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OMB No. 0651-0027 (exp. 6/30/2008)U.S. DEPARTMENT OF COMMERCE  
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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

## 1. Name of conveying party(ies)

Mau-Song Chou;  
Jonathan W. Arenberg;  
Andy Christensen;  
Luke Sollitt.Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party(ies)

Name: Northrop Grumman Corporation

Internal Address: \_\_\_\_\_

Street Address: 1840 Century Park East

City: Los Angeles

State: California

Country: \_\_\_\_\_ Zip: 90067-2199

Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 3. Nature of conveyance/Execution Date(s):

Execution Date(s) September 9, 2005

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

## 4. Application or patent number(s):

☒ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address to whom correspondence concerning document should be mailed:

Name: PATENT COUNSEL

Internal Address: Northrop Grumman Corporation

Space Technology - Law Dept.

Street Address: One Space Park, Bldg. E1/2041

City: Redondo Beach

State: California Zip: 90278

Phone Number: (310) 813-1550

Fax Number: (310) 812-2687

Email Address: scot.hewitt@ngc.com

## 6. Total number of applications and patents involved: 1

## 7. Total fee (37 CFR 1.21(h) &amp; 3.41) \$ 40.00

- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

## 8. Payment Information

a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_

b. Deposit Account Number 14-1325

Authorized User Name \_\_\_\_\_

## 9. Signature:

Signature

September 12, 2005

Date

09/21/2005

DETRME

00000219 141325

Scot R. Hewitt, Reg. No. 35,191

Name of Person Signing

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

3

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Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450PATENT  
REEL: 016999 FRAME: 0228

# ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we Mau-Song Chou, Jonathan W. Arenberg, Andy Christensen and Luke Sollitt respectively, of Rancho Palos Verdes, California, Santa Monica, California, Fountain Valley and Pasadena, California, do hereby sell and assign to Northrop Grumman Corporation, 1840 Century Park East, Los Angeles, California 90067-2199, a Delaware corporation, its successors and assigns, the entire right, title and interest in and to the improvements in **LASER DESORPTION AND THERMAL EMISSION SPECTROSCOPY FOR CHEMICAL ANALYSIS OF CRYOGENIC SURFACES** which has been invented by us, as described in the application for United States Patent which we executed respectively, on Sept. 9, 2005, Sept 9, 2005, Sept. 9, 2005 and SEPT. 9, 2005, and any and all applications for patent and patents therefor in any and all countries, including all divisions, reissues, continuations, and extensions thereof, and the right to claim the priority date of the first filed application in the United States, and authorize and request any official whose duty it is to issue patents, to issue any patent on said improvements or resulting therefrom to said Northrop Grumman Corporation, or its successors or assigns, and agree that on request and without further consideration, but at the expense of Northrop Grumman Corporation, we will communicate to Northrop Grumman Corporation or its representatives or nominees any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and generally do everything possible to aid Northrop Grumman Corporation, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

Date: Sept. 9, 2005Inventor: Mau-Song Chou  
MAU-SONG CHOUDate: Sept 9 2005Inventor: Jonathan W. Arenberg  
JONATHAN W. ARENBERGDate: Sept 9, 2005Inventor: Andy Christensen  
ANDY CHRISTENSENDate: SEPT. 9, 2005Inventor: Luke Sollitt  
LUKE SOLLITT