

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT3689735

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| SUBMISSION TYPE: | NEW ASSIGNMENT | |
| NATURE OF CONVEYANCE: | ASSIGNMENT | |
| CONVEYING PARTY DATA | | |
| Name | | Execution Date |
| LOUISIANA TECH UNIVERSITY RESEARCH FOUNDATION, A DIVISION OF LOUISIANA TECH UNIVERSITY FOUNDATION, INC. | | 09/24/2015 |
| RECEIVING PARTY DATA | | |
| Name: | LOUISIANA TECH RESEARCH CORPORATION | |
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| PROPERTY NUMBERS Total: 2 | | |
| Property Type | Number | |
| Application Number: | 14209754 | |
| Application Number: | 14746508 | |
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| NAME OF SUBMITTER: | LANCE A. FOSTER | |
| SIGNATURE: | /lance a. foster/ | |
| DATE SIGNED: | 01/11/2016 | |
| Total Attachments: 9 | | |
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PATENT ASSIGNMENT

This Patent Assignment ("Assignment") is entered into, with an effective date of September 24, 2015, between **LOUISIANA TECH RESEARCH CORPORATION** ("ASSIGNEE"), 900 Tech Drive, Ruston, LA 71270, **THE LOUISIANA TECH UNIVERSITY RESEARCH FOUNDATION, A DIVISION OF THE LOUISIANA TECH UNIVERSITY FOUNDATION, INC.** ("ASSIGNOR"), 900 Tech Drive, Ruston, LA 71270, and **LOUISIANA TECH UNIVERSITY**, 900 Tech Drive, Ruston, LA 71270.

Whereas ASSIGNOR is the owner of the patents and patent applications listed in Schedule A attached hereto ("Assigned Patents");

Whereas ASSIGNOR and ASSIGNEE believe that transferring title of the Assigned Patents to ASSIGNEE will further their mission of technology transfer in relation to Louisiana Tech University;

Therefore, for the consideration stated above, ASSIGNOR hereby sells, assigns, transfers and conveys to ASSIGNEE, and the successors, assigns and legal representatives of the ASSIGNEE, the entire right, title and interest, for all the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, to the patents and patent applications listed in Schedule A, including the inventions which are the subject thereof. This assignment includes all patents to be obtained for said inventions and improvements thereof, by any non-provisional, continuation, continuations-in-part, division, renewal, substitute, re-issue or re-examination application thereof.

For clarity, this Assignment encompasses the patents and application in Schedule A regardless of whether the owner is identified as (i) Louisiana Tech University Research Foundation, A Division Of The Louisiana Tech University Foundation, Inc. or (ii) Louisiana Tech University Foundation, Inc.

To the extent that Louisiana Tech University has any ownership rights in the Assigned Patents, Louisiana Tech University hereby sells, assigns, transfers and conveys to ASSIGNEE the entire right, title and interest, for all the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, to the patents and patent applications listed in Schedule A.

IN WITNESS WHEREOF, the below parties have executed this Assignment with the effective date referenced above.

ASSIGNEE:

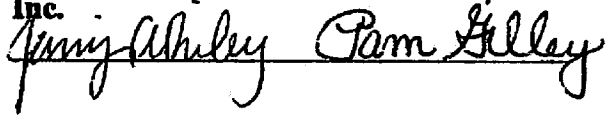
Louisiana Tech Research Corporation



Name: James Davison

ASSIGNOR:

**Louisiana Tech University Foundation,
Inc.**



Name: Jennifer A. Riley Pam Gilley

Louisiana Tech University



Name: Leslie K. Guice

SCHEDULE A

Issued US Patents

| ROI | Patent No | Title | Issue date |
|--------------------|-----------|--|------------|
| 2005-13 | 8,084,159 | Method and Apparatus to Relate Biometric Samples to Target FAR and FRR with predetermined Confidence Levels | 8/23/2015 |
| 2007-06 | 8,000,768 | Pipe Survey Method Method using UWB Signal | 4/7/2015 |
| 2008-02 2011-04 | 8,952,706 | Universal Impedance Probe for detection of side connections through thermoplastics, thermosetting, and cementitious liners | 2/10/2015 |
| 2010-03 | 8,901,802 | Piezoelectric Photovoltaic Micropower Generator and Method | 12/2/2014 |
| 2011-26 | 8,885,631 | Nanofilaments of Catalytic Materials for Chemical Process Improvements | 11/25/2014 |
| 2010-20 | 8,873,033 | Cured-In-Place-Pipe Liner Inspection System | 10/28/2014 |
| 2006-03 | 8,784,938 | Method and Manufacture of Smart Paper and Smart Wood Fibers | 7/1/2014 |
| 2006-11 2006-13 | 8,738,452 | Transmission Delay Based RFID Tag | 5/27/2014 |
| 2008-24 2008-30 | 8,685,538 | Stable Polyelectrolyte Coated Nanoparticles | 4/1/2014 |
| 2011-26 | 8,629,189 | Nanofilaments of Catalytic Materials for Chemical Process Improvements | 1/14/2014 |
| 2005-13 | 8,600,119 | Method and Apparatus to Relate Biometric Samples to Target FAR and FRR with predetermined Confidence Levels | 12/3/2013 |
| 2011-13 | 8,582,735 | Incinerator Fly Ash Geopolymer and Method | 10/22/2013 |
| 2010-11 | 8,512,488 | Geopolymer Mortar and Method | 8/20/2013 |
| 2008-26 | 8,511,403 | Steerable Ground Piercing Tools | 8/20/2013 |
| 2009-09 | 8,507,058 | Microreservoir with End Plugs for Controlled Release of Corrosion Inhibitor | 8/13/2013 |
| 2008-18 | 8,489,835 | Method and System of Identifying Users Based Upon Free Text Keystroke Patterns | 7/18/2013 |
| 2002-04 | 8,473,532 | Method and Apparatus for Automatic Organization for Computer files | 8/25/2013 |
| 2007-26 | 8,441,255 | Thermocooling of GMR Sensors | 5/14/2013 |
| 2007-14 | 8,399,527 | Bound Cobalt Nanowires for Fischer-Tropsch Synthesis | 3/19/2013 |
| 2004-25 | 8,377,278 | Electrokinetic Strength Enhancement of Concrete | 2/19/2013 |
| 2007-06 | 8,350,570 | Pipe Survey Method Using UWB Signal | 1/8/2013 |

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|--|-----------|--|------------|
| 2006-03 | 8,348,131 | Method for the Manufacture of Smart Paper and Smart Wood Microfibers | 1/8/2013 |
| 2008-26 | 8,256,539 | Steerable Ground Piercing Tools | 9/4/2012 |
| 2003-28 2003-29 2004-04 | 8,190,248 | Medical Devices for the Detection Prevention and/or Treatment of Neurological Disorders, and Methods Related Thereto | 5/29/2012 |
| 2006-11 2006-12 2006-13 2006-14 | 8,178,231 | Transmission Delay Based RFID Tag | 5/15/2012 |
| 2009-19 | 8,173,578 | A Bioherbicide and Method for Controlling Giant Salvinia | 5/8/2012 |
| 2006-09 | 8,136,154 | Hidden Markov Model Based User Authentication Using Keystroke Dynamics | 3/13/2012 |
| 2007-03 | 8,127,357 | Method to Detect SYN Flood Attack | 2/28/2012 |
| 2007-10 2008-11 | 8,076,825 | Electret Film Generator | 12/13/2011 |
| 2005-13 | 7,986,818 | Method and apparatus to relate biometric samples to target FAR and FRR with predetermined confidence levels | 7/26/2011 |
| 2006-15 | 7,964,408 | Detecting Hypocalcemia Using Bovine Nose Sweat | 6/21/2011 |
| 2003-22 | 7,893,188 | Multilayer Films, Coatings, and Microcapsules comprising polypeptides | 2/22/2011 |
| 2007-03 | 7,865,954 | Method to Detect Syn Flood Attack | 1/4/2011 |
| 2004-09 | 7,842,182 | Layer-by-layer Nanocoating for paper fabrication | 11/30/2010 |
| 2004-19 | 7,811,478 | Polymer-nanocrystal quantum dot composites and optoelectronic devices | 10/12/2010 |
| 2005-13 | 7,808,170 | Method and Apparatus for Choosing and Evaluating Sample Size for Biometric Training Process | 10/5/2010 |
| 2007-02 | 7,782,770 | Method to Identify Anomalous Data Using Cascaded K-means Clustering and an ID3 Decision Tree | 9/7/2010 |
| 2008-21 | 7,748,451 | On-Chip Microplasma Systems | 6/29/2010 |
| 2000-10 | 7,730,086 | Data Set Request Allocations to Computers | 6/1/2010 |
| 2004-22 | 7,662,911 | Polypeptide Films and Methods | 2/18/2010 |
| 2005-22 | 7,652,261 | Multichannel nanoparticle scintillation microdevice with integrated waveguides for radiation detection | 1/26/2010 |
| 2003-04 | 7,620,818 | System and Method for Classifying regions of keystroke density with neural networks | 11/17/2009 |
| 2001-10 2003-22 | 7,550,557 | Multi-layer films, coatings, and microcapsules comprising polypeptides | 6/23/2009 |

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|--------------------|-----------|--|------------|
| 2001-10 2003-22 | 7,544,770 | Multi-layer films, coatings, and microcapsules comprising polypeptides | 6/9/2009 |
| 2001-09 | 7,538,184 | Method for Controlling Stability of Nano-fabricated polypeptide multi-layer films, coatings, and microcapsules | 6/28/2009 |
| 2001-09 | 7,534,880 | Nanofabricated Polypeptide Multi-layer films, coatings, and microcapsules | 5/19/2009 |
| 2003-45 2004-01 | 7,440,193 | Wide-Angle Variable Focal Length Lens System | 10/21/2008 |
| 2001-09 | 7,411,038 | Artificial Red Blood Cells | 8/12/2008 |
| 2003-46 | 7,359,583 | A Method to stabilize a moving image | 4/15/2008 |
| 2003-45 2004-01 | 7,359,124 | Wide-Angle Variable Focal Length Lens System | 4/15/2008 |
| 2003-35 | 7,357,139 | Stair-Adjustable Crutch | 4/15/2008 |
| 2001-09 | 7,349,399 | Nanofabricated Polypeptide Multilayer films, coatings, and microcapsules | 3/25/2008 |
| 2001-10 | 7,321,022 | Method for Controlling Stability of Nano-fabricated polypeptide multilayer films, coatings, and microcapsules | 1/22/2008 |
| 2002-14 | 7,303,158 | Generation and Usage of Microbubbles as a blood Oxygenator | 12/4/2007 |
| 2000-10 | 7,191,178 | Method for Allocation of Web Pages Using Neural Networks | 3/13/2007 |
| 2000-12 | 7,134,082 | Method and Apparatus for Individualizing and Updating a Directory of Computer Files | 11/7/2006 |
| 2001-05 | 7,094,622 | Polymer Based Tunneling Sensor | 8/22/2006 |
| 1999-09 | 7,090,838 | Bact NRRL B-30043 for controlling algae | 8/15/2006 |
| 2002-09 | 7,090,783 | Lithography-based patterning of L-b-L nanoassembled thin films | 8/15/2006 |
| 2006-01 | 6,966,950 | Method and Apparatus for Treating Underground Pipeline | 11/22/2005 |
| 1999-01 | 6,713,408 | Method of Producing Silica Microstructures from x-ray lithography of SOG Materials | 3/30/2004 |
| 2006-01 | 6,514,346 | Method and Apparatus for Inserting and Propelling a Coating Device into and through Live Gas Pipeline | 2/4/2003 |
| 1999-09 | 6,482,635 | Method of Reducing Off-Flavor in Water or Aquatic Life forms Using Bact NRRL B-30043 | 11/19/2002 |
| 2000-06 | 6,482,553 | Graphite Mask for X-ray or Deep X-ray Lithography | 11/19/2002 |
| 1999-09 | 6,322,782 | Bact NRRL B-30043 for controlling algae | 11/27/2001 |
| 2000-08 | 6,274,534 | Control of Kudzu with a fungal pathogen derived from <i>Myrothecium verrucaria</i> | 8/14/2001 |

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|---------|-----------|---|-----------|
| 2006-01 | 6,180,169 | Method for Internally Coating Live Gas Pipe Joints or Other Discontinuities | 1/30/2001 |
| | 6,024,713 | Leg Support Apparatus | 2/15/2000 |
| 1998-02 | 5,952,264 | Control of Crabgrass with a Fungal Pathogen | 9/14/1999 |
| 2006-01 | 5,913,977 | Apparatus and Method for Internally Coating Live Gas Pipe Joints or Other Discontinuities | 6/22/1999 |
| 1998-02 | 5,747,029 | Control of weeds with a fungal pathogen derived from <i>M. Vermucaria</i> | 5/5/1998 |
| 1998-01 | 5,739,019 | Method of Isolating and Propagating Microorganisms and Viruses | 4/14/1998 |
| 1994-01 | 5,635,444 | Control of Crabgrass with a fungal pathogen | 6/3/1997 |
| 1988-01 | 4,853,771 | Robotic Vision System | 8/1/1989 |
| 2012-02 | 9,103,654 | Nanowire-GMR Thin Film Magnetic Sensors | 8/11/2015 |
| 2011-26 | 9,108,858 | Bound Cobalt Nanowires for Fischer-Tropsch Synthesis | 8/18/2015 |

Pending US Applications

| ROI | Serial No. | title | filing date |
|---------|-------------------|---|-------------|
| 2014-15 | 62/214,331 | Non-Invasive Fluorescence-based oxygen sensor for monitoring cell responses | 9/4/2015 |
| 2012-14 | 62/133,012 | Drill head integrated multi-sensor platform for real-time warning of cross-bore | 3/13/2015 |
| 2013-19 | 62/107,613 | Thermoelectric Method for Performing ELISA | 1/26/2015 |
| 2011-27 | 62/053,946 | Polymers Doped with Graphene via Scalable Process for use in electromagnetic shielding | 9/23/2014 |
| 2014-12 | 62/035,492 | Methods and Devices for 3D Printing or Additive Manufacturing of Bioactive Medical Devices | 8/10/2014 |
| 2014-10 | 62/027,521 | Biomarkers for Susceptibility to SUDEP | 7/22/2014 |
| 2013-06 | PCT/US14/23010 | System and Method for Identifying a focal areas of Abnormal Network Interactions in the brain | 3/11/2014 |
| 2005-13 | 14/069,980 | A Method and Apparatus to Relate Biometric Samples to Target FAR and FRR with predetermined confidence levels | 11/1/2013 |
| 2011-09 | 14/525,882 | Capillary Action Heat Exchanger | 10/28/2014 |
| 2010-20 | 14/496,449 | Cured-In-Place-Pipe Liner Inspection System | 9/25/2014 |
| 2013-08 | 14/469,687 | Geopolymer with Nanoparticle retardant and method | 8/27/2014 |
| 2013-05 | 14/314,408 | Nanostructured Optical biosensor and method | 6/25/2014 |
| 2012-17 | 14/209,754 | Cast-in-Place Fiber Technology | 3/13/2014 |
| | PCT/US2014/026325 | Cast-in-Place Fiber Technology | 3/13/2014 |
| 2012-16 | 14/204,213 | Optically and Thermally responsive nanohybrid materials | 3/11/2014 |
| 2011-26 | 14/151,560 | Nanofilaments of catalytic materials for chemical process improvements | 1/9/2014 |
| 2010-18 | 14/124,567 | System and Method for Ground Penetrating Radar Communication Using Antenna Crosstalk | 4/16/2014 |
| 2008-25 | 13/500,722 | Method & Apparatus for detecting buried objects | 11/19/2012 |
| 2005-13 | 14/069,980 | A Method and Apparatus to Relate Biometric Samples to Target FAR and FRR with predetermined confidence levels | 11/1/2013 |
| 2008-18 | 13/915,301 | Method and System of Identifying Users Based Upon Free Text Keystroke Patterns | 6/11/2013 |
| 2011-16 | 13/891,862 | Methods for Generating 3-dimensional cellular spheroids | 5/10/2013 |
| 2005-13 | 13/111,919 | A Method and Apparatus to Relate Biometric | 5/19/2011 |

Samples to Target FAR and FRR with
predetermined confidence levels

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|--|---------------------------------|---|-------------------------|
| 2010-19 | PCT/US11/55899 13/888,133 | A Rotating Housing Turbine | 10/12/2011 4/19/2013 |
| 2010-02 | 13/801,100 | GMR Nanowire Sensors | 3/13/2013 |
| 2011-05 | 13/777,856 | Semi-continuous metal composites for optoelectronic devices | 2/26/2013 |
| 2004-25 | 13/747,904 | Electrokinetic Strength Enhancement of Concrete | 1/23/2013 |
| 2011-15 | 13/629,164 | Sensor Fusion Framework Using multiple sensors to access buried structures | 9/27/2012 |
| 2008-25 | 13/500,722 PCT/US2009/059626 | Method and Apparatus for Detecting Buried Objects | 11/19/2012 10/6/2009 |
| 2008-26 | 13/602,884 | Steerable Ground Piercing Tool | 9/4/2012 |
| 2003-28 2003-29 2004-04 | 13/482,500 | Medical Devices for the Detection, Prevention and/or Treatment of Neurological Disorders, and Methods Related Thereto | 5/29/2012 |
| 2011-22 | 13/481,494 | Method for Geopolymer Concrete | 5/25/2012 |
| 2011-07 | 13/469,454 | Beam Steerable UWB Radar | 5/11/2012 |
| 2010-05 2010-08 2010-09 | 13/446,775 | Ceramic Nanotube composites with sustained drug release capability for implants, bone repair and regeneration | 4/13/2012 |
| 2010-18 | PCT/2011/39738 | System and Method for ground Penetrating radar communication using antenna crosstalk | 6/9/2011 |
| 2007-01 | 12/669,395 | Therapeutic Stable Nanoparticles | 1/15/2010 |
| 2004-27 | 11/734,155 | Electrokinetic Corrosion Treatment of Concrete | 4/11/2007 |
| 2001-09 2001-10 2002-12 2002-13 | 11/372,901 PCT/US2004/39209 | Method for Designing Polypeptides for the Nanofabrication of Thin Film, Coatings, and Microcapsules by Electrostatic Layer-by-Layer Self Assembly | 3/10/2006 |
| 2013-06 | 14/203,742 | Method for Localizing the Epileptogenic Focus from Interictal Brain Signal Processing | 3/11/2014 |
| 2012-02 | 14/746,352 | Nanowire-GMR Thin Film Magnetic Sensors | 6/22/2015 |
| 2014 | 14/804,658 | Biomarkers of Susceptibility to SUDEP | 7/21/2015 |
| 2011-22 | 14/819,080 | Method for Dry Cast Geopolymer Concrete | 8/5/2015 |
| 2014-12 | 14/822,275 PCT/US2015/44467 | Methods and Devices for 3D Printing or Additive Manufacturing of Bioactive Medical Devices | 8/10/2015 |
| 2013-08 | PCT/US2015/46302 | Geopolymer with Nanoparticle Retardant and Method | 8/21/2015 |

Foreign Patent Applications

| ROI | Country | Title | Appl/Serial Number | Filing Date/ Nationalization |
|--------------------|----------------------------|--|--------------------|---------------------------------|
| 2010-11 | People's Republic of China | Geopolymer Mortar and Method | CN 201180061097.1 | 6/19/2013 |
| 2008-02 2011-04 | Canada | Universal Impedance Probe for detection of side connections through thermoplastics, thermosetting, and cementitious liners | CA 2772848 | 3/28/2012 |
| 2010-11 | Canada | Geopolymer Mortar and Method | CA 2817668 | 12/19/2011 |
| 2010-19 | Canada | A Rotating Housing Turbine | CA 2815495 | 10/12/2011 |
| 2010-18 | Japan | System and Method for Ground Penetrating Radar Communication Using Antenna Crosstalk | JP 2014-514441 | 12/9/2013 |
| 2010-18 | People's Republic of China | System and Method for Ground Penetrating Radar Communication Using Antenna Crosstalk | CN 20118007151.5 | 12/9/2013 |
| 2010-18 | Republic of Korea | System and Method for Ground Penetrating Radar Communication Using Antenna Crosstalk | KR 10-2014-7000368 | 1/7/2014 |
| 2008-25 | Republic of Korea | Method and Apparatus for detecting buried objects | KR 10-2012-7011639 | 5/4/2012 |
| 2008-25 | Canada | Method and Apparatus for detecting buried objects | CA 2,775,808 | 10/6/2009 |
| 2008-25 | Japan | Method and Apparatus for detecting buried objects | JP 2012-533124 | 6/5/2012 |

Foreign Patents

| ROI | Country | Title | Issued Patent Number | Issue Date |
|---------|----------------------------|---|----------------------|------------|
| 2010-18 | Great Britain | System and Method for Ground Penetrating Radar Communication Using Antenna Crosstalk | GB 2504640 | 7/8/2015 |
| 2011-13 | Canada | Incinerator Fly Ash Geopolymer and Method | CA 2787807 | 10/28/2014 |
| 2008-25 | Great Britain | Method and Apparatus for detecting buried objects | GB 2486375 | 8/6/2014 |
| 2004-22 | European | Polypeptide Films and Methods | EP 1957050 | 1/1/2014 |
| 2001-10 | Canadian | Method for designing polypeptides for the nanofabrication of thin films, coatings, and microcapsules by electrostatic layer-by-layer assembly | CA 2587643 | 9/24/2013 |
| 2001-10 | People's Republic of China | Polypeptide Multilayer films | CN 101421416 | 6/12/2013 |
| 2004-22 | Japan | Polypeptide Films and Methods | JP 5189493 | 2/1/2013 |
| 2001-10 | Israel | Thin film comprising plurality of layers of polypeptides | IL 183215 | 12/25/2012 |
| 2001-10 | Mexico | Method for designing polypeptides for the nanofabrication of thin films, coatings, and microcapsules by electrostatic layer-by-layer assembly | MX 304879 | 11/5/2012 |
| 2004-22 | People's Republic of China | Method for designing polypeptides for the nanofabrication of thin films, coatings, and microcapsules by electrostatic layer-by-layer assembly | CN 101309670 | 2/9/2011 |
| 2004-22 | Australia | Polypeptide Films and Methods | AU 2006/346,493 | 2/2/2012 |
| 2004-22 | Mexico | Polypeptide Films and Methods | MX 282,658 | 1/7/2011 |

PATENT

RECORDED: 01/11/2016

REEL: 037453 FRAME: 0589