

PATENT ASSIGNMENT COVER SHEET

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Assignment ID: PATI723722

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
FERMI RESEARCH ALLIANCE, LLC	12/30/2024

RECEIVING PARTY DATA

Company Name:	FERMI FORWARD DISCOVERY GROUP, LLC
Street Address:	5801 S. Ellis Avenue, Suite 619
City:	Chicago
State/Country:	ILLINOIS
Postal Code:	60637

PROPERTY NUMBERS Total: 91

Property Type	Number
Application Number:	17581353
Application Number:	18965986
Application Number:	17890908
Application Number:	18370777
Application Number:	17306481
Application Number:	17236983
Application Number:	18614006
Application Number:	18098022
Application Number:	18684577
Application Number:	17950594
Application Number:	18839995
Application Number:	18319376
Application Number:	18843952
Application Number:	18912327
Application Number:	18763228
Application Number:	18680614
Application Number:	18811043
Application Number:	63634303
Application Number:	63553426
Application Number:	63563615

PATENT

Property Type	Number
Application Number:	63661315
Application Number:	63650517
Application Number:	63663353
Patent Number:	10556604
Patent Number:	10352991
Patent Number:	10075657
Patent Number:	11012642
Patent Number:	10809393
Patent Number:	11108981
Patent Number:	11838666
Patent Number:	9186645
Patent Number:	9340931
Patent Number:	11266005
Patent Number:	11464102
Patent Number:	12004286
Patent Number:	10734980
Patent Number:	11054544
Patent Number:	11719852
Patent Number:	10070509
Patent Number:	10390419
Patent Number:	10993310
Patent Number:	11071194
Patent Number:	11723142
Patent Number:	10892591
Patent Number:	11123921
Patent Number:	11878462
Patent Number:	12172367
Patent Number:	11323105
Application Number:	18650902
Application Number:	18960817
Patent Number:	10962587
Patent Number:	10485088
Patent Number:	10645793
Patent Number:	10914766
Patent Number:	11630132
Patent Number:	10880984
Patent Number:	11291104
Patent Number:	11717584

Property Type	Number
Patent Number:	11353150
Patent Number:	11465920
Patent Number:	11618059
Patent Number:	11639010
Patent Number:	9233459
Patent Number:	10477668
Patent Number:	10448496
Patent Number:	7880146
Patent Number:	8898216
Patent Number:	8795519
Patent Number:	9797538
Patent Number:	9249549
Patent Number:	9496073
Patent Number:	9859046
Patent Number:	8957388
Patent Number:	9437771
Patent Number:	9923017
Patent Number:	9794499
Patent Number:	10084983
Patent Number:	9786464
Patent Number:	9759924
Patent Number:	10387365
Patent Number:	10079740
Patent Number:	9642239
Patent Number:	9928202
Patent Number:	11224918
Patent Number:	11174570
Patent Number:	11788207
Patent Number:	11961664
PCT Number:	US2375396
PCT Number:	US2313640
PCT Number:	US2314928
PCT Number:	US2335589

CORRESPONDENCE DATA

Fax Number: 7144539824

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.

Phone: 7144539824

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Correspondent Name: Kevin L. Soules
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Address Line 4: Upland, CALIFORNIA 91786-6064

ATTORNEY DOCKET NUMBER: FERMI-999

NAME OF SUBMITTER: Kevin Soules

SIGNATURE: Kevin Soules

DATE SIGNED: 12/30/2024

Total Attachments: 6

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ASSIGNMENT

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned:

FERMI RESEARCH ALLIANCE, LLC, a limited liability corporation having a principal place of business at P.O. Box 500, Batavia, IL 60510;

have invented certain new and useful improvements disclosed in attached Schedule A; hereby sell, assign, and transfer the above inventions to:

FERMI FORWARD DISCOVERY GROUP, LLC

a limited liability company of Delaware, having a principal place of business at 5801 S. Ellis Avenue, Suite 619, Chicago, IL 60637, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions and improvements that are disclosed in the applications or patents that have been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below; and in and to said application and all design, utility, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and all other patent applications that have been or shall be filed in the United States and all foreign countries of any of said inventions and improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all foreign countries on said inventions and improvements; and in and to all rights of priority resulting from the filing of said United States and/or Patent Cooperation Treaty (PCT) application; and in all rights of priority under the International Convention for the Protection of Industrial Property for every country in the Union; agree that said Assignee may apply for and receive a patent or patents for said inventions and improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all design, utility, divisional, continuing, continuation-in-part, substitute, renewal, reissue, and all other patent applications on any and all said inventions and improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said

Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions and improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions and improvements and for vesting title to said inventions and improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been nor will be made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

ASSIGNOR:

Date: 30 December 2024

Signature: 

Printed Name: Cherri J. Schmidt

Manager, Office of Partnership and
Technology Transfer
On behalf of Fermi Research Alliance, LLC

Schedule A

Serial #	File Date	Patent #	Issue Date	Title
15/485,411	4/12/2017	10,556,604	2/11/2020	RAILROAD BLOCK/GRADE CROSSING WARNING SYSTEM
15/214,758	7/20/2016	10,352,991	7/16/2019	EDGELESS LARGE AREA ASIC
15/214,933	7/20/2016	10,075,657	9/11/2018	EDGELESS LARGE AREA CAMERA SYSTEM
16/123,857	9/6/2018	11,012,642	5/18/2021	EDGELESS LARGE AREA CAMERA SYSTEM
15/568,500	10/23/2017	10,809,393	10/20/2020	MONOCRYSTAL-BASED MICROCHANNEL PLATE IMAGE INTENSIFIER
16/557,262	8/30/2019	11,108,981	8/31/2021	COMPACT, LOW POWER, HIGH RESOLUTION ADC PER PIXEL FOR LARGE AREA PIXEL DETECTORS
17/394,351	8/4/2021	11,838,666	12/5/2023	COMPACT, LOW POWER, HIGH RESOLUTION ADC PER PIXEL FOR LARGE AREA PIXEL DETECTORS
14/022,365	9/10/2013	9,186,645	11/17/2015	METHOD AND SYSTEM FOR IN-SITU CROSS LINKING OF POLYMERS, BITUMEN AND SIMILAR MATERIALS TO INCREASE STRENGTH, TOUGHNESS AND DURABILITY VIA IRRADIATION WITH ELECTRON BEAMS FROM MOBILE ACCELERATORS
14/942,606	11/16/2015	9,340,931	5/17/2016	METHOD AND SYSTEM FOR IN-SITU CROSS LINKING OF POLYMERS, BITUMEN AND SIMILAR MATERIALS TO INCREASE STRENGTH, TOUGHNESS AND DURABILITY VIA IRRADIATION WITH ELECTRON BEAMS FROM MOBILE ACCELERATORS
16/784,092	2/6/2020	11,266,005	3/1/2022	METHOD FOR TREATING SUPERCONDUCTING CAVITIES
17/581,353	1/21/2022			ENHANCED Nb3Sn SURFACES FOR SUPERCONDUCTING CAVITIES
18/965,986	12/2/2024			FLUID DISPENSING SYSTEM
16/594,011	10/5/2019	11,464,102	10/4/2022	METHODS AND SYSTEMS FOR TREATMENT OF SUPERCONDUCTING MATERIALS TO IMPROVE LOW FIELD PERFORMANCE
17/898,065	8/29/2022	12,004,286	6/4/2024	METHODS AND SYSTEMS FOR TREATMENT OF SUPERCONDUCTING MATERIALS TO IMPROVE LOW FIELD PERFORMANCE
18/650,902	4/30/2024			METHODS AND SYSTEMS FOR TREATMENT OF SUPERCONDUCTING CIRCUITS FOR QUANTUM COMPUTERS
15/993,923	5/31/2018	10,734,980	8/4/2020	PULSE CHARGING SYSTEM
16/043,047	7/23/2018	11,054,544	7/6/2021	HIGH-ENERGY X-RAY SOURCE AND DETECTOR FOR WELLBORE INSPECTION
17/342,525	6/8/2021	11,719,852	8/8/2023	INSPECTION SYSTEM OF WELLBORES AND SURROUNDING ROCK USING PENETRATING X-RAYS
15/280,107	9/29/2016	10,070,509	9/4/2018	COMPACT SRF BASED ACCELERATOR
16/054,942	8/3/2018	10,390,419	8/20/2019	COMPACT SRF BASED ACCELERATOR
16/502,045	7/3/2019	10,993,310	4/27/2021	COMPACT SRF BASED ACCELERATOR
15/656,509	7/21/2017	11,071,194	7/20/2021	LONGITUDINALLY JOINED SUPERCONDUCTING RESONATING CAVITIES
17/333,725	5/28/2021	11,723,142	8/8/2023	LONGITUDINALLY JOINED SUPERCONDUCTING RESONATING CAVITIES
16/373,367	4/2/2019	10,892,591	1/12/2021	HIGH SPEED DRIVER FOR PARTICLE BEAM DEFLECTOR
16/179,546	11/2/2018	11,123,921	9/21/2021	METHOD AND SYSTEM FOR IN SITU CROSS-LINKING OF MATERIALS TO PRODUCE THREE-DIMENSIONAL FEATURES VIA ELECTRON BEAMS FROM MOBILE ACCELERATORS
17/407,007	8/19/2021	11,878,462	1/23/2024	INFRASTRUCTURE-SCALE ADDITIVE MANUFACTURING USING MOBILE ELECTRON ACCELERATORS

18/540,152	12/14/2023	12,172,367	12/24/2024	BEAM BENDING SNOUT FOR MOBILE ELECTRON ACCELERATORS
18/960,817	11/26/2024			MOBILE ACCELERATOR-BASED VOLUMETRIC FABRICATION METHOD FOR IN-SITU CONSTRUCTION OF THREE-DIMENSIONAL STRUCTURES
16/440,573	6/13/2019	11,323,105	5/3/2022	METHOD AND SYSTEM FOR ARBITRARY OPTICAL PULSE GENERATION
16/203,232	11/28/2018	10,962,587	3/30/2021	METHOD AND SYSTEM FOR MICROWAVE MIXER PHASE RESPONSE MEASUREMENT
16/140,845	9/25/2018	10,485,088	11/19/2019	RADIO FREQUENCY TUNING OF DRESSED MULTICELL CAVITIES USING PRESSURIZED BALLOONS
16/664,843	10/26/2019	10,645,793	5/5/2020	AUTOMATIC TUNING OF DRESSED MULTICELL CAVITIES USING PRESSURIZED BALLOONS
16/101,982	8/13/2018	10,914,766	2/9/2021	FAST FARADAY CUP FOR MEASURING THE LONGITUDINAL DISTRIBUTION OF PARTICLE CHARGE DENSITY IN NON-RELATIVISTIC BEAMS
17/151,055	1/15/2021	11,630,132	4/18/2023	FAST FARADAY CUP FOR MEASURING THE LONGITUDINAL DISTRIBUTION OF PARTICLE CHARGE DENSITY IN NON-RELATIVISTIC BEAMS
16/428,664	5/31/2019	10,880,984	12/29/2020	PERMANENT MAGNET E-BEAM/X-RAY HORN
17/116,880	12/9/2020	11,291,104	3/29/2022	PERMANENT MAGNET E-BEAM/X-RAY HORN
17/681,668	2/25/2022	11,717,584	8/8/2023	SUPPORTED X-RAY HORN FOR CONTROLLING E-BEAMS
16/425,222	5/29/2019	11,353,150	6/7/2022	SYSTEM FOR SEALING FLANGED CONNECTIONS
16/505,838	7/9/2019	11,465,920	10/11/2022	WATER PURIFICATION SYSTEM
17/890,908	8/18/2022			WATER PURIFICATION SYSTEM
16/880,636	5/21/2020	11,618,059	4/4/2023	VERTICAL HIGH-PRESSURE RINSE MACHINE
16/923,059	7/7/2020	11,639,010	5/2/2023	ELECTRON BEAM TREATMENT FOR INVASIVE PESTS
13/746,563	1/22/2013	9,233,459	1/12/2016	CHANNEL NUT TOOL
15/512,264	3/17/2017	10,477,668	11/12/2019	VECTOR CONTROL OF RADIO FREQUENCY SIGNAL IN NARROW BAND LOADS DRIVEN BY INJECTION LOCKED MAGNETRON USING CARRIER AMPLITUDE MODULATION BY SPECTRAL ENERGY SPREADING VIA PHASE MODULATION
15/278,299	9/28/2016	10,448,496	10/15/2019	SUPERCONDUCTING CAVITY COUPLER
11/801,183	5/8/2007	7,880,146	2/1/2011	TUNE-STABILIZED, NON-SCALING, FIXED-FIELD, ALTERNATING GRADIENT ACCELERATOR
12/578,190	10/13/2009	8,898,216	11/25/2014	DISTRIBUTED DATA ACQUISITION AND PROCESSING SYSTEM AND METHOD
13/112,251	5/20/2011	8,795,519	8/5/2014	ELECTROMAGNETIC BOOM AND ENVIRONMENTAL CLEANUP APPLICATION FOR USE IN CONJUNCTION WITH MAGNETIZABLE OIL
14/947,201	11/20/2015	9,797,538	10/24/2017	ELECTROMAGNETIC BOOM AND ENVIRONMENTAL CLEANUP APPLICATION FOR USE IN CONJUNCTION WITH MAGNETIZABLE OIL
14/325,489	7/8/2014	9,249,549	2/2/2016	ELECTROMAGNETIC BOOM AND ENVIRONMENTAL CLEANUP APPLICATION FOR USE IN CONJUNCTION WITH MAGNETIZABLE OIL
13/855,190	4/2/2013	9,496,073	11/15/2016	METHOD AND SYSTEM FOR CONTROLLING CHEMICAL REACTIONS BETWEEN SUPERCONDUCTORS AND METALS IN SUPERCONDUCTING CABLES
15/263,935	9/13/2016	9,859,046	1/2/2018	METHOD AND SYSTEM FOR CONTROLLING CHEMICAL REACTIONS BETWEEN SUPERCONDUCTORS AND METALS IN SUPERCONDUCTING CABLES
13/713,134	12/13/2012	8,957,388	2/17/2015	COMPENSATABLE MUON COLLIDER CALORIMETER WITH MANAGEABLE BACKGROUNDS

13/893,514	5/14/2013	9,437,771	9/6/2016	MONOLITHIC ACTIVE PIXEL RADIATION DETECTOR WITH SHIELDING TECHNIQUES
15/168,578	5/31/2016	9,923,017	3/20/2018	MONOLITHIC ACTIVE PIXEL RADIATION DETECTOR WITH SHIELDING TECHNIQUES
14/696,651	4/27/2015	9,794,499	10/17/2017	WAFER-SCALE PIXELATED DETECTOR SYSTEM
15/167,595	5/27/2016	10,084,983	9/25/2018	WAFER-SCALE PIXELATED DETECTOR SYSTEM
14/813,811	7/30/2015	9,786,464	10/10/2017	SUPERCONDUCTING MULTI-CELL TRAPPED MODE DEFLECTING CAVITY
14/675,977	4/1/2015	9,759,924	9/12/2017	FLAT PROFILE LASER BEAM SHAPER
15/737,151	12/15/2017	10,387,365	8/20/2019	METHOD AND SYSTEM FOR HIGH PERFORMANCE REAL TIME PATTERN RECOGNITION
14/931,956	11/4/2015	10,079,740	9/18/2018	PACKET CAPTURE ENGINE FOR COMMODITY NETWORK INTERFACE CARDS IN HIGH-SPEED NETWORKS
14/689,695	4/17/2015	9,642,239	5/2/2017	CONDUCTION COOLING SYSTEMS FOR LINEAR ACCELERATOR CAVITIES
15/134,520	4/21/2016	9,928,202	3/27/2018	TIME-DIVISION MULTIPLEXING DATA BUS
16/250,899	1/17/2019	11,224,918	1/18/2022	SRF E-BEAM ACCELERATOR FOR METAL ADDITIVE MANUFACTURING
16/266,569	2/4/2019	11,174,570	11/16/2021	METHODS AND SYSTEMS FOR ELECTROSPINNING USING LOW POWER VOLTAGE CONVERTER
17/502,611	10/15/2021	11,788,207	10/17/2023	METHODS AND SYSTEMS FOR ELECTROSPINNING USING LOW POWER VOLTAGE CONVERTER
18/370,777	9/20/2023			METHODS AND SYSTEMS FOR ELECTROSPINNING USING LOW POWER VOLTAGE CONVERTER
17/306,481	5/3/2021			BOLTED JOINT CONDUCTION COOLING APPARATUS FOR ACCELERATOR CAVITIES
17/236,983	4/21/2021			METHODS AND SYSTEMS FOR FABRICATING NANOFIBER MATERIALS
17/389,252	7/29/2021	11,961,664	4/16/2024	HIGH TEMPERATURE SUPERCONDUCTING MAGNET
18/614,006	3/22/2024			HIGH TEMPERATURE SUPERCONDUCTING MAGNET
18/098,022	1/17/2023			ADDITIVE MANUFACTURING PLATFORM SYSTEM
18/684,577	2/16/2024			MULTIPLEXED READOUT OF QUANTUM DEVICES
PCT/US23/75396	9/28/2023			QUANTUM READOUT AND CONTROL
17/950,594	9/22/2022			SYSTEMS AND METHODS FOR AUTOMATED DESIGN
PCT/US23/13640	2/22/2023			PARTICLE BEAM ASSISTED FUSED DEPOSITION MODELING
18/839,995	8/20/2024			PARTICLE BEAM ASSISTED FUSED DEPOSITION MODELING
18/319,376	5/17/2023			ELECTRON BEAM STERILIZATION
PCT/US23/14928	3/9/2023			QUANTUM TRANSDUCTION WITH RESONANT CAVITIES
18/843,952	9/4/2024			QUANTUM TRANSDUCTION WITH RESONANT CAVITIES
18/912,327	10/10/2024			VACUUM BELLOWS INTEGRITY VALIDATION TOOL
PCT/US23/35589	10/20/2023			SHIELDED IRRADIATOR VEHICLE
18/763,228	7/3/2024			MULTIPLE AMPLIFIER SENSING CHARGE-COUPLED DEVICE
18/680,614	5/31/2024			WATER TREATMENT SYSTEM
18/811,043	8/21/2024			DAMAGED ACCELERATOR COOLING
63/634,303	4/15/2024			TESLA VALVE PROTECTION OF ACCELERATOR COMPONENTS
63/553,426	2/14/2024			EXTRUDED PLASTIC SCINTILLATORS
63/563,615	3/11/2024			OPTICAL STOCHASTIC CRYSTALLIZATION

63/661,315	6/18/2024			NON-DESTRUCTIVE SKIPPER READOUT OF QUANTUM INFORMATION
63/650,517	5/22/2024			SYSTEMS AND METHODS FOR PREVENTING ICE DEPOSITION ON A GAS VENTING OUTLET
63/663,353	6/24/2024			SYSTEM FOR CONVERTING CRYOCOOLED REFRIGERATION PLATFORMS TO CRYOGENIC PLANT-BASED COOLING