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UNIVERSITY OF FLORIDA
FA9550-04-1-0367

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

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Execution Date(s) 4 Jan 05

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

2. Name and address of receiving party(ies)

Name: United States Air Force

Internal Address: AFOSR/JA

Street Address: 875 N. Randolph St

Suite 325, Rm 3112

City: Arlington

State: VA

Country: USA Zip: 22203

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

4. Application or patent number(s):

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

A. Patent Application No.(s)

10/914,615

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: United States Air Force

Internal Address: AFOSR/JA

Street Address: 875 N. Randolph St

Suite 325, Rm 3112

City: Arlington

State: VA Zip: 22203

Phone Number: (703) 696-9500

Fax Number: (703) 696-7360

Email Address: raymond.marlow@afosr.af.mil

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 0

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

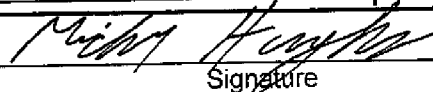
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Signature

17 Aug 05
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MICHAEL D. HUGHES, Capt, USAF, Deputy Staff Judge Advocate

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P.3/11

License to the United States Government

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Invention Title: Low Friction And Ultra Low Wear Polymer/Polymer Nanocomposite UF# 11603

Inventor(s): Wallace Gregroy Sawyer, David Lawrence Burris

U.S. Filing/Issue Date: _____

Patent or Application Serial No.: 10/914,615

Grant/Contract Number(s): FA9550-04-1-0367

Foreign Applications filed/intended in (countries): _____

The invention identified above is a Subject Invention under **35 U.S.C. 200, et seq.**, and the Standard Patent Rights clause at **37 CFR 401.14, FAR 52.227-11** or **FAR 52.227-12** (if applicable) which are included among the terms of the above identified grant or contract award from the United State Government. This document is confirmatory of:

1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations that are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the above-identified patent application.

Signed this 4th day of January, 2005.
By David L. Day (Name of Grantee/Contractor Official) David L. Day (Signature)

Title Director

For UNIVERSITY OF FLORIDA
(Grantee/Contractor Organization)

At P.O. Box 115500 310 Walker Hall Gainesville, FL 32611 U.S.A.
(Business Address)

LOW FRICTION AND LOW WEAR POLYMER/POLYMER COMPOSITES

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] Not applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] The United States Government may have certain rights to this invention pursuant to an Air Force Office of Scientific Research-Multidisciplinary University Research Initiative URI (AFOSR-MURI) contract.

FIELD OF THE INVENTION

[0003] The invention relates to polymer/polymer composites, more specifically to low wear polymer/polymer composites.

BACKGROUND OF THE INVENTION

[0004] Solid lubrication offers many benefits over conventional oil-based hydrodynamic and boundary lubrication. Solid lubrication systems are generally more compact and less costly than oil lubricated systems since pumps, lines, filters and reservoirs are usually required in oil lubricated systems. Greases can contaminate the product of the system being lubricated, making it undesirable for food processing and both grease and oil outgas in vacuum precluding their use in space applications. One of the primary goals of a solid lubricant is obtaining low friction.

[0005] Polytetrafluoroethylene (PTFE) is known by the trade name TEFLON®. PTFE is well known as a low friction material and has thus received much attention for use as a solid