

FORM PTO-1619A  
Expires 06/30/99  
OMB 0651-0027

A/D 581-40

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05-18-2004

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U.S. Department of Commerce  
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PATENT

## Correspondent Name and Address

Area Code and Telephone Number 303/384-7575

Name Paul J. White

Address (line 1) Senior Patent Counsel

Address (line 2) National Renewable Energy Laboratory

Address (line 3) 1617 Cole Boulevard

Address (line 4) Golden, CO 80401

## Pages

Enter the total number of pages of the attached conveyance document including any attachments.

# 4 pages

## Application Number(s) or Patent Number(s)

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## Patent Application Number(s)

## Patent Number(s)

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If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

## Patent Cooperation Treaty (PCT)

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## Number of Properties

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# One (1)

## Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

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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. Charges to deposit account are authorized, as indicated herein.

Paul J. White

Name of Person Signing

Signature

January 29, 2004

Date

## ASSIGNMENT

WHEREAS, We, Qi Wang of of 8552 S. Miller Court, Littleton, County of Jefferson, State of Colorado; and Eugene Iwaniczko of 1102 Alsace Way, Lafayette, County of Jefferson, State of Colorado; and having invented certain new and useful improvements in **Method and Apparatus for Fabricating a Thin-Film Solar Cell Utilizing a Hot Wire Chemical Vapor**, which we are about to make application for Letters Patent of the United States, said application being identified as NREL IR No. 01-03 and; executed concurrently herewith; and;

WHEREAS, we now own the entire right, title and interest therein; and

WHEREAS, Midwest Research Institute, of 425 Volker Blvd., Kansas City, Missouri 64110, a corporation fully organized and existing under the laws of the State of Missouri is desirous of acquiring the entire right, title, and interest therein and thereto;

NOW THEREFORE, be it known that for good and other consideration to us in hand paid, the receipt of which is hereby acknowledged, we, the said Qi Wang and Eugene Iwaniczko by these presents do sell, assign, and transfer unto the said Midwest Research Institute, its successors, legal representatives and assigns, our entire right, title, and interest in and to said invention and the aforesaid application, for the United States of America and for all foreign countries and to all Letters Patents, continuations and reissues, and extensions to be obtained therefor; and we further agree to cooperate with the assignee hereunder in the obtaining and sustaining of any and all such Letters Patent, but at the expense of said assignee.

The Commissioner of Patents is hereby authorized and requested to issue the Letters Patent solely in accordance with the terms of this assignment to Midwest Research Institute, its successors, legal representatives and assigns, as the assignee of the entire right, title and interest therein.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal on the date set

forth hereinafter.

*[Signature]*  
Witness  
*[Signature]*  
Witness

*[Signature]*  
Qi Wang  
*[Signature]*  
Eugene Iwaniczko

COUNTY OF JEFFERSON       )  
  )  
STATE OF COLORADO        )

Before me, a Notary Public in and for the said County and State, personally appeared Qi Wang and Eugene Iwaniczko are known to me to be the persons whose names are subscribed to the foregoing, and acknowledged to me that they executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this 29th day of January 2004.

My commission expires: October 4, 2005.

[Seal]

*[Signature]*  
Brenda E. Brantley  
Notary Public  
State of Colorado  
My Commission Expires 10/4/2005

Approved and consented to this 29th day of January 2004.

ATTEST:

*[Signature]*

MIDWEST RESEARCH INSTITUTE

By *[Signature]*  
Paul J. White, Reg. No. 30,436  
Its Senior Patent Counsel