505338425 02/21/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5385206

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	EXECUTIVE ORDER 9424, CONFIRMATORY LICENSE

CONVEYING PARTY DATA

Name	Execution Date
UT-BATTELLE, LLC	01/28/2019

RECEIVING PARTY DATA

Name:	U.S. DEPARTMENT OF ENERGY	
Street Address:	1000 INDEPENDENCE AVE., SW	
City:	WASHINGTON	
State/Country:	D.C.	
Postal Code:	20585	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16197457

CORRESPONDENCE DATA

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NAME OF SUBMITTER:	BRENDA BANKS
SIGNATURE:	/BRENDA BANKS/
DATE SIGNED:	02/21/2019

Total Attachments: 1

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PATENT 505338425 REEL: 048391 FRAME: 0554

CONFIRMATORY LICENSE

Title:

Quantum Key Distribution Using a Thermal Source

Inventor(s):

Bing Qi, Philip G. Evans, and Warren P. Grice

Serial No.:

16/197,457

Filing Date (U.S.)

November 21, 2018

Contractor:

UT-Battelle, LLC

DOE Contract No.: DE-AC05-00OR22725

The invention identified above is a "Subject Invention" under the above-numbered contract. A copy of the provision of the above-numbered contract (certified on 04-13-00) governing patent rights in the Subject Invention at the time the invention was made, has been submitted to the U. S. Department of Energy.

The Contractor hereby confirms that under the provisions of the above-numbered contract governing patent rights, it has granted to the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world. This license applies to the invention in the above-identified patent application and any and all divisions or continuations thereof and any resulting patent or reissue patent which may be granted thereon.

It is understood and agreed that this document does not preclude the Government from asserting rights under the provisions of said contract or any other agent between the Government and the Contractor, or any other rights of the Government with respect to the above-identified invention.

The Contractor hereby grants the Government an irrevocable power to inspect and make copies of the above-identified application.

Signed this 28 day of 1

UT-Battelle, LLC

By

Michael J. Paulus

Director, Office of Technology Transfer

and Alanh

PATENT REEL: 048391 FRAME: 0555

RECORDED: 02/21/2019