2000, before me a Notary Public in and for the County and State, who are personally known to me to be the same persons whose names and acknowledged that they executed same instrument as their free and therein expressed.
WITNESS my	y hand and seal the day and ve	Muriam & Higar Notary Public
M	MIRIAM R. LEGAN STARY PUBLIC, STATE OF ILLING	Notary Public

MY COMMISSION EXP. 18/9/2005

PATENT REEL: 011656 FRAME: 0427 Joint

U.S. DEPARTMENT OF ENERGY PATENT ASSIGNMENT FORM



WHEREAS, we, Arun C. Bose and Gary J. Stiegel, citizens of the United States residing in Pittsburgh, County of Allegheny, State of Pennsylvania; and in Library, County of Washington, State of Pennsylvania; have invented certain new and useful improvements in METHOD OF GENERATING HYDROGEN BY CATALYTIC DECOMPOSITION OF WATER, for which we are about to file an application for United States Letters Patent identified as S-92,275 and ANL-IN-99-015; and executed by us on _______; and;

WHEREAS, the Government of the United States desires to acquire the entire right, title, and interest in and to the said invention and in and to any Letters Patent wherever they may be issued thereon;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar to us in hand paid by the Government of the United States, and for other good and valuable consideration, the receipt of which is hereby acknowledged, we by these presents do sell, assign, and transfer unto the said Government of the United States, as represented by the United States Department of Energy and/or its assigns, the entire right, title, and interest in and to the said invention and in and to any and all Letters Patent wherever they may be granted thereon as well as reissues and extensions of said Letters Patent, the same to be held and enjoyed by the said Government of the United States to the full end of the term or terms for which Letters Patent are or may be granted, reissued, or extended, as fully and entirely as the same would have been held or enjoyed by us had this assignment not been made.

We agree to make, execute, and deliver unto the Government of the United States, or to the United States Department of Energy, any and all papers, documents, affidavits, renewal, divisional and reissue applications, statements, or other instruments in such usual or other forms, terms, and contents as may be required by the United States Department of Energy or its duly authorized representative, in or incident to the prosecution or conduct of any and all applications, before as well as after the issuance of any Letters Patent thereon, or in the adjustment or settlement of any interferences or other actions or proceedings that said applications may encounter or in which they may become involved, and we agree that we will aid the Government of the United States in every way in protecting the invention as may be requested by the United States Department of Energy or its assigns, except that any expenses arising through extending such assistance will be paid for by proper arrangement with the Government of the United States.

WITNESS:
One C Murlaf

INVENTOR.

CEAT

DATE

TE 05/09/a

PATENT REEL: 011656 FRAME: 0428

WITNESS: Aux C. Dunlap	INVENTOR: Stugel (SEAL) DATE 4-26-60
Approved and consented to this	day of, 19
ATTEST:	
(SEAL)	Ву
Accepted for the Benefit of the Governme	Itsent of the United States.
	UNITED STATES DEPARTMENT OF ENERGY
WITNESS:	Assistant General Counsel for Technology Transfer and Intellectual Property

RECORDED: 03/29/2001

PATENT REEL: 011656 FRAME: 0429