

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT8104939

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
BOSTON SCIENTIFIC SCIMED, INC.	06/21/2023
RECEIVING PARTY DATA	
Name:	REGENTS OF THE UNIVERSITY OF MINNESOTA
Street Address:	200 OAK STREET SE
Internal Address:	SUITE 600
City:	MINNEAPOLIS
State/Country:	MINNESOTA
Postal Code:	55455
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16996537
CORRESPONDENCE DATA	
Fax Number:	(612)746-4781
<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>	
Email:	docketing@pdsdlaw.com
Correspondent Name:	PAULY, DEVRIES SMITH & DEFFNER LLC
Address Line 1:	121 SOUTH 8TH STREET
Address Line 2:	SUITE 900
Address Line 4:	MINNEAPOLIS, MINNESOTA 55402
ATTORNEY DOCKET NUMBER:	442.0372USU1
NAME OF SUBMITTER:	KIERSTEN M. IDZOREK
SIGNATURE:	/KIERSTEN M. IDZOREK/
DATE SIGNED:	08/09/2023
Total Attachments: 14	
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CONFIRMATORY ASSIGNMENT

This ASSIGNMENT AGREEMENT is entered into effective June 21, 2023 (“**Effective Date**”) between Boston Scientific Scimed Inc., having a place of business at One Scimed Place, Maple Grove, MN 55311, (“**BSC**”) and Regents of the University of Minnesota, an educational constitutional corporation and arm of Minnesota state government, through its Technology Commercialization Office, having a place of business at 200 Oak Street, SE, Suite 600, Minneapolis, MN 55455 (“**University**”).

WHEREAS, BSC, owns or did own, by assignment, all right, title, and interest in the U.S. Patents and Foreign Patents described in SCHEDULE A hereto and owns or did own a partial interest in the U.S. Patents and Foreign Patents described in SCHEDULE B, and any invention(s) claimed therein; and

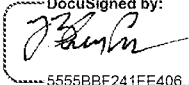
WHEREAS, UNIVERSITY desires to own BSC’s entire right, title, and interest in and to the inventions, in all countries throughout the world, and in and to the patents described in SCHEDULE A and SCHEDULE B.

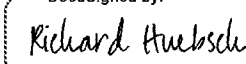
NOW THEREFORE, be it known that, pursuant to the IP TRANSFER AND REVENUE SHARING AGREEMENT FOR FURTHER DEVELOPMENT OF GRAPHENE-BASED SENSOR TECHNOLOGY executed between the parties, for good and valuable consideration, receipt of which is hereby acknowledged, BSC hereby sells, assigns, transfers, and sets over to UNIVERSITY, its lawful successors and assigns, BSC’s entire right, title, and interest in and to the patents described in SCHEDULE A and SCHEDULE B, the inventions claimed therein, and all Letters Patent of the United States that may be granted thereon, and all reissues, reexaminations thereof; rights to claim priority therefrom, and all applications for Letters Patent that may be filed for the inventions in any foreign country and all Letters Patent that may be granted on the invention in any foreign country; and BSC hereby authorizes and request the Commissioner of Patents and Trademarks of the United States and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to UNIVERSITY, its successors and assigns, in accordance with the terms of this Assignment;

IN WITNESS WHEREOF, duly authorized representatives of the parties have duly executed and delivered this Assignment on the dates set forth below, to be effective as of the Effective Date set forth above.

Boston Scientific Scimed, Inc.

Regents of the University of Minnesota

DocuSigned by:

By / _____ / _____
Name: J. Bradley Sorenson
Title: EVP, Global Operations
Date: 6/21/2023 | 1:38 PM PDT

DocuSigned by:

By / _____ / _____
Name: Richard Huebsch
Title: Executive Director per Presidential
Delegation ID_315987
Technology Commercialization
Date: May 30, 2023 | 11:54 AM CDT

SCHEDULE A

UMIN Case #	PDSD Ref. #	Title	IP: Type	Country	Application #	Date Filed	Status
2023-097-05	442.0183CNWO	Disposable Sensor Elements, Systems, And Related Methods	Utility-NSPCT	CN	201580056417.2	10/19/2015	Issued
2023-097-04	442.0183EPWO	Disposable Sensor Elements, Systems, And Related Methods	Utility-NSPCT	EPO	15790739.5	10/19/2015	Pending
2023-097-01	442.0183USP1	Disposable Sensor Elements, Systems, And Related Methods	Prov	US	62/065,951	10/20/2014	Expired
2023-097-02	442.0183USU1	Disposable Sensor Elements, Systems, And Related Methods	Utility-NPNEW	US	14/883,895	10/15/2015	Issued
2023-097-03	442.0183WOU1	Disposable Sensor Elements, Systems, And Related Methods	Utility-ORG	PCT	PCT/US2015/056243	10/19/2015	Completed
2023-098-06	442.0257CNWO	Gas Sampling Catheters	Utility-NSPCT	CN	201780030596	6/13/2017	Issued
2023-098-05	442.0257EPWO	Gas Sampling Catheters	Utility-NSPCT	EPO	17733246.7	6/13/2017	Pending
2023-098-04	442.0257JPWO	Gas Sampling Catheters	Utility-NSPCT	JP	2019-517196	6/13/2017	Abandoned
2023-098-01	442.0257USP1	Gas Sampling Catheters, Systems And Methods	Prov	US	62/350,345	6/15/2016	Expired
2023-098-02	442.0257USU1	Gas Sampling Catheters, Systems And Methods	Utility-NPREG	US	15/621,103	6/13/2017	Issued
2023-098-03	442.0257WOU1	Gas Sampling Catheters	Utility-ORG	PCT	PCT/US2017/037144	6/13/2017	Completed
2023-099-06	442.0266CNWO	Gas Sampling Device	Utility-NSPCT	CN	201780065376.2	10/19/2017	Abandoned

SCHEDULE A

UMIN Case #	PDSD Ref. #	Title	IP: Type	Country	Application #	Date Filed	Status
2023-099-05	442.0266EPWO	Gas Sampling Device	Utility-NSPCT	EPO	17794832	10/19/2017	Pending
2023-099-04	442.0266JPWO	Gas Sampling Device	Utility-NSPCT	JP	2019-520955	10/19/2017	Abandoned
2023-099-01	442.0266USP1	Gas Sampling Device	Prov	US	62/411,383	10/21/2016	Expired
2023-099-02	442.0266USU1	Gas Sampling Device	Utility-NPREG	US	15/787,985	10/19/2017	Issued
2023-099-03	442.0266WOU1	Gas Sampling Device	Utility-ORG	PCT	PCT/US2017/057318	10/19/2017	Completed
2023-100-06	442.0271CNWO	Systems And Methods For Assessing The Health Status Of A Patient	Utility-NSPCT	CN	201880032911.9	5/17/2018	Issued
2023-100-11	442.0271DEEP	Systems And Methods For Assessing The Health Status Of A Patient	Utility-EPPAT	DE	18731579.1	5/17/2018	Issued
2023-100-05	442.0271EPWO	Systems And Methods For Assessing The Health Status Of A Patient	Utility-NSPCT	EPO	18731579.1	5/17/2018	Issued
2023-100-10	442.0271FREP	Systems And Methods For Assessing The Health Status Of A Patient	Utility-EPPAT	FR	18731579.1	5/17/2018	Issued
2023-100-09	442.0271GBEP	Systems And Methods For Assessing The Health Status Of A Patient	Utility-EPPAT	GB	18731579.1	5/17/2018	Issued
2023-100-08	442.0271IEEP	Systems And Methods For Assessing The Health Status Of A Patient	Utility-EPPAT	IE	18731579.1	5/17/2018	Issued

PATENT

REEL: 064538 FRAME: 0884

SCHEDULE A

UMIN Case #	PDSD Ref. #	Title	IP::Type	Country	Application #	Date Filed	Status
2023-100-04	442.0271JPWO	Systems And Methods For Assessing The Health Status Of A Patient	Utility-NSPCT	JP	2019-563876	5/17/2018	Issued
2023-100-07	442.0271NLEP	Systems And Methods For Assessing The Health Status Of A Patient	Utility-EPPAT	NL	18731579.1	5/17/2018	Issued
2023-100-01	442.0271USP1	Systems And Methods For Assessing The Health Status Of A Patient	Prov	US	62/508,442	5/19/2017	Completed
2023-100-02	442.0271USU1	Systems And Methods For Assessing The Health Status Of A Patient	Utility-NPREG	US	15/982,506	5/17/2018	Issued
2023-100-03	442.0271WOU1	Systems And Methods For Assessing The Health Status Of A Patient	Utility-ORG	PCT	PCT/US2018/033166	5/17/2018	Completed
2023-101-14	442.0273CHEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	CH	18180455	6/28/2018	Issued
2023-101-14	442.0273CN01	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-ORG	CN	201810782878.3	7/17/2018	Pending
2023-101-11	442.0273DEEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	DE	18180455	6/28/2018	Issued
2023-101-03	442.0273EP01	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-ORG	EPO	18180455	6/28/2018	Issued

SCHEDULE A

UMIN Case #	PDS Ref. #	Title	IP Type	Country	Application #	Date Filed	Status
2023-101-15	442.0273EPD1	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-DIV	EPO	20214733.6	6/28/2018	Pending
2023-101-10	442.0273ESEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	ES	18180455	6/28/2018	Issued
2023-101-09	442.0273FREP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	FR	18180455	6/28/2018	Issued
2023-101-08	442.0273GBEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	GB	18180455	6/28/2018	Issued
2023-101-07	442.0273IEEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	IE	18180455	6/28/2018	Issued
2023-101-06	442.0273ITEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	IT	18180455	6/28/2018	Issued
2023-101-13	442.0273JP01	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-ORG	JP	2018-133996	7/17/2018	Pending
2023-101-02	442.0273NL01	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-ORG	NL	N2019492	9/6/2017	Abandoned
2023-101-05	442.0273NLEP	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-EPPAT	NL	18180455	6/28/2018	Issued
2023-101-01	442.0273USP1	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Prov	US	62/533,916	7/18/2017	Expired

SCHEDULE A

UMIN Case #	PDSD Ref. #	Title	IP: Type	Country	Application #	Date Filed	Status
2023-101-12	442.0273USU1	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-NPREG	US	16/037,218	7/17/2018	Issued
2023-101-16	442.0273USC1	Systems And Methods For Analyte Sensing In Physiological Gas Samples	Utility-CON	US	17/101,900	11/23/2020	Pending
2023-102-04	442.0340CNWO	Systems And Methods For Detecting A Health Condition	Utility-NSPCT	CN	201980077885.6	11/26/2019	Pending
2023-102-05	442.0340EPWO	Systems And Methods For Detecting A Health Condition	Utility-NSPCT	EPO	19828373.1	11/26/2019	Pending
2023-102-01	442.0340USP1	Systems And Methods For Detecting A Health Condition	Prov	US	62/771,856	11/27/2018	Completed
2023-102-02	442.0340USU1	Systems And Methods For Detecting A Health Condition	Utility-NPREG	US	16/696,348	11/26/2019	Pending
2023-102-03	442.0340WOU1	Systems And Methods For Detecting A Health Condition	Utility-ORG	PCT	PCT/US2019/063324	11/26/2019	Completed
2023-103-04	442.0371CNWO	Gas Measurement Device And Method	Utility-NSPCT	CN	202080077847.3	11/26/2019	Pending
2023-103-05	442.0371EPWO	Gas Measurement Device And Method	Utility-NSPCT	EPO	20775138.9	11/26/2019	Pending
2023-103-01	442.0371USP1	Fluid Analysis System	Prov	US	62/898,155	9/10/2019	Expired
2023-103-02	442.0371USU1	Fluid Analysis System	Utility-NPREG	US	17/012,642	9/4/2020	Pending
2023-103-03	442.0371WOU1	Gas Measurement Device And Method	PCT	PCT	PCT/US2020/049395	9/4/2020	Completed
2023-181-05	442.0379CNWO	Non-Invasive Bladder Cancer Detection System via Liquid and Gaseous Phase Analys...	Utility-NSPCT	CN		4/29/2021	Pending

SCHEDULE A

UMIN Case #	PDSD Ref. #	Title	IP::Type	Country	Application #	Date Filed	Status
2023-181-04	442.0379EPWO	Non-Invasive Bladder Cancer Detection System via Liquid and Gaseous Phase Analys...	Utility-NSPCT	EPO	21727642.7	4/29/2021	Pending
2023-181-06	442.0379JPWO	Non-Invasive Bladder Cancer Detection System via Liquid and Gaseous Phase Analys...	Utility-NSPCT	JP	2022-566321	4/29/2021	Pending
2023-181-01	442.0379USP1	Non-Invasive Bladder Cancer Detection System via Liquid and Gaseous Phase Analys...	Prov	US	63/018,704	5/1/2020	Expired
2023-181-02	442.0379USU1	Non-Invasive Bladder Cancer Detection System via Liquid and Gaseous Phase Analys...	Utility-NPREG	US	17/242,750	4/28/2021	Pending
2023-181-03	442.0379WOU1	Non-Invasive Bladder Cancer Detection System via Liquid and Gaseous Phase Analys...	Utility-ORG	PCT	PCT/US2021/029778	4/29/2021	Completed

SCHEDULE B

UMIN Case #	PDS# Ref. #	Title	IP Type	Country	Application #	Date Filed	Status
20180146-04	442.0320AUWO	Chemical Sensors with Non-covalent Surface Modification of Graphene	Foreign	AU	2019224011	2/20/2019	Issued
20180146-06	442.0320CNWO	Chemical Sensors with Non-covalent Surface Modification of Graphene	Foreign	CN	201980014236.10	2/20/2019	Pending
20180146-07	442.0320EPWO	Chemical Sensors with Non-covalent Surface Modification of Graphene	Foreign	EPO	19709268.7	2/20/2019	Pending
20180146-05	442.0320JPWO	Chemical Sensors with Non-covalent Surface Modification of Graphene	Foreign	JP	2020-566542	8/19/2020	Issued
20180146-01	442.0320USP1	Chemical Sensors with Non-covalent Surface Modification of Graphene	Prov	US	62/632,536	2/20/2018	Expired
20180146-03	442.0320USU1	Chemical Sensors with Non-covalent Surface Modification of Graphene	Utility-ORG	US	16/280,635	2/20/2019	Issued
20180146-08	442.0320USC1	Chemical Sensors with Non-covalent Surface Modification of Graphene	Utility-CON	US	17/387,503	7/28/2021	Pending
20180146-02	442.0320WOU1	Chemical Sensors with Non-covalent Surface Modification of Graphene	PCT	PCT	PCT/US2019/01874.1	2/20/2019	Completed
20180238-04	442.0323CNWO	Breath Sampling Mask and System	Foreign	CN	201980014220.00	2/20/2019	Pending
20180238-09	442.0323CHEP	Breath Sampling Mask and System	Foreign	CH	19711730.2	2/20/2019	Issued
20180238-08	442.0323DEEP	Breath Sampling Mask and System	Utility-EPPAT	DE	19711730.2	2/20/2019	Issued
20180238-05	442.0323EPWO	Breath Sampling Mask and System	Foreign	EPO	19711730.2	2/20/2019	Issued

SCHEDULE B

UMIN Case #	PDSD Ref. #	Title	IP::Type	Country	Application #	Date Filed	Status
20180238-07	442.0323EPD1	Breath Sampling Mask and System	Utility-DIV	EPO	22189298.7	2/20/2019	Pending
20180238-10	442.0323ESEP	Breath Sampling Mask and System	Utility-EPPAT	ES	19711730.2	2/20/2019	Issued
20180238-12	442.0323FREP	Breath Sampling Mask and System	Utility-EPPAT	FR	19711730.2	2/20/2019	Issued
20180238-14	442.0323GBEP	Breath Sampling Mask and System	Utility-EPPAT	GB	19711730.2	2/20/2019	Issued
20180238-11	442.0323IEEP	Breath Sampling Mask and System	Utility - EPPAT	IE	19711730.2	2/20/2019	Issued
20180238-13	442.0323NLEP	Breath Sampling Mask and System	Utility-EPPAT	NL	19711730.2	2/20/2019	Issued
20180238-03	442.0323USU1	Breath Sampling Mask and System	Utility-ORG	US	16/280,644	2/20/2019	Issued
20180238-06	442.0323USC1	Breath Sampling Mask and System	Utility-CON	US	17/520,339	11/5/2021	Pending
20180238-02	442.0323WOU1	Breath Sampling Mask and System	PCT	PCT	PCT/US2019/018744	2/20/2019	Completed
20180238-01	442.0323USP1	Breath Sampling Mask and System	Prov	US	62/632,552	2/20/2018	Expired
20180300-04	442.0325AUWO	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Foreign	AU	2019260666	4/24/2019	Issued
20180300-07	442.0325CNWO	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Foreign	CN	201980027577.20	10/22/2020	Pending

SCHEDULE B

UMIN Case #	PDSD Ref. #	Title	IP::Type	Country	Application #	Date Filed	Status
20180300-06	442.0325EPWO	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Foreign	EPO	19733177	4/24/2019	Pending
20180300-05	442.0325JPWO	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Foreign	JP	2020558952	4/24/2019	Allowed
20180300PV01	442.0325USP1	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Prov	US	62/662,305	4/25/2018	Expired
20180300-02	442.0325USU1	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Utility-ORG	US	16/393,177	4/24/2019	Issued
20180300-08	442.0325USC1	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	Utility-CON	US	17/707,214	3/29/2022	Pending
20180300-03	442.0325WOU1	Chemical Varactor-Based Sensors With Non-Covalent, Electrostatic Surface Modific...	PCT	PCT	PCT/US2019/028870	4/24/2019	Completed
20180362-04	442.0335CNWO	Systems and Methods for Detecting a Brain Condition	Foreign	CN	201980068940.50	10/17/2019	Pending
20180362-05	442.0335EPWO	Systems and Methods for Detecting a Brain Condition	Foreign	EPO	19798812.4	10/17/2019	Pending
20180362-01	442.0335USP1	Systems and Methods for Detecting a Brain Condition	Prov	US	62/747,939	10/19/2018	Completed
20180362-02	442.0335USU1	Systems and Methods for Detecting a Brain Condition	Utility-ORG	US	16/656,159	10/17/2019	Issued
20180362-06	442.0335USC1	Systems And Methods For Detecting A Brain Condition	Utility-CON	US	17/941,364	9/9/2022	Pending
20180362-03	442.0335WOU1	Systems and Methods for Detecting a Brain Condition	PCT	PCT	PCT/US2019/056766	10/17/2019	Completed

SCHEDULE B

UMIN Case #	PDS# Ref. #	Title	IP Type	Country	Application #	Date Filed	Status
2019-051-05	442.0341CNWO	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	CN	201980082446	12/12/2019	Pending
2019-051-04	442.0341EPWO	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	EPO	19836341.8	12/12/2019	Issued
2019-051-06	442.0341IEEP	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	IE	19836341.8	12/12/2019	Issued
2019-051-07	442.0341NLEP	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	NL	19836341.8	12/12/2019	Issued
2019-051-08	442.0341GBEP	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	GB	19836341.8	12/12/2019	Issued
2019-051-09	442.0341FREP	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	FR	19836341.8	12/12/2019	Issued
2019-051-10	442.0341DEEP	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Foreign	DE	19836341.8	12/12/2019	Issued
2019-051-01	442.0341USP1	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Prov	US	62/781,254	12/18/2018	Expired
2019-051-03	442.0341USU1	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	Utility-ORG	US	16/712,255	12/12/2019	Pending
2019-051-03	442.0342WOU1	Systems and Methods for Measuring Kinetic Response of Chemical Sensor Elements	PCT	PCT	PCT/US2019/065981	12/12/2019	Completed
2019-097-04	442.0351CNWO	Systems and Methods for Assessing and Treating Hemorrhage and Other Conditions	Utility-NSPCT	CN	202080031802.2	4/28/2020	Pending

PATENT

REEL: 064538 FRAME: 0892

SCHEDULE B

UMIN Case #	PDSD Ref. #	Title	IP Type	Country	Application #	Date Filed	Status
2019-097-05	442.0351EPWO	Systems and Methods for Assessing and Treating Hemorrhage and Other Conditions	Utility-NSPCT	EPO	20725391.5	4/28/2020	Pending
2019-097-01	442.0351USP1	Systems and Methods for Assessing and Treating Hemorrhage and Other Conditions	Prov	US	62/840,207	4/29/2019	Expired
2019-097-02	442.0351USU1	Systems and Methods for Assessing and Treating Hemorrhage and Other Conditions	Utility-ORG	US	16/860,529	4/28/2020	Pending
2019-097-03	442.0351WOU1	Systems and Methods for Assessing and Treating Hemorrhage and Other Conditions	PCT	PCT	PCT/US2020/030223	4/28/2020	Completed
2019-335	442.0372CNWO	Non-Covalent Modification Of Graphene-Based Chemical Sensors	Foreign	CN	202080058740.40	8/18/2020	Pending
2019-335	442.0372EPWO	Graphene-Based Chemical Sensors	Foreign	EPO	20764525	8/18/2020	Pending
2019-335	442.0372JPWO	Graphene-Based Chemical Sensors	Foreign	JP	2022-511117	8/18/2020	Pending
2019-335	442.0372USP1	Non-Covalent Modification Of Graphene-Based Chemical Sensors	Prov	US	62/889,387	8/20/2019	Expired
2019-335	442.0372USU1	Graphene-Based Chemical Sensors	Utility-ORG	US	16/996,537	8/18/2020	Pending
2019-335	442.0372WOU1	Graphene-Based Chemical Sensors	PCT	PCT	PCT/US2020/046829	8/18/2020	Completed
2020-010	442.0373CNWO	Transfer Material Layers for Graphene Fabrication Process	Foreign	CN	202080078311.3	11/12/2020	Abandoned

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UMIN Case #	PDSD Ref. #	Title	IP Type	Country	Application #	Date Filed	Status
2020-010	442.0373EPWO	Transfer Material Layers for Graphene Fabrication Process	Foreign	EPO	208250233	11/13/2020	Abandoned
2020-010	442.0373JPWO	Transfer Material Layers for Graphene Fabrication Process	Foreign	JP	2022-528056	11/12/2020	Abandoned
2020-010	441.0373USP1	Transfer Material Layers for Graphene Fabrication Process	Prov	US	62/935,941	11/15/2019	Expired
2020-010	442.0373USU1	Transfer Material Layers for Graphene Fabrication Process	Utility-ORG	US	17/096,104	11/12/2020	Abandoned
2020-010	442.0373WOU1	Transfer Material Layers for Graphene Fabrication Process	PCT	PCT	PCT/US2020/060144	11/12/2020	Completed
2020-189-01	442.0383USP1	Non-Covalent Modification of Graphene with Nanoparticles	Prov	US	63/030,139	5/26/2020	Expired
2020-189-03	442.0383USU1	Non-Covalent Modification of Graphene with Nanoparticles	Utility-ORG	US	17/328,478	5/24/2021	Pending
2020-189-02	442.0383WOU1	Non-Covalent Modification of Graphene with Nanoparticles	PCT	PCT	PCT/US2021/033872	5/24/2021	Pending
2020-189-04	442.0383EPWO	Non-Covalent Modification of Graphene with Nanoparticles	Foreign	EPO	21742553.7	5/24/2021	Pending
2020-189-05	442.0383JPWO	Non-Covalent Modification of Graphene with Nanoparticles	Foreign	JP	2022-570412	5/24/2021	Pending
2020-189-06	442.0383CNWO	Non-Covalent Modification of Graphene with Nanoparticles	Foreign	CN	TBD	5/24/2021	Pending
2021-115-01	442.0388USP1	Aldehyde and Ketone Receptor Modification of Graphene	Prov	US	63/161,640	3/16/2021	Expired
2021-115-03	442.0388USU1	Aldehyde and Ketone Receptor Modification of Graphene	Utility-ORG	US	17/689,760	3/8/2022	Pending

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UMIN Case #	PDSD Ref. #	Title	IP::Type	Country	Application #	Date Filed	Status
2021-115-02	442.0388WOU1	Aldehyde and Ketone Receptor Modification of Graphene	PCT	US	PCT/US2022/019728	3/10/2022	Pending
2021-133-01	442.0389USP1	Systems Utilizing Graphene Varactor Hysteresis Effects for Sample Characterizati	Prov	US	63/175,670	4/16/2021	Expired
2021-133-02	442.0389USU1	Systems Utilizing Graphene Varactor Hysteresis Effects for Sample Characterizati	Utility-ORG	US	17/719,760	4/13/2022	Pending
2021-133-03	442.0389WOU1	Systems Utilizing Graphene Varactor Hysteresis Effects for Sample Characterizati	PCT	PCT	PCT/US2022/025004	4/15/2022	Pending