PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 Assignment ID: PATI752803

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
QATAR FOUNDATION FOR EDUCATION, SCIENCE & COMMUNITY DEVELOPMENT	04/30/2024	

RECEIVING PARTY DATA

Company Name:	HAMAD BIN KHALIFA UNIVERSITY	
Street Address:	P.O. Box 34110, Education City	
City:	DOHA	
State/Country:	QATAR	

PROPERTY NUMBERS Total: 224

Property Type	Number
Patent Number:	9116934
Patent Number:	9514167
Patent Number:	9418297
Patent Number:	8805798
Patent Number:	9990368
Patent Number:	9037550
Patent Number:	9514308
Patent Number:	10545932
Patent Number:	10223250
Patent Number:	10318388
Patent Number:	10528532
Patent Number:	10493408
Patent Number:	10147825
Patent Number:	10162857
Patent Number:	11053138
Patent Number:	10933399
Patent Number:	10399041
Patent Number:	10681070
Patent Number:	10425634
Patent Number:	10834379
Patent Number:	11063555

PATENT

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Property Type	Number
Patent Number:	11027994
Patent Number:	10844033
Patent Number:	10724758
Patent Number:	10519094
Patent Number:	10623097
Patent Number:	11446603
Patent Number:	11266945
Patent Number:	11312677
Patent Number:	10946338
Patent Number:	11288270
Patent Number:	10991150
Patent Number:	11459247
Patent Number:	11511882
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Patent Number:	11371846
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Patent Number:	11228009
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Patent Number:	11748837
Patent Number:	11150671
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Patent Number:	11206275
Patent Number:	11529552
Patent Number:	11423275
Patent Number:	11718023
Patent Number:	11796196
Patent Number:	11784953
Patent Number:	11570132
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Application Number:	15209967
Application Number:	16723829
Application Number:	17033777
Application Number:	16525435
Application Number:	17423380
Application Number:	16821494
Application Number:	16922508
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Application Number:	17875053
Application Number:	18217219
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Property Type	Number
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Application Number:	63471128
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Application Number:	63009566
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Application Number:	63157034
Application Number:	63224535
Application Number:	63222173
Application Number:	63193845
Application Number:	63238897
Application Number:	63275206
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Application Number:	63298473
Application Number:	63271512
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Application Number:	63294652
Application Number:	63365349
Application Number:	63336576

Property Type	Number
Application Number:	63327629
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Application Number:	63404270
Application Number:	63395204
Application Number:	63395236
Application Number:	63398113
Application Number:	62782615
Application Number:	62906405
Application Number:	62859791
Application Number:	16898483

CORRESPONDENCE DATA

Fax Number: 3128278185

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: 3123721121

Email: chicago.patents@klgates.com

Correspondent Name: K&L GATES LLP Address Line 1: PO BOX 1135

Address Line 4: Chicago, ILLINOIS 60690

ATTORNEY DOCKET NUMBER:	5600234.00013 -QF to HBKU	
NAME OF SUBMITTER:	Meg Boinski	
SIGNATURE:	/Meg Boinski/	
DATE SIGNED:	01/17/2025	

Total Attachments: 23

source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page1.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page2.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page3.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page4.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page5.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page7.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page8.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page9.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page10.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page11.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page11.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page12.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page12.tiff source=QF-HBKU IP Assignement Agreement_300924signed_ToFile#page13.tiff

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Intellectual Property Assignment Agreement

Between

QATAR FOUNDATION FOR EDUCATION, SCIENCE & COMMUNITY DEVELOPMENT

And

HAMAD BIN KHALIFA UNIVERSITY

THIS INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT is dated 4/30/2024

PARTIES

- (1) QATAR FOUNDATION FOR EDUCATION, SCIENCE & COMMUNITY DEVELOPMENT, a private institution for public benefit established under Law 21 of 2006 in the State of Qatar, whose registered office is at PO Box 5825, Education City Doha, State of Qatar ("Qatar Foundation" or "Assignor"); and
- (2) HAMAD BIN KHALIFA UNIVERSITY, an institution of higher learning under Qatar Foundation and established as a private institution for public benefit under Law 21 of 2006 in the State of Qatar whose registered office is at P.O. Box 34110, Education City, Doha, Qatar ("HBKU" or "Assignee")

(each of the **Assignor** and the **Assignee** being a party and together the **Assignor** and the **Assignee** are the parties).

WHEREAS, The Assignor is the owner of certain Intellectual Property Rights originated at and relating to HBKU as a university as well as all of its centers including HBKU research isntitutes (Qatar Computing Research Institute, Qatar Energy Environment Institute, Qatar Biomedical Research Institute), and HBKU Colleges (Islamic Studies, Science and Engineering, Health and Life Science, Public Policy, Law, Humanities and Social Science), including all other existing and forthcoming HBKU colleges, research institutes, research and educational initiatives, projects, centers as well as any HBKU current and new administrative units, departments, divisions, offices, entities, and any affiliated locations, offices, divisions and entities (collectively referred to as "Assigned Rights") and desires to assign these Assigned Rights to Assignee; and

WHEREAS, the Assignee, wholly owned subsidiary of the Assignor is willing to accept the assignment of the Assigned Rights subject to the terms set forth herein.

NOW, THEREFORE, in consideration of the premises and covenants contained herein, the Assignor and Assignee agree as follows:

1. Assignment of Rights

- 1.1. The Assignor hereby irrevocably without any payments due from Assignee to Assignor assigns, conveys and transfers to the Assignee all of its right, title and interest in and to the Assigned Rights together with the right to sue in respect of every act of infringement of the Assigned Rights occurring prior to the date of this Agreement, including the rights to receive income, royalties and proceeds due or payable to Assignor with respect to the Assigned Rights under including but not limited to any licensing, services and consultancy agreements with third parties.
- 1.2. The Assignor agrees (at the Assignee's request and expense) to use all reasonable endeavors to execute such documents and perform such acts as may reasonably be required or desired by the Assignee to give effect to this Agreement and Assignee agrees to record the change of ownership of the Assigned Rights with all relevant registries and shall do so as soon as reasonably practicable following the execution of this Agreement. Unless otherwise expressly provided for in this Agreement, each Party will pay its own costs and expenses associated with the execution and implementation of this Agreement.

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1.3. For the purposes of this Agreement "Intellectual Property Rights" shall mean whether registered or not any and all copyright, rights in inventions, patents, know-how, trade secrets, trademarks and trade names, service marks, design rights, rights in get-up, database rights and rights in data, utility models, domain names and all similar rights including any applications to protect or register such rights, all renewals and extensions of such rights or applications, whether vested, contingent or future and wherever existing.

2. Warranties and Representations.

- 2.1 The Assignor represents and warrants that it has the legal authority to assign the Assigned Rights
- 2.2 The Assignor makes no other warranties, expressed or implied, regarding the Assigned Rights and excludes any and all liability to the Assignee (to the extent permissible by law) that may arise in relation to the Intellectual Property Rights after the date of this Agreement.
- 3. Non-Disclosure of Assigned Rights. The Assignor agrees not to disclose or make unauthorized use of any confidential Intellectual Property Rights related to the Assigned Rights during this Agreement or thereafter.
- 4. Entire agreement. The parties agree that this Agreement and Schedule herein and any documents entered into pursuant to it constitutes the entire agreement between them and supersedes all previous agreements, understandings and arrangements between them, whether in writing or oral in respect of its subject matter.
- **5. Variation.** No variation of this Agreement shall be valid or effective unless it is in writing, refers to this Agreement and is duly signed or executed by, or on behalf of, each party.
- 6. Governing law. This Agreement and any dispute or claim arising out of, or in connection with, it, its subject matter or formation (including non-contractual disputes or claims) shall be governed by, and construed in accordance with, the laws of the State of Qatar.
- 7. Counterparts. This Agreement may be signed in any number of separate counterparts, each of which when signed and dated shall be an original, and such counterparts taken together shall constitute one and the same agreement.

AGREED by the parties on the date set out at the head of this Agreement;

SIGNED BY HE SHEIKA HIND BINT HAHAD

AL-THANI

Designation: VICE CHAIRPERSON & CEO

30.09.2024

For and on behalf of QATAR FOUNDATION

and

Dr. Ahmad M. Hasnah

Designation: HBKU President

For and on behalf of HAMAD BIN KHALIFA UNIVERSITY

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SCHEDULE

ASSIGNED PATENTS

Track Code	Title	Jurisdiction	Patent Number	Issue Date
2011-005	Holistic DB Record Repair	United States	US 9,116,934	8/25/2015
2011-011	Behaviour Based Record linkage - BBRL	United States	9514167	12/6/2016
2012-004	Detecting Video Copies	United States	9418297	8/16/2016
2012-005	Data Cleaning	United States	US 8,805,798	8/12/2014
2012-025	A system and method for event or entity analysis and exploration in microblogs	United States	9990368	6/5/2018
2012-026	System and Method to Store Video Fingerprints on Distributed Nodes in Cloud Systems	Europe	2742446	1/16/2019
2012-032	Privacy Preserving Data Cleaning (Detecting inconsistent data records)	United States	US 9,037,550	5/19/2015
2012-033	Apparatus to protect an integrated circuit from an invasive attack based on active circuits making capacitive measurements of the metal stack	United States	US 9,514,308	12/6/2016
2013-045	Towards Dependable Data Repairing with Fixing Rules	United States	US 10,545,932 B2	1/28/2020
2013-047	Preventive Data Cleaning	United States	10223250	3/5/2019
2013-049	Detecting Unique Column Combinations in Dynamic Datasets	United States	10318388	6/11/2019
2013-050	Estimating Data Integration and Cleansing Effort	United States	10528532	1/7/2020
2014-035	MXene-based filtration/desalination membranes	United States	10493408	12/3/2019
2014-066	Low Cost Hybrid Partial Power Processing System for Efficient and Fast MPPT of PV Strings	United States	10147825	12/4/2018

2015-028	Lightning Fast and Space Efficient Inequality Joins	United States	10162857	12/25/2018
2015-031	Mxene as New Adsorbent for Heavy Metals	United States	11053138	7/6/2021
		Germany	6.02018E+11	5/20/2020
		Europe	EP3427820	5/20/2020
2015-032	Removal of Barium with 2D Carbon Nano-Material from Natural and Produced/Co-produced Waters	United States	US 10,933,399	3/2/2021
2015-057	Antimicrobial Membranes Based on MXene Composite	United States	10399041	9/3/2019
2015-061	A method to identify malicous web domain names thanks to their dynamics	United States	US 10,681,070 B2	6/9/2020
2015-065	Gradient-based 2D to 3D Video Conversion	United States	10425634	9/24/2019
		United States	10834379	11/10/2020
		Mexico	377805	11/30/2020
		Japan	6903657	6/25/2021
2015-066	An Adaptive Multi-Modeling Approach to Solar Now-casting	United States	11063555	7/13/2021
		Europe	EP 3314751	9/2/2020
		France	FR 3314751	9/2/2020
2016-008	Advanced Oxidation Processes for Treated Sewage Effluent	United States	11027994	6/8/2021
2016-016	Catalytic Ligand complexes and Butadiene-Carbon Dioxide Telomerisation Processes to Mediate Chemical Transformations.	United States	US 10,844,033 B2	11/24/2020
2016-044	HI Thermostat	United States	10724758	7/28/2020
2016-104	Metal Catalysed Alkoxycarbonylation of lactone	United States	10519094	12/31/2019
		Russia	2732499	3/19/2020

2017-013	RECEIVING APPARATUS FOR VISIBLE LIGHT COMMUNICATION SYSTEM TO DECREASE BER UNDER OPTICAL NOISE INTERFERENCE		GB2566668	11/25/2020
			US 10,623,097 B2	4/14/2020
2017-018	Optimizing the Design and Operation Parameters of Acid Gas Removal System	United States	11446603	9/20/2022
2017-024	Hybrid AGR-FO for Saving Energy, Water Purification and Power Production	United States	US 11,266,945 B2	3/8/2022
2017-025	Hydrogenation of CO2 derived lactone and lactone derived feedstocks	United States	11,312,677 B2	4/26/2022
2017-028	Novel polyamide RO membranes blended with Acacia Gum (AG)	United States	10,946338 B2	3/16/2021
2017-065	An optimization method for cross-platform data processing	United States	US 11,288,270 B2	3/29/2022
2017-073	Fully Convoluational Neural Networks for 2D-to-3D video conversion	United States	US 10,991,150 B2	4/27/2021
2018-023	Iron oxide modified halloysite clay as an efficient adsorbent for enhanced selective phosphate removal from water	United States	11,459,247 B2	10/4/2022
2018-031	A method for encoding historical fault conditions based on semantic techniques for rapid identification of additional data capture	United States	11511882	11/29/2022
2018-033	A system helping ISP to filter out DRDoS amplification traffic	United States	US 11,206,286 B2	12/21/2021
2018-051	An Autonomous Visual Celestial Navigation System for Smart Vehicles	United States	11371846	6/28/2022
2018-060	Role of fluorination in creating CNT-metal rectifier for optical Rectenna applications	United States	11227963	1/18/2022
2019-007	A Molecular building block strategy for creating defect-free single crystal perovskite based solar cells	United States	11228009	1/18/2022
2019-009	Methods and Solutions to establish a communication channel and security	United States	11271749	3/8/2022

	services in presence of reactive jamming and eavesdropping attacks			MID M. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
2019-010	AI-CARGO: An intelligent and data-driven system air-cargo revenue management system	United States	11748837	9/5/2023
2019-014	Methods and Apparatus for Jamming Localisation and Supporting Navigation System	United States	16/405,489	10/19/2021
2019-015	Systems and methods for implementing an assisted secure secret recovery mechanism.	United States	US 11,182,470 B2	11/23/2021
2019-027	Domain Maliciousness Assessment via Real-Time Graph Inference	United States	US 11,206,275 B2	12/21/2021
2019-053	YouRule: A Real Sport Game Design System for Users to Create, Play and Share their Rules.	United States	11529552	12/20/2022
2019-070	A CMOS Analog Sensor Interface Circuit Embedded in a Passive RFID Tag	United States	11423275	8/23/2022
2019-074	3D printing based on self-assembled molecular building blocks for materials design and bio-applications	United States	11718023	8/8/2023
2020-045	Total deactivation of biological and chemical agents in HVAC systems with ultraviolet germicidal irradiation (UVGI) and CO2 adsorption filter	United States		10/24/2023
2020-064	Content-Agnostic Detection of Unwanted Emails for Enterprise Security	United States	11,784,953 B2	10/10/2023
		United States	11784953	10/10/2023
2020-087	InViTAG, Interactive Voronoi Treemap	United States	11222453	1/11/2022

ASSIGNED PATENT APPLICATIONS

Track code	Title	Jurisdiction	Application/ Publication Number	Filing Date
2011-005	Holistic DB Record Repair	United Kingdom	1114740.2	8/26/2011
2012-002	Systems and methods for On-demand sharing of graphics processor units among current applications	Europe	12724141.2	5/29/2012
2012-004	Detecting Video Copies	United States	15/209967	7/14/2016
2012-005	Data Cleaning	Europe	20120726398	10/24/2014
2012-009	Multicasting Multiview 3D Videos	United Kingdom	1207698	5/2/2012
2012-021	A method and system for integrating data in to a database	Europe	EP20130173538	6/25/2013
2012-022	MAQSA - Interactive Social Analytics for News	United Kingdom	1202309.9	2/10/2012
		Europe	EP20120740958	7/26/2012
2012-036	Seamless Switch (Methods and systems for managing access to a location indicated by a link in a remote access system)	United Kingdom	1508483.3	5/18/2015
2013-003	Dynamically Adapting Machine Translation	Qatar	QA/201507/00304	7/12/2015
2014-035	MXene-based filtration/desalination membranes	Gulf Cooperation Council	2015-30411	11/17/2015
2014-036	Novel Multi Effect Distillation (MED) Evaporator	Gulf Cooperation Council	2016-31325	5/12/2016

2015-003	Multi Effect Distillation - Absorption Vapor Compression (MED-AVC) without Heat Rejection	Gulf Cooperation Council	2017-32908	2/9/2017
2015-057	Antimicrobial Membranes Based on MXene Composite	Gulf Cooperation Council	2016-32216	10/20/2016
2015-078	Organic Hole Transporting Materials for Opto- Electronic Applications	Europe	15173936.4	6/30/2015
2016-008	Advanced Oxidation Processes for Treated Sewage Effluent	Europe	17814262.6	1/30/2019
2016-016	Catalytic Ligand complexes and Butadiene-Carbon Dioxide Telomerisation Processes to Mediate Chemical Transformations.	Europe	17723995.1	10/3/2018
2016-029	Tri Hybrid Desalination Process	India	2.01917E+11	1/24/2019
	110003	Qatar	QA/201901/000054	1/24/2019
2016-044	HI Thermostat	Europe	17205140.1	12/4/2017
2016-049	Arabic gum as a new pore- former and functionalizing agent for casting of polymer membranes	Qatar	QA/201902/000070	2/3/2019
2016-088	Multi Effect Membrane Distillation (ME-MD) Process	Gulf Cooperation Council	2018-35096	4/5/2018
2016-104	Metal Catalysed Alkoxycarbonylation of	Germany		
	lactone	Netherlands		alled bereen and the second
		Europe	18771331.8	10/1/2019
		Gulf Cooperation Council	2018-34977	3/18/2018
	ANALAS AND CONTRACTOR OF THE PROPERTY OF THE P	Qatar	QA/201909/000502	9/17/2019

2017-018	Optimizing the Design and Operation Parameters of Acid Gas Removal System	Qatar	QA/202001/00016	1/6/2020
2017-024	Hybrid AGR-FO for Saving Energy, Water Purification and Power Production	Qatar	QA/202001/00026	1/9/2020
2017-025	Hydrogenation of CO2 derived lactone	Europe	18817086.4	1/9/2020
	derived feedstocks	Russia	2020100077	6/7/2018
2017-061	Novel AGR-EOR System	Qatar	QA/201811/00498	11/12/2018
2017-065	An optimization method for cross-platform data processing	Qatar	QA/201902/00256	5/12/2019
2018-013	Automatic Inference of Road Map Topologies from Aerial Images	United States	16/723,829	12/20/2019
2018-023	Iron oxide modified halloysite clay as an	Oman	OM/P/2019/00418	10/21/2019
	efficient adsorbent for enhanced selective phosphate removal from water	Qatar	QA/201910/00554	10/16/2019
2018-024	Novel Antibacterial Polysulphone Membrane	Oman	OM/P/2019/00393	10/3/2019
	Blended with Arabic Gum	Qatar	QA/201910/00530	10/3/2019
2018-028	A hardware design scheme of LSTM neural network based on memristor crossbar	United States	17/033777	9/26/2020
2018-031	A method for encoding historical fault conditions based on semantic techniques for rapid identification of additional data capture	Qatar	QA/202006/000327	6/11/2020
2018-035	Root Cause Analysis for Aircraft Faults with	United States	16/898,483	6/11/2020
	Monochromatic Clique Detection	Qatar	QA/202006/000328	6/11/2020

2018-037	Topotello	United States	16/525,435	7/29/2019
2018-052	Methods and solutions to guarantee information and transactions authenticity	Qatar	QA/201910/000577	10/31/2019
2018-057	New Method for the Synthesis of Antibacterial	Saudi Arabia	521422537	7/14/2021
	Chitosan-Lignosulfonate Nanospheres	Qatar	QA/202107/00395	1/14/2020
2018-058	Green chitosan- lignosulfonate	United States	17/423,380	7/15/2021
	nanocomposites for inhibition of Microbial Induced Corrosion (MIC)	Qatar	QA/202107/00406	7/18/2021
2018-061	Physical layer positioning and navigation technologies	United States	16/821,494	3/17/2020
	spoofing detection techniques	Qatar	QA/202003/00142	3/19/2020
2019-007	A Molecular building block strategy for creating defect- free single crystal perovskite based solar cells	Qatar	QA/202009/00463	9/3/2020
2019-008	A Molecular building block strategy for engineering	United States	16/922,508	7/7/2020
	high-efficiency organic solar cells (BBSA Solar cells)	Qatar	QA/202007/00372	7/9/2020
2019-010	Al-CARGO: An intelligent and data-driven system air-	China	2.0201E+11	5/14/2020
	cargo revenue management system	Europe	EP 20174272.3	5/12/2020
		Qatar	QA/202005/00259	5/12/2020
2019-014	Methods and Apparatus for Jamming Localisation and Supporting Navigation System	Qatar	QA/202111/000625	11/7/2021
2019-015	Systems and methods for implementing an assisted secure secret recovery mechanism.	Qatar	QA/202005/00281	5/23/2020
2019-019		United States	17/598,633	9/27/2021

	Arabic diacritization using sequence labeling	Qatar	QA/202110/00526	9/26/2021
2019-024	BlockStack: A full-stack system for blockchain	United States	16/880,575	5/21/2020
	analytics	Qatar	QA/202005/00282	5/23/2020
2019-027	Domain Maliciousness Assessment via Real-Time Graph Inference	Qatar	QA/201905/00298	5/30/2019
2019-050	Carbon derived carbon as a novel adsorbent for water treatment applications	Qatar	QA/202010/00539	10/11/2020
2019-053	YouRule: A Real Sport Game Design System for Users to Create, Play and Share their Rules.	Qatar	QA/202102/00086	2/14/2021
2019-070	A CMOS Analog Sensor Interface Circuit Embedded in a Passive RFID Tag	United States	17/875,053	7/27/2022
ta-daballina. Advantario Andrea		Qatar	QA/202012/00632	12/6/2020
2019-074	3D printing based on self- assembled molecular building blocks for materials design and bio-applications	United States	18/217,219	6/30/2023
		United States	18/217,225	6/30/2023
		Not Applicable (PCT App)	PCT/QA2021/050010	5/15/2021
		Qatar	QA/202006/00335	6/16/2020
2019-078	Generation of induced pluripotent stem cells	United States	17/161,269	1/28/2021
	(iPSCs) from a patient with GLUT2 mutations	Qatar	QA/202101/00070	1/28/2021
2019-081	Detecting Visual Attention of Children with Autism	United States	17/170,184	2/8/2021
	Spectrum Disorder Based on Geometric-Distance of Facial Landmark	Qatar	QA/202102/00085	2/14/2021
2019-090	Novel Techniques for Hybrid Carbon Capture and	United States	17/504,699	10/19/2021
	Mineralization	Qatar	QA/202110/00590	10/17/2021

2019-098	Operating and Control Scheme for Off-Grid	Qatar	QA/202103/00136	3/11/2021
	Batteryless PV Powered System	United States	17/196,372	3/9/2021
2020-002	Modified Kalina System for an Efficient Power and	United States	17/919,021	10/14/2022
	Water Production	Not Applicable (PCT App)	PCT/QA2021/050005	4/14/2021
2020-027	Method and Techniques to Classify Malicious Domain	Singapore	11202253934X	4/13/2021
	Hosting Types	Australia	2021257379	10/5/2022
		China	2.0218E+11	10/13/2022
		Europe	21787700	4/13/2021
		Not Applicable (PCT App)	PCT/QA2021/050004	4/13/2021
2020-032	A new method to prepare novel activated carbon-composite materials and new activated carbon based water filters	Not Applicable (PCT App)	PCT/QA2021/050015	6/15/2021
		United States	18/011,023	12/16/2022
2020-037	LDHC-based treatment to improve drug response in breast cancer.	Not Applicable (PCT App)	PCT/QA2021/050012	6/8/2021
	delication and the second seco	United States	18/009,245	12/8/2022
	The second secon	Qatar	QA/202212/00865	12/26/2022
2020-038	Thermal conductivity enhancement of nanofluids using functionalized and emulsified carbide derived	Not Applicable (PCT App)	PCT/QA2021/050014	6/15/2021
	carbon nanoparticles	United States	18/010,368	12/14/2022
2020-043	Direct air capture of CO2 using the air conditioning	United States	18/016,180	1/13/2023
	(AC/HVAC) system	Not Applicable (PCT App)	PCT/QA2021/050018	7/15/2021

s - 1,000 m		Qatar	QA/202301/00056	1/15/2023
2020-045	Total deactivation of biological and chemical agents in HVAC systems with ultraviolet germicidal irradiation (UVGI) and CO2 adsorption filter	Qatar	QA/202104/00268	4/19/2021
2020-048	Mouse monoclonal antibody against non-phosphorylated S129 alpha-synuclein (4B1)	Not Applicable (PCT App)	PCT/QA2021/050019	9/17/2021
		United States	17/511,230	10/26/2021
for Up	Novel System and Method for Low-Cost Methane	United States	17/374,247	7/13/2021
	Upgrading to Added- Valuable Products	Qatar	QA/202107/00394	7/13/2021
2020-057	Fabrication Method of thermally enhanced thermoplastic for thermal system applications	Qatar	QA/202107/00386	7/8/2021
2020-061	Smart Mask with Printed- electronics for Flu-like Symptoms Real-time Monitoring	United States	17/036,936	9/29/2020
		United States	17/502,802	10/15/2021
		Qatar	QA/202008/00425	8/11/2020
		Qatar	QA/202110/00587	10/17/2021
2020-064	Content-Agnostic Detection of Unwanted Emails for Enterprise Security	Qatar	QA/202109/00551	9/30/2021
2020-069	A self-sustaining greenhouse with novel roof	United States	17/369,281	7/7/2021
	design employing spectrum selective nanofluid	Qatar	QA/202107/00385	7/8/2021
2020-070	Method for Detecting Compromised Mobile	United States	17/495,391	10/6/2021
	Devices via Network Traffic Analysis and Graph- inference	Qatar	QA/202110/00566	10/7/2021
2020-072		United States	18/031,122	4/10/2023

	Personal Safe Breathing Space	Qatar	QA/202304/00259	4/4/2023
		Not Applicable (PCT App)	PCT/QA2021/050020	10/8/2021
2020-073	Systems and Methods for Privacy-Preserving Co- Location Detection and Collision Avoidance	United States	17/943,773	9/13/2022
2020-085	Explainable propaganda detection	United States	17/855,248	6/30/2022
GGGGIOH	Qatar	QA/202206/00453	6/30/2022	
2020-087	InViTAG, Interactive Voronoi Treemap	Qatar	QA/202012/00655	12/20/2020
2020-096	Protection against biological agents via personalized aircurtain in aircrafts' cabins and buildings	Not Applicable (PCT App)	PCT/QA2021/050021	10/14/2021
renoveralization of the control of t	J	United States	18/032,066	4/14/2023
		Qatar	QA/202304/00286	4/11/2023
2020-116	Methods and Techniques to Detect Exact Brand	United States	17/558,986	12/22/2021
	Squatting Domains Early in Domain Life Cycle	Qatar	QA/202112/00723	12/23/2021
2020-120	Evaluating and Monitoring Mindfulness During Islamic Prayer with a Smart Mobile Device	United States	17/559,015	12/22/2021
2020-121	Prognostic molecular and clinical profiles for severe	United States	18/038,665	5/24/2023
complications and outcomes from COVID-19	complications and	Not Applicable (PCT App)	PCT/QA2021/050024	11/25/2021
Softening for Desalinat	Methods of Seawater Softening for Desalination	United States	18/283,173	9/20/2023
	and Mineral Extraction	Not Applicable (PCT App)	PCT/QA2022/050005	3/25/2022
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	Novel ssDNA aptamers that specifically bind to truncated α-syn fibrils and inhibit α-syn seeded aggregation and phosphorylation	Not Applicable (PCT App)	PCT/QA2022/050003	2/18/2022
2020-128	Name2GAN - Demographic information classifier from	United States	17/570,663	1/7/2022
	the Name	Qatar	QA/20220/00025	1/9/2022
2020-129	KPI2Segment - A technology for the rapid and	United States	17/579,039	1/19/2022
	accurate segmentation of customer behavioral and associated demographic data based on stakeholder selected Key Performance Indicators	Qatar	QA/202201/00049	1/13/2022
2020-136	Method and system for Anomalous User Account	United States	17/685,687	3/3/2022
	Detection by Profiling Individual and Group Behavior	Qatar	QA/202203/00149	3/3/2022
2020-139	Circulating noncoding RNAs as a Signature of Autism Spectrum Disorder Symptomatology	Not Applicable (PCT App)	PCT/QA2022/050007	4/28/2022
iPSC lines (QI QBRIi011/ diabetes due t	Establishing novel human iPSC lines (QBRIi010A and	United States	18/276,416	8/8/2023
	QBRIi011A) to study diabetes due to mutations in the GLUCOKINASE gene	Not Applicable (PCT App)	PCT/QA2022/050001	2/7/2022
		Qatar	QA/202307/00638	7/27/2023
2021-003	Smart Diaper for Infant and Critical Patient Real-time Health Monitoring	United States	17/687,048	3/4/2022
		Qatar	QA/202203/00151	3/3/2022
2021-007	Cross-Domain Label- Adaptive Stance Detection	United States	17/871,206	7/22/2022
	, taping starios betout	Qatar	QA/202207/00447	8/21/2022
2021-009		United States	17/865,963	7/15/2022

	Graph Neural Networks for News Media Profiling: Factuality and Bias	Qatar	QA/202207/000422	7/14/2022
2021-023	Genetically encoded, live cell, BRET-based SARS-CoV-2 Mpro protease activity sensor	Not Applicable (PCT App)	PCT/QA2022/050009	5/20/2022
2021-026	Smart Indoor Air Quality Platform	Not Applicable (PCT App)	PCT/QA2022/050013	6/27/2022
2021-029	A Modelling Framework for Embedding-based	United States	17/804,408	5/27/2022
	Predictions for Compound- Viral Protein Activity	Qatar	QA/202205/00327	5/26/2022
Screen Printed Weara	Low-Cost and Scalable	United States	17/900,261	8/31/2022
	Human Body Temperature Sensor	Qatar	QA/202208/00569	8/31/2022
2021-038	RT-QuIC using C-terminally truncated a-Synuclein forms detects differences in seeding propensity of different brain regions from synucleinopathies	Not Applicable (PCT App)	PCT/QA2022/050010	6/2/2022
2021-068	An Interpretable Graph- based Al System for Traffic Accident Prediction	United States	17/979,488	11/2/2022
2021-069	Long Term HbA1C Predcition	United States	18/101,913	1/26/2023
		Qatar	QA/202301/00083	1/26/2023
2021-073	DiaNet: A Deep Learning Based Architecture to	United States	18/094,649	1/9/2023
	Diagnose Diabetes Using Retinal Images Only	Qatar	QA/202301/00042	1/10/2023
2021-088	QASR Reservoir Simulator	United States	17/973,212	10/25/2022
		Qatar	QA/202210/00734	10/25/2022
2021-095	Methods and Techniques to Generate High-Quality	United States	18/087,290	12/22/2022

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2021-098	Power Line Communication CIR Multilevel Quantization for Physical Layer Security	United States	18/093,184	1/4/2023
2021-099	Efficient and cost-effective Photonic cooler based IR filtering for Photovoltaics and Energy efficiency applications	United States	18/090,968	12/29/2022
2021-100	Tau and Amyloid Protein Lowering Compound	United States	18/202,525	8/28/2023
2021-103	Selective modulator of the Tau Pathway	Not Applicable (PCT App)	PCT/QA2023/050016	8/9/2023
2021-105	Method for direct-fabrication of regular/random network of plasmonic/metastructures on-substrate by a vacuum-free/lithography-free piezo inkjet printed process for light management high efficiency solar cells.	Not Applicable (PCT App)	PCT/QA2023/050009	6/1/2023
2021-106	Synthetic Methods for the Modification of Clay-based Supports and their Applications in Heterogeneous Catalysis	Not Applicable (PCT App)	PCT/QA2023/050014	8/4/2023
2021-115	Multifunctional halloysite based ceramic membrane for water treatment applications	Not Applicable (PCT App)	PCT/QA2023/050013	8/4/2023
2021-117	Novel functionalized limestone with antimicrobial properties, heavy metals and phosphate removal for wastewater treatment applications	Not Applicable (PCT App)	PCT/QA2023/050015	8/4/2023
2021-119	Identification of immune associated-IncRNA	United States	18/141,167	4/28/2023
	signature with prognostic	Qatar	QA/202304/00333	4/30/2023

	connotation in multi-cancer setting.			
2022-011	Automatic Generation of H.264 Parameter Sets to	United States	18/131,002	4/5/2023
	Recover Video File Fragments	Qatar	QA/202304/00257	4/4/2023
2022-023	A CMOS Temperature Sensor with Wide-Range Sensing Capability and High Energy-efficiency	United States	18/204,611	6/1/2023
2022-024	Decentralised offshore floating greenhouse to support food security in sustainable manner across the globe.	Not Applicable (PCT App)	PCT/QA2023/050002	4/25/2023
2022-029	Latent concept Analysis method	Qatar		4/6/2023
		United States	18/132,224	4/7/2023
2022-040	PLC Topology Change Detection System	Not Applicable (PCT App)	PCT/QA2023/050006	5/15/2023
2022-046	An Integrtaed Laser Doppler Blood Flow Measurement System for PAD patients	Qatar	QA/202208/00492	8/4/2022
2022-062	Cofactors FAD and PLP promote pancreatic progenitors in pancreatic development	United States	63/421,394	11/1/2022
2022-064	Design and Fabrication of Patient-Specific Stimuli- Responsive Cardiovascular Stents for Coronary Artery Spasm Treatment to Eliminate Post-Surgical Interventions	United States	63/525,289	7/6/2023
2022-066	Functional polymer nanocomposites for stimuli- responsive Dynamic Ring to treat Cardiac Mitral Valve Disorder	United States	63/525,285	7/6/2023

2022-085	Direct Metal Nano Patterning Using Electron- Beam Irradiation on Metal- Containing Molecular- Sheets Built from Self- Assembled Molecular Monolayers for the Next Generation of Flexible Electronics and Rectennas Application.	United States	18/220,369	7/11/2023
2022-090	A Method of Voltage Violation Prediction	United States	18/368,168	9/14/2023
2022-096	Directly Air-CO2-Captured via Ammonia Plants (DAC-AMM)	United States	63/425,152	11/14/2022
2022-099	Efficient integration of desiccant and induction heating with Direct Air Capture	United States	63/423,309	11/7/2022
2022-100	Management and communication system for non-centralized AC such as split Air Conditioning units	United States	18/243,236	9/7/2023
2022-101	Survey2Persona: Rendering Survey Responses as Personas	United States	18/230,322	8/4/2023
2022-102	Question2Statement (Q2S): An Algorithm for identifying questions and converting them into statements	United States	18/230,046	8/3/2023
2022-108	Engineered picobody to α- syn retains binding and functional activity	United States	18/233,733	8/14/2023
2022-112	A free-standing sponge-like porous thin film sorbent using polyolefin and preparing method thereof	United States	63/430,213	12/5/2022
2022-113	Two-layered sponge-like sorbent for oil spill cleanup and a method for enhancing sorption performance thereof	United States	63/430,217	12/5/2022

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2022-115	Detection of Tor-based malware	United States	63/423,700	11/8/2022
2022-119	L2min2/2s: Efficient Linear Decimation Filters for Incremental Delta-Sigma ADCs	United States	63/426,232	11/17/2022
2022-120	METHOD FOR PREPARING SPONGE- LIKE POROUS THIN FILM USING POLYPROPYLENE	United States	63/430,201	12/5/2022
2022-121	POROUS OIL SORBENT WITH SWELLABLE POCKETS USING POLYETHYLENE	United States	63/430,203	12/5/2022
2022-122	POLYETHYLENE AND POLYPROPYLENE BLEND WITH IMPROVED COMPATIBILITY DERIVED FROM PLASTIC WASTE STREAM AND A METHOD TO PREPARE PE-PP BASED REUSABLE OIL SORBENT WITH SWELLABLE CAVITIES	United States	63/430,205	12/5/2022
2022-124	Dizzy: System and Methods for Scalable Darkweb Analytics	United States	63/426,243	11/17/2022
2022-127	Direct Synthesis of Fractal Metallic Nanostructures with Control Over Fractal Path Using Electron-Beam Irradiation of Metal- Containing Self-Assembled Carbon-Nanosheets for the Next Generation of Electronics, bioelectronics, and energy conversion syst	United States	63/421,341	11/1/2022
2022-131	PROCESS OF SATURATED VAPOR COMPRESSION AND METHOD FOR THE SAME	United States	63/434,307	12/21/2022
2022-135	Token Pruning for Swin Transformers	United States	63/435,923	12/29/2022

2022-142	Kansa: System and Methods for Cloud-based Smart Contract Security Auditing	United States	63/432,570	12/14/2022
2023-009	PROCESS OF BRINE COCNETRATION AND METHOD FOR TREATMETN THE SAME	United States	63/462,849	4/28/2023
2023-012	A BRET-based Mpro biosensor with an increased rate of cleavage	United States	63/522,298	6/21/2023
2023-018	Integrated Printed Sensors` Patch for Micro-Climate Monitoring of Green House and Soil-Related Variables	United States	63/463,448	5/2/2023
2023-026	A Novel Maskless Photolithography Process for the Synthesis of Metallic Nanostructures of Fractal Geometry Directly on 2D Printed Carbon-Based Nanosheets Under Room Temperature UV Irradiation	United States	63/534,672	8/25/2023
2023-029	DuProSense: A BRET- based, Dual Protease Biosensor	United States	63/525,307	7/6/2023
2023-036	Novel immunoassay for detecting neurodegenerative diseases pathology in biological fluids	United States	63/471,128	6/5/2023
2023-039	A Method for Zero-shot Black-box Detection of Neural Trojans	United States	63/542,136	10/3/2023
2023-054	ProvG-Searcher: A Graph Representation Learning Approach for Efficient Provenance Graph Search	United States	63/538,133	9/13/2023
2023-055	Image Encryption: An Exploration of Collatz Conjecture to strengthen Data Security	United States	63/538,136	9/13/2023

and described to be a second	2023-060	Standalone Smart Fresh Air Intake Management System	63/544,724	10/18/2023	
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