

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7074690

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CUBIC PEROVSKITE LLC	09/15/2021

RECEIVING PARTY DATA

Name:	CUBICPV INC.
Street Address:	1807 ROSS AVENUE, SUITE 333
City:	DALLAS
State/Country:	TEXAS
Postal Code:	75201

PROPERTY NUMBERS Total: 81

Property Type	Number
PCT Number:	US1425910
PCT Number:	US1467024
PCT Number:	US1542864
PCT Number:	US1631986
PCT Number:	US1561467
PCT Number:	US1641090
PCT Number:	US1653806
PCT Number:	US1827073
PCT Number:	US1827326
PCT Number:	US2061820
PCT Number:	US1960405
PCT Number:	US1961462
PCT Number:	US2028827
PCT Number:	US2061512
PCT Number:	US2058874
PCT Number:	US2061824
PCT Number:	US1960410
PCT Number:	US2062483
PCT Number:	US2062512
Application Number:	13839349

PATENT

Property Type	Number
Application Number:	13869325
Application Number:	13869426
Application Number:	61785331
Application Number:	13210425
Application Number:	61909168
Application Number:	14281196
Application Number:	14209013
Application Number:	14448053
Application Number:	15135982
Application Number:	15142520
Application Number:	15142770
Application Number:	15460953
Application Number:	15966994
Application Number:	15966698
Application Number:	15968156
Application Number:	16117290
Application Number:	17325597
Application Number:	61913665
Application Number:	62032137
Application Number:	14711330
Application Number:	15068187
Application Number:	15996944
Application Number:	16939907
Application Number:	14711430
Application Number:	14866150
Application Number:	14949080
Application Number:	15443582
Application Number:	15713104
Application Number:	16436538
Application Number:	14711391
Application Number:	62083063
Application Number:	14796468
Application Number:	15194765
Application Number:	62232088
Application Number:	15276378
Application Number:	15989530
Application Number:	17063157
Application Number:	15822349

Property Type	Number
Application Number:	15488151
Application Number:	15489431
Application Number:	16859545
Application Number:	15882307
Application Number:	62941320
Application Number:	17102241
Application Number:	62770313
Application Number:	16665815
Application Number:	62770389
Application Number:	16577781
Application Number:	17136503
Application Number:	62836376
Application Number:	16852142
Application Number:	16695438
Application Number:	62837056
Application Number:	16682254
Application Number:	62941345
Application Number:	17102211
Application Number:	16665831
Application Number:	62941066
Application Number:	17106002
Application Number:	62941361
Application Number:	17106017

CORRESPONDENCE DATA

Fax Number: (512)322-2501

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: 5123222601

Email: tracy.engberg@bakerbotts.com

Correspondent Name: BAKER BOTTS L.L.P.

Address Line 1: 98 SAN JACINTO BLVD., SUITE 1500

Address Line 4: AUSTIN, TEXAS 78701

ATTORNEY DOCKET NUMBER:	089891.0101
NAME OF SUBMITTER:	TRACY E. ENGBERG
SIGNATURE:	/Tracy E. Engberg/
DATE SIGNED:	12/15/2021

Total Attachments: 33

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ASSIGNMENT OF INTELLECTUAL PROPERTY

This ASSIGNMENT OF INTELLECTUAL PROPERTY (this "Assignment"), dated as of September 15, 2021, is entered into by and between by Cubic Perovskite LLC, a Delaware company ("Assignor"), and CubicPV Inc., a Delaware corporation ("Assignee") (collectively referred to as the "Parties").

WHEREAS, Assignee purchased all the outstanding membership interests of Hunt Perovskite Technologies, L.L.C. from Hunt Energy Enterprises, L.L.C. pursuant to that certain Membership Interest Purchase Agreement, dated as of June 24, 2021 (the "Acquisition");

WHEREAS, following the Acquisition, Hunt Perovskite Technologies L.L.C. changed its name to Cubic Perovskite LLC by filing a Certificate of Amendment to Certificate of Formation of Hunt Perovskite Technologies, L.L.C. with the Secretary of State of the State of Delaware on June 25, 2021;

WHEREAS, Assignor is the owner of all rights, title and interest in and to the following: (1) all patents, patent applications and patent disclosures used in Assignor's business, including U.S. and foreign patents and patent applications and any future related applications, reissues, re-examinations, extensions, continuations, continuations-in-part, and divisionals based thereon and foreign counterparts of the foregoing, including those set forth in Exhibit A; (2) all other intellectual property rights, including inventions, ideas, copyrights, trade secrets, and industrial and other protected designs used in Assignor's business, whether or not registered, applied for, or unregistered (collectively, the "Assigned Intellectual Property"); and

WHEREAS, in connection with the Acquisition, Assignor desires to assign to Assignee all of Assignor's right, title and interest in and to the Assigned Intellectual Property.

NOW THEREFORE, for good and valuable consideration exchanged between the Parties, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee hereby agree as follows:

1. Assignment. Assignor hereby irrevocably conveys, transfers, and assigns to Assignee, and Assignee hereby accepts, all of Assignor's right, title, and interest in and to the Assigned Intellectual Property, including:

(a) all rights of any kind whatsoever of Assignor accruing under any of the Assigned Intellectual Property provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world;

(b) any and all royalties, fees, income, payments, and other proceeds now or hereafter due or payable with respect to any and all of the Assigned Intellectual Property; and

(c) any and all claims and causes of action, with respect to any of the Assigned Intellectual Property, whether accruing before, on, or after the date hereof, including all rights to and claims for damages, restitution, and injunctive and other legal

and equitable relief for past, present, and future infringement, dilution, misappropriation, violation, misuse, breach or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

Assignee hereby accepts the assignment and assumes and agrees to observe and perform all of the duties, obligations, terms, provisions and covenants, and to pay and discharge all of the liabilities of Assignor to be observed, performed, paid or discharged from and after the date of this Assignment.

2. Further Actions. Assignor agrees that it shall, without additional compensation, execute and deliver further instruments of conveyance, transfer and assignment as reasonably requested by Assignee, its successors, or assigns; reasonably cooperate and assist in providing information for making and completing regulatory and other filings; and take other similar actions as Assignee may reasonably require to effectively assign, convey and transfer the Assigned Intellectual Property and all registrations and rights therein to Assignee.

3. Counterparts. This Assignment may be executed in two or more counterparts and by exchange of original, facsimile or portable document format (.pdf) signature pages, all of which shall be considered one and the same agreement and shall become effective when counterparts of such signature pages have been signed by each of the parties hereto and delivered to the other parties hereto, it being understood that each party need not sign the same counterpart signature page.

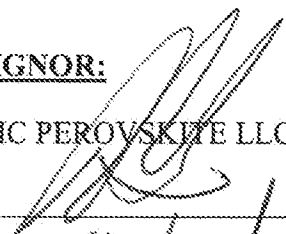
4. Successors and Assigns. This Assignment shall be binding upon and shall inure to the benefit of the Parties and their respective successors and assigns.

5. Governing Law; Venue. This Assignment and any claim, controversy or dispute arising under or related to this Assignment shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to any conflicts of laws principles that would result in the application of any law other than the law of the State of Delaware. The Parties hereby irrevocably submit to the exclusive jurisdiction of (i) the state courts of the State of Delaware or (ii) the United States District Court for the District of Delaware, for the purposes of any claim, controversy or dispute arising under or related to this Assignment, so long as such court shall have subject matter jurisdiction over such proceeding. The Parties hereby irrevocably waive, to the fullest extent permitted by law, any objection that they may now or hereafter have to the laying of venue of any dispute, controversy or claim arising out of or relating to this Assignment brought in such court or any defense of inconvenient forum for the maintenance of such dispute, controversy or claim. Each Party agrees that a judgment in any such dispute may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by Law. This consent to jurisdiction is being given solely for purposes of this Assignment and is not intended to confer, and shall not confer, consent to jurisdiction with respect to any other dispute in which a Party to this Assignment may become involved.

IN WITNESS WHEREOF, the undersigned have duly executed and delivered this Assignment as of the date first above written.

ASSIGNOR:

CUBIC PEROVSKITE LLC

By: 

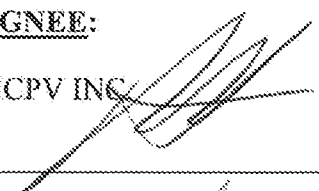
Name: Michael Iwain

Title: CTO, SVP

AGREED TO AND ACCEPTED:

ASSIGNEE:

CUBICPV INC.

By: 

Name: Michael Iwain

Title: CTO, SVP

EXHIBIT A

Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0211	Australia	PCT	2014354911	24-Nov-2014	2014354911	16-Mar-2017	Granted	Perovskite and other Solar Cell Materials
081546.0233	Australia	DIV	2017201243	24-Nov-2014			Abandoned	Perovskite and other Solar Cell Materials
081546.0297	Australia	DIV	2018202758	24-Nov-2014			Abandoned	Perovskite and other Solar Cell Materials
081546.0370	Australia	DIV	2019268163	24-Nov-2014			Pending	Perovskite and other Solar Cell Materials
081546.0228	Australia	PCT	2015296288	30-Jul-2015	2015296288	27-Jul-2017	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0247	Australia	DIV	2017204662	30-Jul-2015	2017204662	10-Oct-2019	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0343	Australia	DIV	2019236643	30-Jul-2015	2019236643	15-Jul-2021	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0448	Australia	DIV	2021204425	30-Jul-2015			Pending	(Solar0151-AUD3) Method of Formulating Perovskite Solar Cell Materials (DIV + AU0343)
081546.0254	Australia	PCT	2016261906	12-May-2016			Abandoned	(Solar0157-AU) Titanate Interfacial Layers in Perovskite Material Devices

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REEL: 058517 FRAME: 0926

Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0316	Australia	DIV	2018282426	12-May-2016			Abandoned	Titanate Interfacial Layers in Perovskite Material Devices
081546.0407	Australia	DIV	2021200670	12-May-2016			Pending	(Solar0157-AUD2) Titanate Interfacial Layers in Perovskite Material Devices (DIV + AU316)
081546.0237	Australia	PCT	2015349902	19-Nov-2015	2015349902	08-Mar-2016	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0280	Australia	DIV	2018201184	19-Nov-2015	2018201184	30-May-2019	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0331	Australia	DIV	2019203293	19-Nov-2015	2019203293	17-Dec-2020	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0387	Australia	DIV	2020267316	19-Nov-2015			Pending	(Solar0160-AUD3) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (DIV + AU0331)
081546.0268	Australia	PCT	2016294314	06-Jul-2016	2016294314	07-Mar-2019	Granted	Perovskite Material Layer Processing
081546.0318	Australia	DIV	2019201229	06-Jul-2016	2019201229	11-Mar-2021	Granted	Perovskite Material Layer Processing
081546.0284	Australia	PCT	2016325716	26-Sep-2016	2016325716	26-Sep-2016	Granted	(Solar0173-AU) System and Method for Testing Photosensitive Device Degradation

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REEL: 058517 FRAME: 0927

Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0305	Australia	Div	2018204249	26-Sep-2016	2018204249	26-Sep-2016	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0311	Australia	Div	2018250421	26-Sep-2016	2018250421	13-Feb-2020	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0344	Australia	PCT	2018255199	12-Apr-2018			Pending	Hybrid Perovskite Material Processing
081546.0410	Australia	PCT	AU2019384592	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0438	Australia	PCT	AU2019384104	14-Nov-2019			Pending	Nickel Oxide Sol-Gel Ink
081546.0425	Australia	PCT	AU2019383351	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0231 BE	Belgium	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0204	Brazil	PCT	BR 112015011873-1	24-Nov-2014			Published	Perovskite and other Solar Cell Materials
081546.0224	Brazil	PCT	1120170021072	30-Jul-2015	BR 112017002107-2	27-Oct-2020	Granted	Method of Formulating Perovskite Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0255	Brazil	PCT	BR 112017024352-0	12-May-2018			Published	Titanate Interfacial Layers in Perovskite Material Devices
081546.0235	Brazil	PCT	112017010550-0	19-Nov-2015			Published	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0382	Brazil	DIV	122020016555-3	19-Nov-2015			Pending	(Solar160-BRD1) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (Div1 + BR0235)
081546.0277	Brazil	PCT	112018000181-3	06-Jul-2016			Pending	Perovskite Material Layer Processing
081546.0337	Brazil	DIV	122019013870-2	06-Jul-2016			Pending	Perovskite Material Layer Processing
081546.0291	Brazil	PCT	112018005784-3	26-Sep-2016			Published	System and Method for Testing Photosensitive Device Degradation
081546.0345	Brazil	PCT	112019021770-3	12-Apr-2018			Published	Hybrid Perovskite Material Processing
081546.0202	Canada	PCT	2931692	24-Nov-2014			Published	Perovskite and other Solar Cell Materials
081546.0222	Canada	PCT	2956633	30-Jul-2015	2956633	11-Feb-2020	Granted	Method of Formulating Perovskite Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0304	Canada	DIV	3010113	30-Jul-2015	3010113	22-Sep-2020	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0384	Canada	DIV	3090853	30-Jul-2015			Published	(Solar151-CAD2) Method of Formulating Perovskite Solar Cell Materials (DIV2 + CA304)
081546.0258	Canada	PCT	2985784	12-May-2016	2985784	04-Sep-2018	Granted	Titanate Interfacial Layers in Perovskite Material Devices
081546.0243	Canada	PCT	2968367	19-Nov-2015			Published	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0276	Canada	PCT	2991887	06-Jul-2016	2991887	28-Jan-2020	Granted	Perovskite Material Layer Processing
081546.0320	Canada	DIV	3038358	06-Jul-2016	3038358	15-Dec-2020	Granted	Perovskite Material Layer Processing
081546.0285	Canada	PCT	2999939	26-Sep-2016	2999939	10-Sep-2019	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0312	Canada	DIV	3022433	26-Sep-2016	3022433	03-Sep-2019	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0346	Canada	PCT	3059122	12-Apr-2018			Published	Hybrid Perovskite Material Processing

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0412	Canada	PCT	3120258	08-Nov-2019			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0430	Canada	PCT	3120657	14-Nov-2019			Published	Nickel Oxide Sol-Gel Ink
081546.0418	Canada	PCT	3120251	08-Nov-2019			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0203	China (People's Republic)	PCT	201480074039.6	24-Nov-2014	ZL201480074039.6	12-Sep-2017	Granted	Perovskite and other Solar Cell Materials
081546.0249	China (People's Republic)	DIV	201710705222.7	24-Nov-2014			Abandoned	Perovskite and other Solar Cell Materials
081546.0223	China (People's Republic)	PCT	201580051686.2	30-Jul-2015	ZL201580051686.2	25-Dec-2018	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0314	China (People's Republic)	DIV	201811463544.6	30-Jul-2015			Abandoned	Method of Formulating Perovskite Solar Cell Materials
081546.0257	China (People's Republic)	PCT	201680036859.X	12-May-2016			Abandoned	Titanate Interfacial Layers in Perovskite Material Devices
081546.0441	China (People's Republic)	DIV	202110537312.6	12-May-2016			Published	(Solar0157-CND1) Titanate Interfacial Layers in Perovskite Material Devices (DIV1 + CN0257)

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0239	China (People's Republic)	PCT	201580073486.4	19-Nov-2015			Abandoned	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0446	China (People's Republic)	DIV	202110742042.2	19-Nov-2015			Pending	(Solar)160-CND1) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0274	China (People's Republic)	PCT	201680040676.0	06-Jul-2016			Published	Perovskite Material Layer Processing
081546.0287	China (People's Republic)	PCT	201680065103.3	26-Sep-2016	ZL201680065103.3	05-Nov-2019	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0355	China (People's Republic)	DIV	201910950664.7	26-Sep-2016			Published	System and Method for Testing Photosensitive Device Degradation
081546.0356	China (People's Republic)	PCT	201880033074.1	11-Apr-2018			Published	Photovoltaic Device Encapsulation
081546.0347	China (People's Republic)	PCT	201880033068.6	12-Apr-2018			Published	Hybrid Perovskite Material Processing
081546.0411	China (People's Republic)	PCT	201980087633.1	08-Nov-2019			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0431	China (People's Republic)	PCT	201980087256.1	14-Nov-2019			Published	Nickel Oxide Sol-Gel Ink

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REEL: 058517 FRAME: 0932

Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0419	China (People's Republic)	PCT	201980087628.0	08-Nov-2019			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0205	European Patent Convention	PCT	14865222.5	24-Nov-2014	3075012	07-Oct-2020	Granted	Perovskite and other Solar Cell Materials
081546.0380	European Patent Convention	DIV	20193082.3	24-Nov-2014			Published	(Solar)131 - EPD1) Perovskite and other Solar Cell Materials (DIV1 + EP205)
081546.0231	European Patent Convention	PCT	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0338	European Patent Convention	DIV	19185355.5	30-Jul-2015			Published	Method of Formulating Perovskite Solar Cell Materials
081546.0258	European Patent Convention	PCT	16793494.2	12-May-2016			Published	Titanate Interfacial Layers in Perovskite Material Devices
081546.0241	European Patent Convention	PCT	15860737.4	19-Nov-2015	3221896	27-May-2020	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0375	European Patent Convention	DIV	20170937.5	19-Nov-2015			Published	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0275	European Patent Convention	PCT	16924904.3	06-Jul-2016	3320571	02-Sep-2020	Opposition	Perovskite Material Layer Processing

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REEL: 058517 FRAME: 0933

Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0378	European Patent Convention	DIV	20180285.1	06-Jul-2018			Published	(SOLAR0163) (EP-D1) Perovskite Material Layer Processing (EP DIV1 + EP0275)
081546.0390	European Patent Convention	PCT	16849881.4	26-Sep-2016	3353890	28-Jul-2021	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0447	European Patent Convention	DIV	21180168.3	26-Sep-2018			Pending	(Solar0173-EPD1) System and Method for Testing Photosensitive Device Degradation (DIV + EP0290)
081546.0357	European Patent Convention	PCT	18784901.3	11-Apr-2018			Published	Photovoltaic Device Encapsulation
081546.0348	European Patent Convention	PCT	18788265.9	12-Apr-2018			Published	Hybrid Perovskite Material Processing
081546.0413	European Patent Convention	PCT	19886670.9	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0434	European Patent Convention	PCT	19888063.5	14-Nov-2019			Pending	Nickel Oxide Sol-Gel Ink
081546.0420	European Patent Convention	PCT	19886989.5	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0231 FR	France	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0231 DE	Germany	EPC	15828193.1	30-Jul-2015	602015037412.6	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0209	India	PCT	201617018073	24-Nov-2014	355401	06-Jan-2021	Granted	Perovskite and other Solar Cell Materials
081546.0381	India	DIV	202016035057	24-Nov-2014			Pending	(Solar0131-IN0209) Perovskite and other Solar Cell Materials (Div1 + IN0209) (081546.0381)
081546.0226	India	PCT	201717004379	30-Jul-2015			Pending	Method of Formulating Perovskite Solar Cell Materials
081546.0259	India	PCT	201717041039	12-May-2016			Pending	Titanate Interfacial Layers in Perovskite Material Devices
081546.0240	India	PCT	201717021070	19-Nov-2015	361746	18-Mar-2021	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0389	India	DIV	202018047436	19-Nov-2015			Pending	(Solar0160-IN0211) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (Div + IN0240)
081546.0270	India	PCT	201817000381	06-Jul-2016	359388	24-Feb-2021	Granted	Perovskite Material Layer Processing
081546.0383	India	DIV	202015035644	06-Jul-2016			Pending	(Solar0163-IN0211) Perovskite Material Layer Processing (Div + IN0270)

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0293	India	PCT	201817011647	26-Sep-2016			Pending	System and Method for Testing Photosensitive Device Degradation
081546.0452	India	DIV					Unfiled	(Solar0173-IND1) System and Method for Testing Photosensitive Device Degradation (DIV + IND293)
081546.0351	India	PCT	201917040904	12-Apr-2018			Pending	Hybrid Perovskite Material Processing
081546.0414	India	PCT	202117022276	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0432	India	PCT	202117022437	14-Nov-2018			Pending	Nickel Oxide Sol-Gel Ink
081546.0426	India	PCT	202117022274	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0231 IE	Ireland	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0231 IT	Italy	EPC	15828193.1	30-Jul-2015	502019000061317	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0212	Japan	PCT	2016-535008	24-Nov-2014			Abandoned	Perovskite and other Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0229	Japan	PCT	2017-505481	30-Jul-2015	6301548	09-Mar-2018	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0281	Japan	DIV	2018-034518	30-Jul-2015			Abandoned	(XTRA) JP - Method of Formulating Perovskite Solar Cell Materials (DIV of 081546.0229)
081546.0260	Japan	PCT	2017559435	12-May-2016			Abandoned	Titanate Interfacial Layers in Perovskite Material Devices
081546.0327	Japan	DIV	2019082745	12-May-2016			Published	Titanate Interfacial Layers in Perovskite Material Devices
081546.0444	Japan	DIV	2021-117336	12-May-2016			Pending	(Solar0157-JPD2) Titanate Interfacial Layers in Perovskite Material Devices
081546.0244	Japan	PCT	2017527327	19-Nov-2015			Abandoned	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0336	Japan	DIV	2019123320	19-Nov-2015			Published	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0273	Japan	PCT	2018500688	06-Jul-2016	6374134	27-Jul-2018	Granted	Perovskite Material Layer Processing
081546.0308	Japan	DIV	2018134567	06-Jul-2016	6513862	19-Apr-2019	Granted	Perovskite Material Layer Processing

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0292	Japan	PCT	2018515498	26-Sep-2016	6738051	12-Aug-2020	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0313	Japan	DIV	2018207151	26-Sep-2016	6905303	29-Jun-2021	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0386	Japan	DIV	2020157804	26-Sep-2016			Published	(Solar)173-JPD2) System and Method for Testing Photosensitive Device Degradation (DIV + JPD00313) (081546.0386)
081546.0358	Japan	PCT	2019555794	11-Apr-2018			Published	Photovoltaic Device Encapsulation
081546.0349	Japan	PCT	2019555458	12-Apr-2018			Published	Hybrid Perovskite Material Processing
081546.0415	Japan	PCT	2021-528880	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0433	Japan	PCT	2021-528879	14-Nov-2019			Pending	Nickel Oxide Sol-Gel Ink
081546.0427	Japan	PCT	2021-528882	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0208	Korea, Republic of	PCT	10-2016-7014064	24-Nov-2014	10-1740206	19-May-2017	Granted	Perovskite and other Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0246	Korea, Republic of	DIV	10-2017-7013463	24-Nov-2014	10-1808013	05-Dec-2017	Granted	Perovskite and other Solar Cell Materials
081546.0267	Korea, Republic of	DIV	1020177034983	24-Nov-2014	10-2247514	27-Apr-2021	Granted	Perovskite and other Solar Cell Materials
081546.0440	Korea, Republic of	DIV	1020217012899	24-Nov-2014			Allowed	(Solar0131-KRD3) Perovskite and other Solar Cell Materials (DIV+KR0267)
081546.0225	Korea, Republic of	PCT	10-2017-7005765	30-Jul-2015	10-1840351	14-Mar-2018	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0293	Korea, Republic of	DIV	1020187007213	30-Jul-2015			Abandoned	Method of Formulating Perovskite Solar Cell Materials
081546.0321	Korea, Republic of	DIV	1020197009695	30-Jul-2015	10-2262957	03-Jun-2021	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0443	Korea, Republic of	DIV	10-2021-7017053	30-Jul-2015			Published	Method of Formulating Perovskite Solar Cell Materials
081546.0261	Korea, Republic of	PCT	1020177034554	12-May-2016	102008737	02-Aug-2019	Granted	Titanate Interfacial Layers in Perovskite Material Devices
081546.0236	Korea, Republic of	PCT	1020177017076	19-Nov-2015	101877975	06-Jul-2018	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0309	Korea, Republic of	DIV	1020187019493	19-Nov-2015	101972919	22-Apr-2019	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0326	Korea, Republic of	DIV	1020197011510	19-Nov-2015	102051980	28-Nov-2019	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0371	Korea, Republic of	DIV	1020197035242	19-Nov-2015	10-2179880	11-Nov-2020	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0391	Korea, Republic of	DIV	10-2020-7032564	19-Nov-2015			Allowed	(Solar0160-KRD4) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (DIV + KR0371) (081546.0391)
081546.0450	Korea, Republic of	DIV	10-2021-7025797	19-Nov-2015			Pending	(Solar0160-KRD5) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (DIV + KR0391) (081546.0450)
081546.0272	Korea, Republic of	PCT	1020187000814	06-Jul-2016	101963702	25-Mar-2019	Granted	Perovskite Material Layer Processing
081546.0319	Korea, Republic of	DIV	1020197008516	06-Jul-2016			Published	Perovskite Material Layer Processing
081546.0289	Korea, Republic of	PCT	1020187011241	26-Sep-2016			Abandoned	System and Method for Testing Photosensitive Device Degradation
081546.0342	Korea, Republic of	DIV	1020187022257	26-Sep-2016			Published	System and Method for Testing Photosensitive Device Degradation

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0359	Korea, Republic of	PCT	1020197033305	11-Apr-2018			Published	Photovoltaic Device Encapsulation
081546.0350	Korea, Republic of	PCT	10201970333833	12-Apr-2018			Published	Hybrid Perovskite Material Processing
081546.0416	Korea, Republic of	PCT	10-2021-7018579	16-Jun-2021			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0435	Korea, Republic of	PCT	10-2021-7018591	16-Jun-2021			Published	Nickel Oxide Sol-Gel Ink
081546.0428	Korea, Republic of	PCT	10-2021-7018576	16-Jun-2021			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0263	Malaysia	PCT	PI 2017704292	12-May-2016			Allowed	Titanate Interfacial Layers in Perovskite Material Devices
081546.0238	Malaysia	PCT	PI 2017701800	19-Nov-2015	MY-181178-A	21-Dec-2020	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0398	Malaysia	DIV	PI2020006120	19-Nov-2015			Pending	(Solar0160-MYD1) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (DIV + MY0238)
081546.0271	Malaysia	PCT	PI 2017705063	06-Jul-2016			Allowed	Perovskite Material Layer Processing

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0406	Malaysia	DIV	PY2021003586	06-Jul-2018			Pending	Perovskite Material Layer Processing
081546.0286	Malaysia	PCT	PI 2018701149	26-Sep-2018			Allowed	System and Method for Testing Photosensitive Device Degradation
081546.0306	Malaysia	DIV	PI 2018703196	26-Sep-2018			Pending	System and Method for Testing Photosensitive Device Degradation
081546.0408	Malaysia	DIV					Unfiled	(Solar0173-MYD2) System and Method for Testing Photosensitive Device Degradation (DIV + MY0306)
081546.0353	Malaysia	PCT	PI2019005960	12-Apr-2018			Pending	Hybrid Perovskite Material Processing
081546.0417	Malaysia	PCT	PI2021002767	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0438	Malaysia	PCT	PI2021002799	14-Nov-2019			Pending	Nickel Oxide Sol-Gel Ink
081546.0422	Malaysia	PCT	PI2021002767	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0210	Mexico	PCT	MX/a/2016/006714	24-Nov-2014	364267	17-Apr-2019	Granted	Perovskite and other Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0324	Mexico	DIV	MX/a/2019/004512	24-Nov-2014			Pending	Perovskite and other Solar Cell Materials
081546.0227	Mexico	PCT	MX/a/2017/001390	30-Jul-2015	369793	21-Nov-2019	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0365	Mexico	DIV	MX/a/2019/013856	30-Jul-2015			Pending	Method of Formulating Perovskite Solar Cell Materials
081546.0262	Mexico	PCT	MX/a/2017/014453	12-May-2016	367777	05-Sep-2019	Granted	Titanate Interfacial Layers in Perovskite Material Devices
081546.0245	Mexico	PCT	MX/a/2017/006646	19-Nov-2015	378357	15-Dec-2020	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0400	Mexico	DIV	MX/a/2020/013576	19-Nov-2015			Pending	(Solar0160-MXD1) Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices (DIV + MX0245)
081546.0278	Mexico	PCT	MX/a/2018/000314	06-Jul-2016			Pending	Perovskite Material Layer Processing
081546.0288	Mexico	PCT	MX/a/2018/003586	26-Sep-2016			Pending	System and Method for Testing Photosensitive Device Degradation
081546.0451	Mexico	DIV					Unfiled	(Solar0173-MXD1) System and Method for Testing Photosensitive Device Degradation (DIV1 + MX0288)

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0352	Mexico	PCT	MX/a/2019/012317	12-Apr-2018			Pending	Hybrid Perovskite Material Processing
081546.0423	Mexico	PCT	MX/a/2021/005894	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0439	Mexico	PCT	MX/a/2021/005895	14-Nov-2019			Pending	Nickel Oxide Sol-Gel Ink
081546.0421	Mexico	PCT	MX/a/2021/005893	08-Nov-2019			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0231 NL	Netherlands	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0146	Patent Cooperation Treaty	ORD	US14/25910	13-Mar-2014			Abandoned	Perovskite and Other Solar Cell Materials
081546.0144	Patent Cooperation Treaty	ORD	US14/67024	24-Nov-2014			Completed	Perovskite and other Solar Cell Materials
081546.0184	Patent Cooperation Treaty	ORD	US15/42864	30-Jul-2015			Completed	Method of Formulating Perovskite Solar Cell Materials
081546.0201	Patent Cooperation Treaty	ORD	US16/31986	12-May-2016			Completed	Titanate Interfacial Layers in Perovskite Material Devices

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0175	Patent Cooperation Treaty	ORD	US15/61457	19-Nov-2015			Completed	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0216	Patent Cooperation Treaty	ORD	US16/41090	06-Jul-2018			Completed	Perovskite Material Layer Processing
081546.0219	Patent Cooperation Treaty	ORD	US16/53806	26-Sep-2016			Completed	System and Method for Testing Photosensitive Device Degradation
081546.0296	Patent Cooperation Treaty	ORD	US18/27073	11-Apr-2018			Completed	Photovoltaic Device Encapsulation
081546.0295	Patent Cooperation Treaty	ORD	US18/27326	12-Apr-2018			Completed	Hybrid Perovskite Material Processing
081546.0394	Patent Cooperation Treaty	ORD	PCT/US2020/061820	23-Nov-2020			Published	(Solar)265-WO) CROSS LINKED SURFACE COATING AND INTERFACIAL LAYER FOR A PEROVSKITE MATERIAL PHOTOVOLTAIC DEVICE (PCT+US0285)
081546.0382	Patent Cooperation Treaty	ORD	PCT/US2019/080405	08-Nov-2019			Completed	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0364	Patent Cooperation Treaty	ORD	US19/61462	14-Nov-2019			Completed	Nickel Oxide Sol-Gel Ink

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0376	Patent Cooperation Treaty	ORD	PCT/US2020/028827	17-Apr-2020			Published	METHOD FOR SOLVENT-FREE PEROVSKITE DEPOSITION
081546.0393	Patent Cooperation Treaty	ORD	PCT/US2020/061512	20-Nov-2020			Published	(Solar0323-WO) 2D Perovskite Tandem Photovoltaic Devices (PCT + US0323)
081546.0390	Patent Cooperation Treaty	ORD	PCT/US2020/058874	04-Nov-2020			Published	(Solar0332-WO) Perovskite Material Photovoltaic Device and Method for Assembly (PCT + US0332)
081546.0395	Patent Cooperation Treaty	ORD	PCT/US2020/061824	23-Nov-2020			Published	(Solar0335-WO) NON-FULLERENE ACCEPTORS (NFAS) AS INTERFACIAL LAYERS IN PEROVSKITE SEMICONDUCTOR DEVICES (PCT + US0335)
081546.0363	Patent Cooperation Treaty	ORD	PCT/US2019/060410	08-Nov-2019			Completed	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0396	Patent Cooperation Treaty	ORD	PCT/US2020/062463	27-Nov-2020			Published	(Solar0361-WO) Metal Oxide Nanoparticle Electron Transport Layers in Perovskite Semiconductor Devices (PCT + US0361) (081546.0396)
081546.0397	Patent Cooperation Treaty	ORD	PCT/US2020/062512	27-Nov-2020			Published	(Solar0372-WO) Reusable Interface for Solar Cell Test and Characterization (PCT + US0372)
081546.0231 PL	Poland	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2018	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0231 ES	Spain	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0231 CH	Switzerland	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0231 GB	United Kingdom	EPC	15828193.1	30-Jul-2015	3195372	04-Sep-2019	Inactive	Method of Formulating Perovskite Solar Cell Materials
081546.0117	United States of America	ORD	13/839349	15-Mar-2013	8889909	18-Nov-2014	Granted	Tunable Photoactive Compounds
081546.0122	United States of America	CON	13/869325	24-Apr-2013	9466798	11-Oct-2016	Granted	Tunable Photoactive Compounds
081546.0123	United States of America	CON	13/869426	24-Apr-2013	9000294	07-Apr-2015	Granted	Tunable Photoactive Compounds
081546.0124	United States of America	PRO	61/785331	14-Mar-2013			Abandoned	Nanodiamond Coatings for Solar Cells
081546.0125	United States of America	CIP	13/210425	16-Aug-2011			Abandoned	Nanodiamond Coatings for Solar Cells
081546.0128	United States of America	CIP					Abandoned	PVs with Tunable Compound SAMs
081546.0127	United States of America	PRO	61/909168	26-Nov-2013			Closed	Improved Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0129	United States of America	CVP	14/281196	19-May-2014			Abandoned	Solar Cell Materials
081546.0131 1	United States of America	CVP	14/289013	13-Mar-2014	9136408	15-Sep-2015	Granted	Perovskite and Other Solar Cell Materials
081546.0145	United States of America	CON	14/448053	31-Jul-2014	9331292	03-May-2016	Granted	Perovskite and Other Solar Cell Materials
081546.0176	United States of America	CON	15/135982	22-Apr-2016	9539972	27-Dec-2016	Granted	Perovskites and Other Solar Cell Materials
081546.0186	United States of America	CON	15/142520	29-Apr-2016			Abandoned	Perovskite and Other Solar Cell Materials
081546.0199	United States of America	CON	15/142770	29-Apr-2016	10193087	29-Jan-2019	Granted	Perovskite and Other Solar Cell Materials
081546.0130	United States of America	CON	15/460953	16-Mar-2017			Abandoned	Perovskite and Other Solar Cell Materials
081546.0250	United States of America	CON	15/966994	30-Apr-2018	10333082	25-Jun-2019	Granted	Multi-Junction Perovskite Material Devices
081546.0251	United States of America	CON	15/966698	30-Apr-2018	10608190	31-Mar-2020	Granted	Mixed Metal Perovskite Material Devices

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0253	United States of America	CON	15/986156	01-May-2018	11024814	01-Jun-2021	Granted	Multi-Junction Perovskite Material Devices
081546.0298	United States of America	CON	16/117290	30-Aug-2018	10816712	09-Feb-2021	Granted	Perovskite and Other Solar Cell Materials
081546.0442	United States of America	CON	17/325597	20-May-2021			Pending	Multi-Junction Perovskite Material Devices
081546.0131	United States of America	PRO	61/913665	09-Dec-2013			Closed	Perovskite and other Solar Cell Materials
081546.0151	United States of America	PRO	62/032137	01-Aug-2014			Closed	Method of Formulating Perovskite Solar Cell Materials
081546.0151.1	United States of America	CVP	14/711330	13-May-2015	9305715	05-Apr-2016	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0185	United States of America	CON	15/068187	11-Mar-2016	9901457	05-Jun-2018	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0302	United States of America	CON	15/996944	04-Jun-2018	10741779	11-Aug-2020	Granted	Method of Formulating Perovskite Solar Cell Materials
081546.0379	United States of America	CON	16/939907	27-Jul-2020			Published	Method of Formulating Perovskite Solar Cell Materials

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0157	United States of America	CIP	14/711430	13-May-2015	9520512	13-Dec-2016	Granted	TITANATE INTERFACIAL LAYERS IN PEROVSKITE MATERIAL DEVICES
081546.0158	United States of America	CON	14/866150	25-Sep-2015	9884966	06-Feb-2018	Granted	Bi- and Tri- Layer Interfacial Layers in Perovskite Material Devices
081546.0159	United States of America	CON	14/949080	23-Nov-2015	9617431	11-Apr-2017	Granted	Bi- and Tri- Layer Interfacial Layers in Perovskite Material Devices
081546.0220	United States of America	CON	15/443582	27-Feb-2017	10189998	29-Jan-2019	Granted	Doped Nickel Oxide Interfacial Layer
081546.0221	United States of America	CON	15/713104	22-Sep-2017	10316196	11-Jun-2019	Granted	Bi- and Tri- Layer Interfacial Layers in Perovskite Material Devices
081546.0334	United States of America	CON	16/436538	10-Jun-2019			Allowed	Mixed Cation Perovskite Material Devices
081546.0160 1	United States of America	CIP	14/711391	13-May-2015	9416279	16-Aug-2016	Granted	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0160	United States of America	PRO	62/083063	21-Nov-2014			Closed	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0163	United States of America	CIP	14/796468	10-Jul-2015	9425396	23-Aug-2016	Granted	Perovskite Material Layer Processing

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0214	United States of America	DIV	15/194765	28-Jun-2016	9941480	10-Apr-2018	Granted	Perovskite Material Layer Processing
081546.0173	United States of America	PRO	62/232088	24-Sep-2015			Closed	System and Method for Testing Photosensitive Device Degradation
081546.0173.1	United States of America	CVP	15/276378	26-Sep-2016	9831829	28-Nov-2017	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0301	United States of America	CON	15/989530	25-May-2018	10797641	06-Oct-2020	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0388	United States of America	CON	17/063157	05-Oct-2020			Published	System and Method for Testing Photosensitive Device Degradation
081546.0248	United States of America	DIV	15/822349	27-Nov-2017	9935583	29-May-2018	Granted	System and Method for Testing Photosensitive Device Degradation
081546.0215	United States of America	ORD					Unfiled	Perovskite Material Solar Cell and Method of Manufacture
081546.0217	United States of America	ORD	15/488151	14-Apr-2017			Published	Photovoltaic Device Encapsulation
081546.0234	United States of America	ORD	15/489431	17-Apr-2017	9880458	30-Jan-2018	Granted	Hybrid Perovskite Material Processing

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0374	United States of America	CON	16/865545	27-Apr-2020			Published	Hybrid Perovskite Material Processing
081546.0252	United States of America	DIV	15/882307	29-Jan-2018	10642147	05-May-2020	Granted	Hybrid Perovskite Material Processing
081546.0265	United States of America	PRO	62/941320	27-Nov-2019			Closed	Cross Linked Surface Coating and Interfacial Layer for a Perovskite Material Photovoltaic Device
081546.0265 1	United States of America	CVP	17/102241	23-Nov-2020			Allowed	Cross Linked Surface Coating and Interfacial Layer for a Perovskite Material Photovoltaic Device
081546.0366	United States of America	PRO	62/770313	21-Nov-2018			Closed	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0266 1	United States of America	CVP	16/665815	28-Oct-2019			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0303	United States of America	PRO	62/770389	21-Nov-2018			Closed	Nickel Oxide Sol-Gel Ink
081546.0303 1	United States of America	CVP	16/577781	20-Sep-2019	10907050	02-Feb-2021	Granted	Nickel Oxide Sol-Gel Ink
081546.0404	United States of America	DIV	17/136503	29-Dec-2020			Published	Nickel Oxide Sol-Gel Ink

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Client Matter Number	Country	Case Type	Application No.	Filing Date	Patent No.	Patent Date	Status	Title
081546.0322	United States of America	PRO	62/636376	19-Apr-2019			Closed	Method for Solvent Free Perovskite Deposition
081546.0322 1	United States of America	CVP	16/852142	17-Apr-2020			Published	Method for Solvent Free Perovskite Deposition
081546.0323	United States of America	ORD	16/695438	26-Nov-2019			Published	2D Perovskite Tandem Photovoltaic Devices
081546.0325	United States of America	PRO	62/637056	22-Apr-2019			Abandoned	Inverter for Perovskite Solar Cells
081546.0332	United States of America	ORD	16/682254	13-Nov-2019			Published	Perovskite Material Photovoltaic Device and Method for Assembly
081546.0335	United States of America	PRO	62/641345	27-Nov-2019			Closed	Non-Fullerene Acceptors (NFAS) as Interfacial Layers in Perovskite Semiconductor Devices
081546.0335 1	United States of America	CVP	17/102211	23-Nov-2020			Published	Non-Fullerene Acceptors (NFAS) as Interfacial Layers in Perovskite Semiconductor Devices
081546.0341	United States of America	CVP	16/665831	28-Oct-2019			Published	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0361	United States of America	PRO	62/641066	27-Nov-2019			Closed	Metal Oxide Nanoparticle Electron Transport Layers in Perovskite Semiconductor Devices

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081546.0361.1	United States of America	CVP	17/106002	27-Nov-2020			Allowed	Metal Oxide Nanoparticle Electron Transport Layers in Perovskite Semiconductor Devices
081546.0372	United States of America	PRO	62/941361	27-Nov-2019			Closed	Reusable Interface for Solar Cell Test and Characterization
081546.0372.1	United States of America	CVP	17/106017	27-Nov-2020			Published	Reusable Interface for Solar Cell Test and Characterization
081546.0213	Vietnam	PCT	1-2016-01922	24-Nov-2014			Allowed	Perovskite and other Solar Cell Materials
081546.0230	Vietnam	PCT	1-2017-00621	30-Jul-2015			Published	Method Of Preparing A Perovskite Material And Perovskite Material Prepared Therefrom
081546.0264	Vietnam	PCT	1-2017-04813	12-May-2016			Pending	Titanate Interfacial Layers in Perovskite Material Devices
081546.0242	Vietnam	PCT	1-2017-02308	19-Nov-2015			Pending	Bi- and Tri-layer Interfacial Layers in Perovskite Material Devices
081546.0269	Vietnam	PCT	1-2018-00090	06-Jul-2016			Pending	Perovskite Material Layer Processing
081546.0294	Vietnam	PCT	1201801739	26-Sep-2016			Pending	System and Method for Testing Photosensitive Device Degradation

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081546.0354	Vietnam	PCT	1201906171	12-Apr-2018			Pending	Hybrid Perovskite Material Processing
081546.0385	Vietnam	DIV					Unfiled	(Solar)234-VND1) Hybrid Perovskite Material Processing (Div + VN0354)
081546.0424	Vietnam	PCT	1-2021-03675	18-Jun-2021			Pending	Enhanced Perovskite Materials for Photovoltaic Devices
081546.0437	Vietnam	PCT	1-2021-03683	18-Jun-2021			Pending	Nickel Oxide Sol-Gel Ink
081546.0429	Vietnam	PCT	1-2021-03673	18-Jun-2021			Pending	Enhanced Perovskite Materials for Photovoltaic Devices

28/14/8/2016