Mail Stop: Assignment Recordation Services Director of the U.S. Patent and Trademark Office P.O. Box 1450	RECORDATION FORM PATENTS (U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office		
Alexandria, VA 22313-1450		Atto	orney Docket No. <u>153829</u>		
Please record the attached document. Total number of pages including cover sheet, attachments, and document: 2					
1. A. Name of conveying parties: (1) Yusuke HORIGUE (2) Makiko UMEZAK (3) Noriaki FUJITAN (4) Hirokazu NISHIM (5) Takahiro KISHIO (6) Takahiro HAMAI B. Additional name(s) of conveying 3. A. Nature of conveyance: Security Agreement Other B. Execution Date: ALL: June	I IAKI KA DA ing party(ies) attached? ☐ Yes ☒ No ☐ Merger ☐ Change of Name	NISSA 7-1, K CHIYO JAPA	AN CHEMICAL INDUSTRIES, LTD. ANDA-NISHIKI-CHO 3- CHOME, ODA-KU, TOKYO 1010054, N al name(s) & address(es) attached? Yes No		
4. A. Patent Application No. 13/516,304 B. Patent No.(s) Additional numbers attached? ☐ Yes ☒ No C. Title of Application: COMPOSITION FOR FORMING PHOTOSENSITIVE RESIST UNDERLAYER					
5. Name and address of party to whom concerning document should be ma Name: James A. Oliff Address: OLIFF & BERRIDG P.O. Box 3208 Alexandria, VA 22 Phone Number: 703- Fax Number: 703-	n correspondence iled: — SE, PLC 550 320-4850 -836-6400	7. Please chatotal fee (3	of applications and patents involved: 1 arge Deposit Account No. 15-0461 the 37 CFR 3.41) in the amount of \$40.00. Expayment or charge any underpayment to at number 15-0461.		
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Date: June 15, 2012 Jeffrey Ru Bousquet, Registration No. 57,771					

PATENT REEL: 028407 FRAME: 0768

ASSIGNMENT

(1-8) Insert Name(s)	(1) Yusuke HORI			ro KISHIOKA			
of Inventor(s)	(2) <u>Makiko UME</u>			ro HAMADA			
	(3) <u>Noriaki FUJI</u>		(7)	#1.49FW-			
	(4) <u>Hirokazu NIS</u>	SHIMAKI	(8)				
	Y			21.00)			
				31.00) and other good and			
		valuable consideration paid to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and set over to					
(9) Insert Name of Assignee	(9) NISSAN CHEMICAL INDUSTRIES, LTD.						
(10) Insert Address of			me, Chiyoda-ku, Tok	yo 1010054, Japan			
Assignee							
- ,	(hereinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. § 100, in the invention, and in all applications for						
	-			al, divisional, continuation,			
		substitute, and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as					
(11) Insert Identification,		•	FORMING PHOT				
such as Title, Case Number		UNDERLAYER	and the second s	USENSTITVE			
or Foreign Application	_RESTST	UNIVERDATER	E-1-1-11				
Number	(Attorney De	ocket No. <u>15382</u>	29)			
	•			ion for patent in the United			
		on even date herev					
(12) Insert Date of Signing of	(12) onJur	ne 11, 2012					
Application			10/516 504				
(13) Alternative Identification	(13) U.S. applica	tion Serial Numbe	r 13/316,304				
	for filed applications filed June 15, 2012 1) Each undersigned agrees to execute all papers necessary in connection with any application and any continuing,						
divisional or reissue application							
assignments in connection with							
				interference which may be			
declared concerning any applic							
thereon, for the invention, and	to cooperate with t	he Assignee in eve	ry way possible in ob	taining evidence and going			
forward with such interference.							
3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in							
connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.							
4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm							
by reissue or reexamination a grant of a valid United States patent to the Assignee.							
5) Each undersigned authorizes and requests the Director of Patents to issue any and all Letters Patents of the							
United States resulting from sa	id application(s) to	the said Assignee,	as Assignee of the ent	ire interest, and covenants			
that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute,							
any agreements in conflict herewith, and agrees that this assignment is binding on him and his heirs, successors, and							
assigns and legal representative 6) Each undersigned herel		OTIFF & BEPRI	OGE PLC the newer of	of insert on this assignment			
any further identification that				_			
Patent and Trademark Office fo	•		- 00 00 (10				
In witness whereof, executed !	by the undersigned	on the date(s) opp	osite the undersigne	d name(s).			
Date Jun, 11, 2012 In	t Ci	Musice	Horron.	(CTEAT)			
'	_			(SEAL)			
Date Jun. 11, 2012 In	-	_	Mezaki	(SEAL)			
Date Jun. 11, 2012 In	ventor Signature	Noriaki'	Fejilani	(SEAL)			
Date Jun. 11, 2012 In	ventor Signature _	Hirokazu	XITSHIMAL	(SEAL)			
Date Jun. 11, 2012 In	ventor Signature	Takalino	Kish of	(SEAL)			
Date Jun. 11, 2012 In	-	Takchino	Hanada	(SEAL)			
DateIn				(SEAL)			
This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside							
the U.S.A. If neither, then it should be signed before at least two witnesses who also sign here:							
DateW							
	itness						
•			•	PATENT			

RECORDED: 06/15/2012 REEL: 028407 FRAME: 0769