

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6635292

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
THE PENN STATE RESEARCH FOUNDATION	03/26/2021
RECEIVING PARTY DATA	
Name:	GREENE, TWEED TECHNOLOGIES, INC.
Street Address:	1105 NORTH MARKET STREET
Internal Address:	SUITE 1300
City:	WILMINGTON
State/Country:	DELAWARE
Postal Code:	19801
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17219117
CORRESPONDENCE DATA	
Fax Number:	(856)267-5370
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	8564466045
Email:	LCALDERONE@CALDERONEBULLOCK.COM
Correspondent Name:	LYNDA L. CALDERONE
Address Line 1:	TWO GREENTREE CENTRE, 9000 LINCOLN DRIVE EAST
Address Line 2:	SUITE 301
Address Line 4:	MARLTON, NEW JERSEY 08053
ATTORNEY DOCKET NUMBER:	G0623-1273U1
NAME OF SUBMITTER:	LYNDA L. CALDERONE
SIGNATURE:	/Lynda L. Calderone/
DATE SIGNED:	04/01/2021
Total Attachments: 12	
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INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This Intellectual Property Assignment Agreement (this “**Assignment Agreement**”), effective upon the date of last signature (the “**Effective Date**”), is by and between The Penn State Research Foundation (“**PSRF**”), a non-profit corporation duly organized and existing under the laws of the Commonwealth of Pennsylvania and having an office at 304 Old Main, University Park, PA 16802 and GT Services LLC, a company registered in Delaware, with a principal place of business at 1684 South Broad Street, PO Box 1307, Lansdale PA 19446 (“**Company**”) and Greene, Tweed Technologies, Inc., a company registered in Delaware, with a principal place of business at Suite 1300, Wilmington, Delaware 19801 (“**Assignee**”).

W I T N E S S E T H

WHEREAS, Company and The Pennsylvania State University (“**University**”) entered into that Sponsored Research Agreement #223704 effective on July 2nd, 2019 and extended by Sponsored Research Agreement #238054 effective on September 1, 2020;

WHEREAS, under the terms of the Sponsored Research Agreement, Company has the option to receive ownership of Intellectual Property (as defined in the Sponsored Research Agreement, which is provided as Appendix A) created during performance of the sponsored research project by University;

WHEREAS, PSRF is a wholly owned subsidiary of University and is University’s designee to manage University’s intellectual property;

WHEREAS, Greene, Tweed Technologies Inc, a Delaware corporation with a principal place of business at Suite 1300, Wilmington, Delaware 19801, is an affiliate of Company;

WHEREAS, Michael Hickner and Lachlan Peeke, employees of the University (“**University Inventor**”) have made an invention entitled: “Additive Manufacturing of Reinforced Silicone Elastomers”, filed as PSRF Invention Disclosure No. 2019-SRA026 as provided in Appendix B, and a Provisional Patent Application Serial No. 63/003,146, filed on March 31, 2020, by Assignee on behalf of Company, which are all Intellectual Property under the Sponsored Research Agreement;

WHEREAS, Company has informed University and PSRF that Company wishes its affiliate Greene, Tweed Technologies Inc. to receive ownership to the Intellectual Property;

WHEREAS, pursuant to the terms of the University’s Intellectual Property Agreement, the University Inventors have assigned University Inventors’ entire right, title, and interest in the Intellectual Property to PSRF;

NOW THEREFORE, in consideration of the premises and the mutual promises and covenants set forth below, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereby agree as follows:

ARTICLE I - THE ASSIGNMENT AND LICENSE

1.1 In consideration of the mutual understandings set forth above and the financial terms set forth in the Sponsored Research Agreement between University and Company, PSRF does hereby assign, transfer,

and convey all of its worldwide right, title, and interest in the Intellectual Property to Assignee and Assignee's successor(s). PSRF agrees for itself and on behalf of the University and University Inventors, at Assignee's expense, to execute all papers, give any required testimony, and perform other lawful acts, as Assignee may require to enable Assignee to perfect Assignee's interest in any resulting patent of the United States and countries foreign thereto, and to acquire, hold, enforce, convey, and uphold the validity of said patent and reissues and extensions thereof, and Assignee's interest therein.

1.2 Assignee and Assignee's successors grant to PSRF and University a perpetual, non-exclusive, royalty-free, non-revocable, and fully paid-up license to practice the Intellectual Property for research and educational purposes.

1.3 This Assignment Agreement shall not be construed to confer any rights upon Assignee by implication, estoppel or otherwise in the Intellectual Property or to any technology owned or controlled by PSRF which is not specifically set forth in this Assignment Agreement.

REDACTED

REDACTED

REDACTED

ARTICLE VIII - MISCELLANEOUS PROVISIONS

8.1 This Assignment Agreement embodies the entire understanding of the parties and shall supersede all previous communications, representations, or undertakings, either verbal or written, between the parties relating to the subject matter hereof, except for as it relates to the Sponsored Research Agreement.

8.2 This Assignment Agreement may be amended only by a written agreement embodying the full terms of the amendment signed by authorized representatives of both parties.

8.3 Should any provision of this Assignment Agreement be held to be illegal, invalid or unenforceable, by any court of competent jurisdiction, such provision shall be modified by such court in compliance with the law and, as modified, enforced. The remaining provisions of this Assignment Agreement shall be construed in accordance with the modified provision and as if such illegal, invalid or unenforceable provision had not been contained herein.

8.4 The language used in this Assignment Agreement shall be deemed to be the language chosen by both parties to express their mutual intent and no rule of strict construction against either party shall apply to any term or condition of this Assignment Agreement.

8.5 Nothing contained in this Assignment Agreement shall be construed as creating a partnership, joint venture, agency or an association of any kind.

8.6 The failure of one party to enforce at any time any of the provisions of this Assignment Agreement, or any rights in respect thereto, or to exercise any election provided, shall in no way be considered to be a waiver of such provision, rights or elections or in any way to affect the validity of this Assignment Agreement, or excuse a similar subsequent failure to perform any such term or condition by the other party. Any waiver must be in writing.

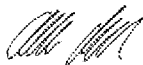
8.7 The headings of several articles and paragraphs contained in this Assignment Agreement are inserted for convenience of reference only, and are not intended to be a part of or to affect the meaning or interpretation of this Assignment Agreement.

8.8 This Assignment Agreement shall be governed by and construed in accordance with the laws of the United States of America and the Commonwealth of Pennsylvania without giving effect to any choice of law or conflict of law provision or rule that would cause the application of the laws of any jurisdiction other than the Commonwealth of Pennsylvania, except that questions affecting the construction and effect of any patent shall be determined by the law of the country in which the patent was granted.

8.9 This Assignment Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Scanned copies of signatures or electronic images of signatures shall be considered original signature unless prohibited by applicable law.

IN WITNESS WHEREOF, the parties, intending to be legally bound hereby, have each caused a duly authorized representative to execute this Assignment Agreement on the day and year set forth below.

Greene, Tweed Technologies, Inc.
(Assignee)



By: _____

Name: Allon Bloch

Title: Director

Date: March 23, 2021

The Penn State Research Foundation
(PSRF)


HARL R. TOLBERT (MAR 26, 2021 09:11 EDT)

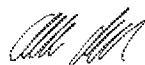
By: _____

Name: Harl R. Tolbert

Title: Director, Office of Technology Management

Date: 26-Mar-2021

GT Services LLC
(Company)



By: _____

Name: Allon Bloch

Title: Chairman

Date: March 23, 2021



SPONSORED RESEARCH AGREEMENT
FIXED PRICE AGREEMENT #223704

THIS AGREEMENT, effective this 2nd day of July, 2019, by and between The Pennsylvania State University (hereinafter referred to as "University") and Greene, Tweed & Co., having a principal place of business at 1510 Gehman Road, Kulpsville, PA 19443 (hereinafter referred to as "Sponsor").

1. **Period of Performance.** Period of performance shall be from 09/01/2019 to 08/31/2020 (hereinafter referred to as "Period of Performance").

2. **Research Work.** As used herein, "Project" shall mean those the research described in Appendix A hereof, under the direction of Dr. Michael Hinkler (hereinafter referred to as "Principal Investigator"). University shall commence the performance of Project on the first day of Period of Performance and shall use reasonable best efforts to perform Project substantially in accordance with the terms and conditions of this Agreement. The Principal Investigator shall furnish Sponsor with reports regarding Project.

3. **Fiscal Considerations.** This is a fixed price agreement. The total price of the Project will be \$ REDACTED. Payments shall be made in accordance with the payment schedule referenced in Appendix B. Sponsor shall be responsible for all collection costs associated with non-payment. University shall retain title to any equipment purchased with funds provided by Sponsor under this Agreement. In the event of early termination of this Agreement pursuant to Article 8 hereof, Sponsor shall pay all reasonable costs incurred and non-cancelable obligations incurred by University as of the date of termination.

4. **Publicity.** Neither party to this Agreement will use the name, trademarks, or logos of the other party or its employees, in any publicity, advertising, or news release without the prior written approval of an authorized representative of that party.

5. **Confidentiality.** As used herein, "Proprietary Information" shall mean any written information and data marked proprietary or non-written information and data disclosed which is identified at the time of disclosure as proprietary and is reduced to writing and transmitted to the other party within sixty (60) days of such non-written disclosure. Prior to disclosure of Proprietary Information to University by Sponsor, Sponsor shall notify Principal Investigator of its intent to disclose Proprietary Information; and Principal Investigator shall have the right to decline receipt of said information. Said Proprietary Information shall be sent only to Principal Investigator. Each party to this Agreement agrees to treat Proprietary Information received from the other with the same degree of care with which it treats its own Proprietary Information and further agrees not to disclose such Proprietary Information to a third party without prior written consent from the party disclosing Proprietary Information. The foregoing obligations of non-disclosure do not apply to Proprietary Information which is in the public domain, independently known, independently developed or obtained by University, or required by law or regulation to be disclosed. Unless otherwise agreed to in writing, the period of confidentiality shall be five (5) years from the date of receipt of Proprietary Information.

6. **Publication.** Sponsor acknowledges that University, subject to prior review by Sponsor, shall have the right to publish any results of the Project that do not disclose Proprietary Information. University agrees not to publish or otherwise disclose Proprietary Information. Sponsor shall be furnished copies of any proposed publication or presentation at least 60 days before submission of such proposed publication or presentation. During that time, Sponsor shall have the right to review the material for Proprietary Information provided by Sponsor and to assess the patentability of any invention described in the material. If Sponsor decides that a patent application should be filed, the publication or presentation shall be delayed an additional seventy-five (75) days or until a patent application is filed, whichever is sooner. At Sponsor's request, Proprietary Information provided by Sponsor shall be deleted. Notwithstanding the limitations of Article 4, the University reserves the right to identify its sponsors in academic publications.

7. **Intellectual Property.** As used herein, "Intellectual Property" shall mean those inventions and/or discoveries conceived and/or reduced to practice in performance of this Project and resulting patents, divisions, continuations, or substitutions of such applications and all reissues thereof, upon which a University employee or agent is a named inventor. Sponsor has the right to take ownership of Intellectual Property. University reserves the right to file a provisional patent application to protect Intellectual Property in circumstances where University has an expedited need to publish or present results. University will promptly disclose Intellectual Property to Sponsor in writing. Sponsor has ninety (90) days from the receipt of the disclosure to request University to assign ownership to Sponsor. In consideration for assigning ownership, Sponsor shall reimburse University for any patent protection costs incurred. REDACTED

REDACTED

University retains the right to use Intellectual Property for non-commercial research and educational purposes. In the event University background intellectual property is required to practice Intellectual Property, University will negotiate an option or license to the extent such rights are available.

REDACTED

REDACTED

14. General Provisions

14.1 *Non-assignability.* The rights and obligations of the parties under this Agreement shall not be assignable without written permission of the other party.

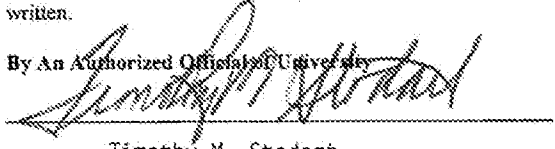
14.2 *Severability.* If any provision hereof is held unenforceable or void, the remaining provisions shall be enforced in accordance with their terms.

14.3 *Entire Agreement.* This Agreement contains the entire and only agreement between the parties respecting the subject matter hereof and supersedes or cancels all previous negotiations, agreements, commitments and writings between the parties on the subject of this Agreement. Should processing of this Agreement require issuance of a purchase order or other contractual document, all terms and conditions of said document are hereby deleted in entirety. This Agreement may not be amended in any manner except by an instrument in writing signed by the duly authorized representatives of each of the parties hereto.

REDACTED

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed in duplicate as of the day and year first above written.

By An Authorized Officer of University

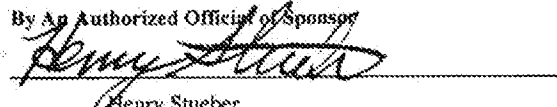


Name: Timothy M. Stodart

Title: Associate Director of Sponsored Programs

Date: July 17, 2019

By An Authorized Officer of Sponsor



Name: Henry Smeber

Title: Sr VP Customer Operations

Date: July 15, 2019



SPONSORED RESEARCH AGREEMENT
FIXED PRICE AGREEMENT # 238054

THIS AGREEMENT, effective this 1st day of September, 2020, by and between The Pennsylvania State University (hereinafter referred to as "University") and GT Services LLC, having a principal place of business at: 1684 South Broad Street, PO Box 1307 Lansdale, PA 19446 (hereinafter referred to as "Sponsor").

1. Period of Performance. Period of performance shall be from 09/01/2020 to 02/28/2021 (hereinafter referred to as "Period of Performance").

2. Research Work. As used herein, "Project" shall mean those the research described in Appendix A hereof, under the direction of Dr. Michael Hickner (hereinafter referred to as "Principal Investigator"). University shall commence the performance of Project on the first day of Period of Performance and shall use reasonable best efforts to perform Project substantially in accordance with the terms and conditions of this Agreement. The Principal Investigator shall furnish Sponsor with reports regarding Project.

3. Fiscal Considerations. This is a fixed price agreement. The total price of the Project will be \$ REDACTED. Payments shall be made in accordance with the payment schedule referenced in Appendix B. Sponsor shall be responsible for all collection costs associated with non-payment. University shall retain title to any equipment purchased with funds provided by Sponsor under this Agreement. In the event of early termination of this Agreement pursuant to Article 8 hereof, Sponsor shall pay all reasonable costs incurred and non-cancelable obligations incurred by University as of the date of termination.

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6. Publication. Sponsor acknowledges that University, subject to prior review by Sponsor, shall have the right to publish any results of the Project that do not disclose Proprietary Information. University agrees not to publish or otherwise disclose Proprietary Information. Sponsor shall be furnished copies of any proposed publication or presentation at least 60 days before submission of such proposed publication or presentation. During that time, Sponsor shall have the right to review the material for Proprietary Information provided by Sponsor and to assess the patentability of any invention described in the material. If Sponsor decides that a patent application should be filed, the publication or presentation shall be delayed an additional seventy-five (75) days or until a patent application is filed, whichever is sooner. At Sponsor's request, Proprietary Information provided by Sponsor shall be deleted. Notwithstanding the limitations of Article 4, the University reserves the right to identify its sponsors in academic publications.

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REDACTED

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REDACTED

REDACTED

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14.2 *Severability.* If any provision hereof is held unenforceable or void, the remaining provisions shall be enforced in accordance with their terms.

14.3 *Entire Agreement.* This Agreement contains the entire and only agreement between the parties respecting the subject matter hereof and supersedes or cancels all previous negotiations, agreements, commitments and writings between the parties on the subject of this Agreement. Should processing of this Agreement require issuance of a purchase order or other contractual document, all terms and conditions of said document are hereby deleted in entirety. This Agreement may not be amended in any manner except by an instrument in writing signed by the duly authorized representatives of each of the parties hereto.

14.4 *Export Control Regulations.* Both parties are subject to applicable U.S. export laws and regulations and shall use their reasonable best efforts to comply with any and all reporting or licensing requirements contained therein. Prior to delivery to the University of any export controlled information, materials, technology, or know-how (collectively "Controlled Content"), Sponsor shall notify the University's contractual contact, as identified in Appendix B below, and inform such contact of the Sponsor's intention to disclose or deliver the Controlled Content. At such time, University's contractual offices shall have a reasonable period, not to exceed seven (7) business days, to evaluate the request for disclosure or delivery of the Controlled Content. University's contractual office shall have, in its sole discretion, the right to accept or decline receipt of such Controlled Content. Upon receipt of written notification from University of its acceptance of delivery of the identified Controlled Content, in a manner consistent with this provision, Sponsor may disclose and/or deliver the Controlled Content only to the attention of the named Principal Investigator as identified in Appendix B.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed in duplicate as of the day and year first above written.

By An Authorized Official of University

Timothy M. Stodart



By An Authorized Official of Sponsor

Kevin J. Lukiewski

Name: Timothy M. Stodart

Name: Kevin J. Lukiewski

Title: Associate Director, Office of Sponsored Programs

Title: President

Date: 09/30/2020

Date: 09/24/2020

 PennState	Technology Disclosure Form Office of Technology Management 113 Technology Center, University Park, PA 16802 814.865.6277 • otminfo@psu.edu	Disclosure Number <i>(OTM Use Only)</i>
		2019-SRA026

The completed form, along with a detailed description of the technology, should be emailed to the OTM (OTMinfo@psu.edu). Please attempt to complete the form in its entirety, but if you have any questions, please call our office (814.865.6277).

1. Title of Technology (brief but descriptive):							
Additive Manufacturing of Reinforced Silicone Elastomers							
2. Technology Inventors/Contributors (list primary contact first – attach additional sheets for more than 5):							
	Full Legal Name	Work Email Address	Title (e.g., Professor, Grad Student, or Undergrad)	Primary College	Primary Department		
A	Michael Hickner	mah49@psu.edu	Professor	EMS	MATSE		
B	Lachlan Peeke	lmj5527@psu.edu	Undergrad	EMS	MATSE		
C	Greene Tweed inventors						
D							
E							
For reporting purposes, are any of the technology inventors/contributors listed above female?				Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
3. Is this technology the result of sponsored research (i.e., government or industry)? <i>Important: If you will report this technology to a sponsor, you must list the sponsor here.</i>				Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Sponsor			Grant or Contract #	Principal Investigator			
Greene Tweed			206278	Michael Hickner			
4. Are there any other agreements pertaining to this technology (i.e., material transfer agreements, consulting agreements, confidentiality agreements, etc.)?				Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Agreement Type		Name of Other Party		Institution Contact			
5. Public Disclosures (any publicly available and potentially enabling disclosures of the technology): <i>Public disclosure immediately prevents us from obtaining most foreign patent rights and may also impact our ability to obtain US patent rights. As such, please try to contact OTM before publicly disclosing your technology so we can consider protection strategies. However, even if you have publicly disclosed your technology, please complete and submit this form.</i>							
Has the technology been disclosed to anyone (e.g., published in a journal, thesis, or abstract; presented as a poster or orally at a conference or invited talk; discussed with colleagues, etc.)?				Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
If yes, please provide below the dates of all disclosures and describe their nature (e.g., publication, presentation, discussion, etc.).							
If no, please provide below your plans for disclosure (e.g., publication in a journal, thesis, or abstract; presentation as a poster or orally at a conference or invited talk; discussion with colleagues, etc.). <i>If a disclosure is anticipated within the next 14 days, please call our office as soon as possible so we can consider appropriate protection strategies.</i>							
This work will eventually be disclosed in a publication and thesis in the next 8-12 months.							
Greene Tweed is working on a patent application now with Penn State co-inventorship.							

6. Please provide a brief summary of the technology (no need to use all the space provided below).

Silicone and thermoplastic dual extrusion 3D printing. Use of two different types of printing technologies that are integrated to form a composite part.

7. Please briefly describe the problem that the technology solves and how it is different from similar technologies. Describe how the invention might be used in a commercial setting (i.e., what would a product, method, or service look like, who would be the most likely end user, etc.) and how it is unique/improved over existing products/methods (no need to use all the space provided below).

It was not clear how to make hard and soft silicone composites before this invention. We have constructed a new type of printer and used it to integrate unique materials.

8. If available, please attach a detailed description of the technology (often a manuscript draft, grant proposal, or similar will suffice).

The completed form, along with a detailed description of the technology, should be emailed to the OTM (OTMinfo@psu.edu). Please attempt to complete the form in its entirety, but if you have any questions, please call our office (814.865.6277).