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TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1 ETAS ID: TM741641 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
C3 Nano, Inc.		07/15/2022	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	Newlight Capital LLC, as Servicer
Street Address:	1135 Kildaire Farm Road, Suite 200
Internal Address:	Attn: Erwin Gostomski
City:	Cary
State/Country:	NORTH CAROLINA
Postal Code:	27511
Entity Type:	Limited Liability Company: NORTH CAROLINA

PROPERTY NUMBERS Total: 3

Property Type	Number	Word Mark
Registration Number:	5533463	C3 NANO
Registration Number:	5723953	NANOGLUE
Registration Number:	6073924	ACTIVEGRID

CORRESPONDENCE DATA

Fax Number: 6179518736

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: 6173417729

Email: katarzyna.gaysunas@morganlewis.com

Correspondent Name: Katarzyna Gaysunas

Address Line 1: 1 Federal St

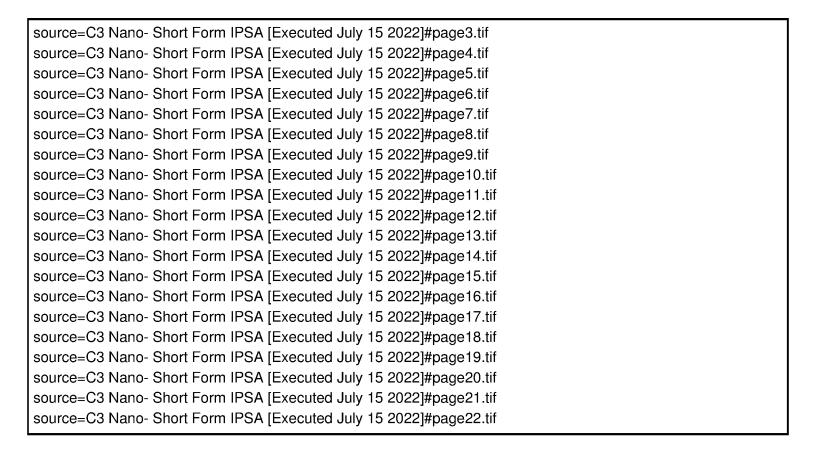
Address Line 2: c/o Morgan, Lewis & Bockius LLP

Address Line 4: Boston, MASSACHUSETTS 02110-1726

NAME OF SUBMITTER:Katarzyna GaysunasSIGNATURE:/Katarzyna Gaysunas/DATE SIGNED:07/16/2022

Total Attachments: 22

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SHORT FORM INTELLECTUAL PROPERTY SECURITY AGREEMENT

This SHORT FORM INTELLECTUAL PROPERTY SECURITY AGREEMENT (the "Short Form Agreement") is made by C3 NANO, INC., a Delaware corporation ("Grantor"), and dated as of July 15, 2022, in favor of NEWLIGHT CAPITAL LLC, a North Carolina limited liability company, as servicer ("Servicer"), (i) for itself and for the benefit of UMB BANK, NATIONAL ASSOCIATION, as Trustee, solely in its capacity as disbursing agent ("Disbursing Agent") and the Insurer, and (ii) as collateral agent for the benefit of the Trustee under the Trust Indenture.

WITNESSETH:

WHEREAS, the Grantor and Servicer entered into an Intellectual Property Security Agreement dated as of July 15, 2022 (as amended, restated, modified or supplemented from time to time, the "Intellectual Property Security Agreement"), and this Short Form Agreement is a supplement to the Intellectual Property Security Agreement; and

WHEREAS, this Short Form Agreement is executed for the purpose of filing a short form intellectual property security agreement with the United States Patent and Trademark Office (the "<u>USPTO</u>") and the United States Copyright Office (the "<u>USCO</u>"), which sets forth the Grantor's pledge of its intellectual property as a first priority security interest for certain indebtedness and other obligations of Grantor;

NOW, THEREFORE, in consideration of the premises, and for other good and valuable consideration as set forth in the Intellectual Property Security Agreement, the receipt and sufficiency of which are hereby acknowledged, the Grantor and Servicer hereby agree as follows:

1. GRANT OF SECURITY INTEREST.

Grantor hereby pledges, assigns and grants to Servicer (and its successors and assigns), (x)(i) for the benefit of the Servicer, (ii) as representative and for the benefit of the Insurer and (iii) as representative and for the benefit of Disbursing Agent, in order to secure prompt repayment and performance of any and all Obligations and in order to secure prompt performance by Grantor and each other Co-Obligor of each of their agreements, covenants and duties under the Disbursement Documents, and (y) as collateral agent for the benefit of the Trustee under the Trust Indenture in order to secure prompt repayment of any and all obligations of Grantor and each other Co-Obligor under the Trust Transaction Documents and in order to secure prompt performance by Grantor and each other Co-Obligor of each of their agreements, covenants and duties under the Trust Transaction Documents, a continuing security interest in and a lien upon, and a collateral assignment of, all of the following (being collectively referred to herein as the "IP Collateral):

a. all of its now existing or hereafter acquired right, title and interest in and to all patents, trademarks, copyrights, inventions, invention disclosures and improvements, and all applications, registrations and recordings relating to the foregoing, and any reissues, divisions, continuations, continuations-in-part, renewals, extensions, and/or reexaminations of any of the foregoing, as may at any time be filed in the USPTO or in any similar office or agency of the United States, any State thereof, any political subdivision thereof, or in any other country, including, without limitation, those set forth on Schedule A; provided, however, such security interest shall not extend to any "intent-to-use" trademark application filed pursuant to Section 1(b) of the Lanham DB1/130437265, Act, 15 U.S.C. § 1051, prior to the filing of a "Statement of Use" pursuant to Section

DB1/ 130437265.3ACt, 13 U.S.C. § 1031, prior to the filing of a Statement of Use pursuant to Section

- 1(d) of the Lanham Act or an "Amendment to Allege Use" pursuant to Section 1(c) of the Lanham Act with respect thereto, to the extent that, and solely during the period, if any, in which, the grant of a security interest therein would impair the validity or enforceability of any registration that issues from such intent-to-use application under applicable federal law (it being understood that after such period such intent-to-use application shall be automatically subject to the security interest granted herein);
- b. all rights of any kind whatsoever accruing under any of the foregoing throughout the world, including, without limitation, all rights under and interests in any and all patent, copyright or trademark licenses, whether written or oral, with any other party, and whether Grantor is a licensee or licensor under any such license (all of the foregoing are referred to, collectively, as the "Licenses");
- c. all income, fees, royalties and other payments at any time due or payable with respect thereto, including, without limitation payments under any and all Licenses at any time entered into in connection therewith; and
- d. any and all claims and/or causes of actions with respect to any of the foregoing, whether occurring before, on, or after the date hereof, including without limitation all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present, and/or future infringement, violation, misuse, breach, or default, with the right but not the obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

2. MISCELLANEOUS

- a. To the extent that Grantor creates or acquires any items of the type described in Section 1 after the date hereof, the same shall immediately constitute IP Collateral for purposes hereof from and after the date of such creation or acquisition and shall immediately be subject to the security interest and assignment set forth herein. Grantor shall give to Servicer written notice of any such creation or acquisition (that is not Excluded Property) within 15 days thereof. Upon the request of Servicer, Grantor shall promptly execute any and all assignments, agreements, instruments, documents and other papers as may be reasonably requested by Servicer to evidence and/or perfect the security interest in and collateral assignment of such items in favor of Servicer, including, without limitation, in Servicer's discretion, a modification, amendment or supplement hereof or a new short form intellectual property security agreement with respect thereto.
- b. Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks, Commissioner of Copyrights and any other government officials to record this Short Form Agreement upon request of Servicer.
- c. This Short Form Agreement has been entered into pursuant to, and in conjunction with, the Intellectual Property Security Agreement, and the terms and provisions thereof are incorporated by reference herein. The rights and remedies of Servicer with respect to the security interests described herein are as provided by the Intellectual Property Security Agreement and nothing in this Short Form Agreement shall be deemed to limit such rights and remedies.

DB1/ 130437265.3

- d. This Short Form Agreement is binding on and shall inure to the benefit of the parties hereto, and their respective successors and assigns.
- e. All capitalized terms not expressly defined herein shall have the definitions ascribed to them in the Intellectual Property Security Agreement and the Disbursing Agreement (as defined in the Intellectual Property Security Agreement) and are incorporated herein by reference. If there is a conflict between the definitions, terms, and/or provisions of this Short Form Agreement and the Intellectual Property Security Agreement, the definitions, terms, and/or provisions of the Intellectual Property Security Agreement shall control.
- f. This Short Form Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute but one and the same agreement. Delivery of an executed signature page or counterpart (or electronic image or scan transmission (such as a "pdf" file) thereof), whether by facsimile transmission, email, similar form of electronic transmission or otherwise (and whether executed manually, electronically or digitally), shall be effective as delivery of a manually executed counterpart of this Short Form Agreement and shall create a valid and binding obligation of the party executing the same or on whose behalf such signature page or counterpart is executed.
- g. THIS SHORT FORM AGREEMENT SHALL BE GOVERNED BY NEW YORK LAW, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW THAT WOULD RESULT IN THE APPLICATION OF THE LAW OF A STATE OTHER THAN NEW YORK.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

DB1/ 130437265.3

IN WITNESS WHEREOF, the undersigned have duly executed this Short Form Agreement as of the date first above written.

C3 NANO, INC., as Grantor
By: CIF Morris Name: CIFFON Morris
Title: Chief Executive Officer
ACCEPTED AND AGREED:
NEWLIGHT CAPITAL LLC , as Servicer
By:
Name:
Title:

IN WITNESS WHEREOF, the undersigned have duly executed this Short Form Agreement as of the date first above written.

C3 NANO, INC., as Grantor

By: _____ Name: Title:

ACCEPTED AND AGREED:

NEWLIGHT CAPITAL LLC, as Servicer

Name: Erwin Gostomski Title: Vice President

SCHEDULE A

Intellectual Property

Registered Trademarks and Trademark Applications:

<u>Company/</u> <u>Subsidiary</u> <u>Owner</u>	C3 Nano, Inc.	C3 Nano, Inc.	C3 Nano, Inc.	C3 Nano, Inc.	C3 Nano, Inc.	C3 Nano, Inc.
<u>Trademark</u>	C3Nano®	Nanoglue®	Activegrid®	ActiveguardHCTM	$Topaz^{TM}$	ТЫТм
Jurisdiction	USA	USA	USA	See Footnote ¹	66	
App. No.	A/N	A/N	N/A	Trademark cla	Trademark cla	Trademark cla
App. Date	N/A	N/A	N/A	Trademark claimed by Common Law Usage	Trademark claimed by Common Law Usage	Trademark claimed by Common Law Usage
Reg. No.	5,533,463	5,723,953	6,073,924	on Law Usage	on Law Usage	on Law Usage
Reg. Date	August 7, 2018	April 9, 2019	June 9, 2020			

Patents and Patent Applications:

Note for all Patents listed herein, the Company and Patent Owner is C3 Nano, Inc. All Inventors have assigned the Patents to C3 Nano, Inc

Inventors	Family	Patent	Turisdiction2 App. No. /	App. No. /	Ann. Date /	Patent No.	Issued Date
				Publication No.	Publ'n Date		
Ajay Virkar, Ying-Syi Li,	01	Metal Nanowire Networks	USA	13/530,822	06-22-2012	10,029,916	8102-24-2018
Melburne C. LeMieux		and Transparent Conductive		2013/0341074	12-26-13		
		Material					
Ajay Virkar,	01	Metal Nanowire Networks	USA	16/018,889	06-26-2018		
Ying-Syi Li,		and Transparent Conductive		2018/0297840	10-18-2018		
Melburne C. LeMieux		Material (Div)					
Ajay Virkar; Xiqiang Yang;	05	Metal Nanostructured	Taiwan	102122029	6/20/2013	1627640	06-21-2018
Ying-Syi Li; Melburne C.		Networks and Transparent		201405583	2/1/2014		
Lemieux		Conductive Material					
Ajay Virkar; Ying-Syi Li;	05	Metal Nanostructured	USA	13/664,159	10-30-2012	9,920,207	03-20-2018
Xiqiang Yang; Melburne C.		Networks and Transparent		2013/0342221	12/26/2013		
Lemieux		Conductive Material					

¹ The Company asserts common law trademark rights in the USA and in other jurisdictions that recognize common law trademark rights.

07-10-2018	07-1	10,020,807	02-26-2013 08/28/2014	13/777,802 2014/0238833	USA	Fused Metal Nanostructured Networks, Fusing Solutions with Reducing Agents and Methods for Forming Metal Networks	06	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Dennis McKean; Melburne C. LeMieux
05-21-2018	05-2	1624357	2/24/2014 !2-!6-20!4	103106126 TW201446491A	Taiwan	Fused Metal Nanostructured Networks, Fusing Solutions with Reducing Agents and Methods for Forming Metal Networks	06	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Dennis McKean; Melburne C. LeMieux
			08-06-2020 03-16-2022	10-2020-7022803 10-2376788	Korea	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
08-06-2020	08-0	10-2143963	09-24-2019	10-2019-7028001	Korea	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
09-25-2019	09-2	10-2027623	6/20/2013 04-15-2015	10-2015-7001771 KR20150040865A	Korea	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
08/31/2018	08/3	6392213	6/20/2013 10/15/2015	2015-518580 2015-530693	Japan	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
			08-04-2020 11-27-2020	42020013168.8 40023116	Hong Kong	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
			10-01-2019 02-19-2020	19200682.3 3611231	EPO	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
10-02-2019 TR	10-0	2864990	6/20/2013 04/29/2015	13806288.0 2 864 990	EPO	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
01/16/2018 ADEM		ZL201380033141.7	6/20/2013 6/3/2015	201380033141.7 CN104685577A	China	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Xiqiang Yang; Ying-Syi Li; Melburne C. Lemieux
ARK			08-14-2020 12-03-2020	16/994,519 2020-0377744	USA	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Ying-Syi Li; Xiqiang Yang; Melburne C. Lemieux
09-22-2020	09-2	10,781,324	02-01-2018 06-07-2018	15/886,201 2018-0155558	USA	Metal Nanostructured Networks and Transparent Conductive Material	05	Ajay Virkar; Ying-Syi Li; Xiqiang Yang; Melburne C. Lemieux
Issued Date	Issu	Patent No.	App. Date / Publ'n Date	App. No. / Publication No.	Jurisdiction2	Patent	<u>Family</u>	Inventors

Inventors	Family	Patent	Jurisdiction2	App. No. / Publication No.	App. Date / Publ'n Date	Patent No.	Issued Date
Ajay Virkar; Xiqiang Yang;	96	Fused Metal	USA	16/001,472	06-06-2018		
Ying-Syi Li;		Nanostructured Networks,		2018-0287608	10-04-2018		
Dennis McKean; Melburne C.		Fusing Solutions with					
LeMieux		Reducing Agents and					
		Methods for Forming Metal Networks (Div)					\R!
Ajay Virkar; Xiqiang Yang;	90	Fused Metal	China	201480018434.0	2/21/2014	ZL	02-16-2018
Ying-Syi Li;		Nanostructured Networks		CN105102555A	11/25/2015	201480018734.0	F
Dennis McKean; Melburne C.		and Fusing Solutions with					ח
LeMieux		Reducing Agents					R A
Ajay Virkar; Xiqiang Yang;	90	Fused Metal	China	201810047475.4	01-18-2018		TF
Ying-Syi Li;		Nanostructured Networks		CN108357168A	08-03-2018		
Dennis McKean; Melburne C.		and Fusing Solutions with					
LeMieux		Reducing Agents					
Ajay Virkar; Xiqiang Yang;	06	Fused Metal	EPO	14757422.2	2/21/2014		
Ying-Syi Li;		Nanostructured Networks		2961801	1/6/2016		
Dennis McKean; Melburne C.		and Fusing Solutions with					
LeMieux		Reducing Agents					
Ajay Virkar; Xiqiang Yang;	06	Fused Metal	Japan	2015-558993	2/21/2014	6387021	8/17/2018
ring-syi Li;		Nanostructured Networks		JP2016519206A	06-30-2016		
LeMieux		Reducing Agents					
Ajay Virkar; Xiqiang Yang;	90	Fused Metal	Japan	2018-151356	08-10-2018	6657336	02-07-2020
Ying-Syi Li;		Nanostructured Networks	,	2019-007085	01-17-2019		
Dennis McKean; Melburne C.		and Fusing Solutions with					
LeMieux		Reducing Agents					
Ajay Virkar; Xiqiang Yang;	06	Fused Metal	Korea	10-2015-7026866	2/21/2014	10-1888734	08-08-2018
Ying-Syi Li;		Nanostructured Networks		KR20160010406A	01-27-2016		
Dennis McKean; Melburne C.		and Fusing Solutions with					
LeMieux		Reducing Agents					
47	ì	1	3				
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	Taiwan	103140507	11/21/2014	1553069	10-11-2016
Yung-Yu Huang, Chris Scully,		Coatings Based on Metal		201525086	7-1-2015		
Virkar		Rinders Solution					
· AAAAA		Processing Thereof and					
		Patterning Approaches					

Inventors	<u>Family</u>	Patent	Jurisdiction2	App. No. /	App. Date /	Patent No.	Issued Date
47. ·	ì			Publication No.	Publ'n Date		
Yung-Yu Huang, Christopher S. Scully, Clifford M. Morris, Ajay Virkar	0	Coatings Based on Metal Nanowires and Polymer Binders, Solution	USA	2015/0144380	5/28/2015	11,2/4,223	03-13-2022
		Processing Thereof, and Patterning Approaches					ARK
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	USA	17/509,013	02/01/2022		MA
Yung-Yu Huang, Christopher S Scrilly Clifford M Morris		Coatings Based on Metal Nanowires and Polymer		2022-0154025	05-19-2022		DE
Ajay Virkar		Binders, Solution					RA
		Processing Thereof, and					TF
		Patterning Approaches					
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	China	201480071606.2	11/14/2014	ZL201480071606.2	07/16/2019
Yung-Yu Huang, Christopher		Coatings Based on Metal		CN105874889A	08/17/2016		
Ajay Virkar		Nanownes					
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	China	201910542227.1	06-21-2019		
Yung-Yu Huang, Christopher		Coatings Based on Metal		CN110204950A	09-06-2019		
S. Scully, Clifford M. Morris, Aiav Virkar		Nanowires					
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	Hong Kong	42020003270.4	02-25-2020		
Yung-Yu Huang, Christopher		Coatings Based on Metal		40013166A	08-07-2020		
S. Scully, Clifford M. Morris, Ajay Virkar		Nanowires					
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	EPO	14863676.4	11/14/2014		
Yung-Yu Huang, Christopher		Coatings Based on Metal		3072373	09/28/2016		
S. Scully, Clifford M. Morris, Ajay Virkar		Nanowires					
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	Japan	2016-533161	11-14-2014	6644684	01-10-2020
Yung-Yu Huang, Christopher S. Scully, Clifford M. Morris,		Coatings Based on Metal Nanowires		2017-505509	02-16-2017		
Ajay Virkar							
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	Japan	2020-001550	01-08-2020		
Yung-Yu Huang, Christopher		Coatings Based on Metal		2020-074310	05-14-2020		
S. Scully, Clifford M. Morris,		Nanowires					
Ajay Virkar							
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	Japan	2022-002511	01-11-2022		
S Scally Clifford M Morris		Coatings Based on Metal		2022-068877	05-10-2022		
S. Settiy, Chiloid M. Mollis, Aiav Virkar		Nanownes					

Inventors	Family	Patent	Iurisdiction2	App. No. /	Ann. Date /	Patent No.	Issued Date
				Publication No.	Publ'n Date	:	
Xiqiang Yang, Ying-Syi Li, Yung-Yu Huang, Christopher S. Scully, Clifford M. Morris, Ajay Virkar	07	Transparent Conductive Coatings Based on Metal Nanowires	Korea	10-2016-7016609	11-14-2014		
Xiqiang Yang, Ying-Syi Li,	07	Transparent Conductive	Korea	10-2022-7000334	01-05-		ВК
Yung-Yu Huang, Christopher S. Scully, Clifford M. Morris, Ajay Virkar		Coatings Based on Metal Nanowires		10-2022-0005646 A	2022/01-13-2022)EMAI
Yu Kambe, Yung-Yu Huang, Christopher S. Scully, Xiqiang Yano Ajay Virkar	09	Formable Transparent Conductive Films with Metal Nanowires	USA	14/680,390	04-07-2015	11,343,911	05-24-2022 TRA
Yu Kambe, Yung-Yu Huang, Christopher S. Scully, Xiqiang Yang, Ajay Virkar	99	Formable Transparent Conductive Films with Metal Nanowires	USA	17/728,324	04-25-2022		
Ying-Syi Li, Xiqiang Yang, Yu Kambe, Xiaofeng Chen, Hua Gu, Steven Michael Lam, Melanie Mariko Inouye, Arthur Yung-Chi Cheng, Alex Da Zhang Tan, Christopher S. Scully, Ajay Virkar	11	Metal Nanowire Inks for the Formation of Transparent Conductive Films with Fused Networks	Taiwan	104124429 201610006	07-28-2015 03-16-2016	1577752	04-11-2017
Ying-Syi Li, Xiqiang Yang, Yu Kambe, Xiaofeng Chen, Hua Gu, Steven Michael Lam, Melanie Mariko Inouye, Arthur Yung-Chi Cheng, Alex Da Zhang Tan, Christopher S. Scully, Ajay Virkar	11	Metal Nanowire Inks for the Formation of Transparent Conductive Films with Fused Networks	Taiwan	105143754 201713735	12-28-2016 04-16-2017	1621669	04-21-2018
Ying-Syi Li, Xiqiang Yang, Yu Kambe, Xiaofeng Chen, Hua Gu, Steven Michael Lam, Melanie Mariko Inouye, Arthur Yung-Chi Cheng, Alex Da Zhang Tan, Christopher S. Scully, Ajay Virkar	11	Metal Nanowire Inks for the Formation of Transparent Conductive Films with Fused Networks	USA	14/448,504	07-31-2014	9,183,968	11/10/2015
Ying-Syi Li, Xiqiang Yang, Yu Kambe, Xiaofeng Chen, Hua Gu, Steven Michael Lam, Melanie Mariko Inouye, Arthur Yung-Chi Cheng, Alex Da Zhang Tan, Christopher S. Scully, Ajay Virkar	11	Metal Nanowire Inks for the Formation of Transparent Conductive Films with Fused Networks (Continuation)	USA	14/464,332	08-20-2014	9,150,746	10/06/2015

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ye drang, 11 Metal Nanowire Inks for OSA 14548.697 (09-09-2015 9.447,301 09:20/2016 bire Liam. Transparent Conductive Uye, 17 Image of Conductive Inks for Oye, 18 Image of Conductive Inks for Oye, 19 Image of Conductive Inks for Oye,	шуєння	Fallity	Talent	Jui isuiciioii2	Publication No.	Publ'n Date	i aleit 140.	Issued Date
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Imarburent Conductive Infline with Pased Networks	Yu Kambe, Xiaofeng Chen,		the Formation of		2016-0032127	02-04-2016		
teng, Alex stopher S. Hilms with Fused Networks L5/247.533 08-25-2016 10.100.213 10/16/2018 g Chen, In lace Lam, Intel Lam, Use of Stopher S. 11 Mean Nanowite Inks for Use Count USA 2016-0389118 12-22-2016 10.100.213 10/16/2018 g Chen, Intel Lam, Use On Proposition of Section of Section Intel Lam, In	Hua Gu, Steven Michael Lam,		Transparent Conductive					
stopher S. Metal Nanowire Inks for USA 15/247.333 08-25-2016 10,100,213 10/16/2018 Stang, Alex topper S. CCont) Transparent Conductive Films with Fused Networks	Melanie Mariko Inouye,		Films with Fused Networks					7
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g Yang, 11 Metal Nanowire Inks for USA 2016-086918 12-22-2016 10,100,213 10/16/2018 pc Chen, Intel Lam, Imagement Conductive Flins with Fissed Networks stopher S. (Cont) g Chen, Intel Lam, UCont.) g Yang, 11 Transparent Conductive Plins With Fased Networks stopher S. (Cont.) g Chen, Intel Lam, Ucont.) g Chen, Intel Lam, Ucont.) g Chen, Intel Lam, Ucont.) g Yang, 11 Transparent Conductive Plins With Fased Networks stopher S. (Cont.) g Yang, 11 Transparent Conductive Plins With Fased Networks stopher S. (Cont.) g Yang, 11 Transparent Conductive Plins With Fased Networks stopher S. (Cont.) Metal Nanowire Inks For China Conductive Plins With Fased Networks stopher S. (Cont.) G Chen, Intel Lam, Herrandion Of Transparent Conductive Flins With Fased Networks stopher S. (Cont.) Metal Nanowire Inks For China Conductive Flins With Fased Networks stopher S. (Conductive Flins Stopher S. (C	Da Zhang Tan, Christopher S.							Δ F.
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		10-02-2015	10-2017-7012065	Korea	Property Enhancing Fillers for Transparent Coatings and Transparent Conductive Films	13	Ajay Virkar, Faraz Azadi Manzour, Xiqiang Yang, Hua Gu
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					Nanoscale Colorants		Syi Li, and Ajay Virkar
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	6755244	10-15-15	2017-520512	Japan	Transparent Films With	14	Xiqiang Yang, Yadong Cao,
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					Synthesis And Transparent		Ajay Virkar
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					Stabilizing Compounds		Ying-Syi Li
					Solutions For Delivery Of		Cheng, Faraz Azadi Manzour,
					Conductive Films And		Ajay Virkar, Arthur Yung-Chi
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					Stabilizing Compounds		Ying-Syi Li
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		04-19-2022	2022-062085		Conductive Films And		Ajay Virkar, Arthur Yung-Chi
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		12-26-2019	2019-537820		Conductive Films And		Ajay Virkar, Arthur Yung-Chi
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Transparent Conductive Films And Processes For Forming The Structures Taiwan 28 Thin Flexible Structure With Surfaces With Transparent Conductive Films And Processes For Forming The Structures 202106818	Kang, Jackie Chen, Yadong		With Surfaces With		2020-0245457	07-30-2020		
Films And Processes For Forming The Structures Thin Flexible Structure With Surfaces With Transparent Conductive Films And Processes For Forming The Structures Taiwan 109102669 202106818	Cao, Vicki Luo,		Transparent Conductive					
Forming The Structures In 28 Thin Flexible Structure Taiwan 109102669 With Surfaces With Transparent Conductive Films And Processes For Forming The Structures Taiwan 109102669 202106818	Arthur Yung-Chi Cheng,		Films And Processes For					
m 28 Thin Flexible Structure Taiwan 109102669 With Surfaces With Transparent Conductive Films And Processes For Forming The Structures	Andrew Hyeongjoo Moon,		Forming The Structures					
n 28 Thin Flexible Structure Taiwan 109102669 With Surfaces With Transparent Conductive Films And Processes For Forming The Structures	Xiqiang Yang, Ajay Virkar		c					
With Surfaces With Transparent Conductive Films And Processes For Forming The Structures	Xiaofeng Chen, Byunghwan	28	Thin Flexible Structure	Taiwan	109102669	01-22-		
Transparent Conductive Films And Processes For Forming The Structures	Kang, Jackie Chen, Yadong		With Surfaces With			2020/02-16-		
Films And Processes For Forming The Structures	Cao, Vicki Luo,		Transparent Conductive		202106818	2021		
	Arthur Yung-Chi Cheng,		Films And Processes For		TOTAL COOLS			
	Andrew Hyeongjoo Moon,		Forming The Structures					
	Xiqiang Yang, Ajay Virkar							

					Sparse Metal Conductive Lavers		
		11-18-2020/9- 1-2021	109140374 202132111	Taiwan	Coatings And Processing Of Transparent Conductive	30	Xiqiang Yang, Ajay Virkar
		11-17- 2020/05-20- 2021	16/950,246 2021-0145911	USA	Coatings And Processing Of Transparent Conductive Films For Stabilization Of Sparse Metal Conductive Layers	30	Xiqiang Yang, Ajay Virkar
		2021	10-2021-0118179		Transparent Conductive Films And Processes For Forming The Structures		Cao, Vicki Luo, Arthur Yung-Chi Cheng, Andrew Hyeongjoo Moon, Xiqiang Yang, Ajay Virkar
		01-27- 2020/09-29-	10-2021-7027552	Korea	Thin Flexible Structure With Surfaces With	28	Xiaofeng Chen, Byunghwan Kang, Jackie Chen, Yadong
					Forming The Structures		Andrew Hyeongjoo Moon, Xiqiang Yang, Ajay Virkar
			1011		Transparent Conductive Films And Processes For		Cao, Vicki Luo, Arthur Yung-Chi Cheng
		01-27-2020	2021-543406	Japan	Thin Flexible Structure With Surfaces With	28	Xiaofeng Chen, Byunghwan Kang, Jackie Chen, Yadong
					Forming The Structures		Xiqiang Yang, Ajay Virkar
			() () () () () () () () () ()		Films And Processes For		Arthur Yung-Chi Cheng,
		2020/12-8-	3918454		With Surfaces With Transparent Conductive		Kang, Jackie Chen, Yadong Cao, Vicki Luo,
		01-27-	20748527.7	EP	Thin Flexible Structure	28	Xiaofeng Chen, Byunghwan
TF					Forming The Structures		Andrew Hyeongjoo Moon, Xiqiang Yang, Ajay Virkar
RAI		2021	CN 113363296 A		Films And Processes For		Arthur Yung-Chi Cheng,
DE		2020/09-10-			Transparent Conductive		Kang, Jackie Chen, Yadong
M		01-27-	202080011393.X	China	Thin Flexible Structure	28	Xiaofeng Chen, Byunghwan
AR					TOTHING THE SHACKIES		Xiqiang Yang, Ajay Virkar
K					Films And Processes For		Arthur Yung-Chi Cheng,
					Transparent Conductive		Cao, Vicki Luo,
		05-05-2022	111117014	Taiwan	Thin Flexible Structure With Surfaces With	28	Xiaofeng Chen, Byunghwan Kang, Jackie Chen, Yadong
Issued Date	Patent No.	App. Date / Publ'n Date	App. No. / Publication No.	Jurisdiction2	Patent	<u>Family</u>	Inventors

			ę	Publication No.	Publ'n Date	
Xiqiang Yang, Ajay Virkar	30	Coatings And Processing Of Transparent Conductive	China			
		Films For Stabilization Of				
		Sparse Metal Conductive				
		Layers				RK
Xiqiang Yang, Ajay Virkar	30	Coatings And Processing	EP			ΑF
		Of Transparent Conductive				M
		Films For Stabilization Of				F
		Sparse Metal Conductive				7 D
		Layers				R
Xiqiang Yang, Ajay Virkar	30	Coatings And Processing	Japan	2022-528639	11-17-2020	T
		Of Transparent Conductive				
		Films For Stabilization Of				
		Sparse Metal Conductive				
		Layers				
Xiqiang Yang, Ajay Virkar	30	Coatings And Processing	Korea			
		Of Transparent Conductive				
		Films For Stabilization Of				
		Sparse Metal Conductive				
		Layers				
Faraz Azadi Manzour,	31	Transparent Polymer	USA	17/390,060	07-30-	
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Xiqiang Yang, Ajay Virkar		(Prov)				

Abandoned Patent Applications Co-Assigned to Nissha Printing Company, Limited

The patent applications in this list were filed under a Joint Development Agreement and were later abandoned by mutual consent of Nissha and C3 Nano based on a lack of commercial interest in the covered subject matter.

- Taiwan 104135646, abandoned 2018
- U.S. 2016/0122562 A, abandoned 2018
- WO2016069438, abandoned 2017

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