Case No.: 56613US002 R 102165054 To: The Honorable Commissioner of Patents and Trademarks Please record the attached original document(s) or copy thereof. 1. Name of conveying party(ies)/(Execution Date) Name and address of receiving party(ies) Sierakowski, Michael J. July 3, 2002 **3M Innovative Properties Company** Hardy, L. Charles July 3, 2002 P.O. Box 33427 Terrazas, Michael S. July 3, 2002 St. Paul, Minnesota 55133-3427 Waddell, Jennifer E. July 5, 2002 July 9, 2002 Johnson, Bryan J. 7.10.02 Additional names of receiving party(ies) attached? Additional names of conveying party(ies) attached? ☐ Yes ☒ No ☐ Yes ⊠ No 3. Nature of Conveyance: Assignment Assignment Merger Security Agreement Change of Name Other: 10/192335 If this is a request for correction of a previously recorded document, a copy of the previously recorded assignment and previous Notice of Recordation is enclosed. 4. Application number or patent number: This document is being filed with a new patent application on: July 10, 2002 This document is to be recorded against the following patent application or patent: Enter Patent Cooperation Treaty (PCT) application number only if a USSN has not been assigned: Additional Numbers Attached? Yes No 5. Name and address of party to whom correspondence 6. Total number of applications concerning document should be mailed: and patents involved: 1 Name: Douglas B. Little Office of Intellectual Property Counsel 3M Innovative Properties Company P.O. Box 33427 St. Paul, Minnesota 55133-3427 7. Total fee (37 CFR 3.41): \$40.00 Enclosed Phone Number: 651-733-1501 Authorized to be charged to deposit account 8. Deposit Account Number: 13-3723 DO NOT USE THIS SPACE 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. Charges to deposit account are authorized, as indicated hereig Printed Name of Attorney/Agent: Douglas B. Little July 10, 2002 Registration No.: 28,439

Mail documents to be recorded with required cover sheet information to:

Commissioner for Patents, Box Assignments, Washington, DC 20231

Total number of pages including COVER SHEET, attachments and documents

CPI 100 Assign Record Cover - New Appln (3/06/02)

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#### ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

## ELECTROLYTIC PROCESSES WITH REDUCED CELL VOLTAGE AND GAS FORMATION

and have contemporaneously executed an application for Letters Patent of the United States of America based thereon:

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by 3M Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as we lawfully may, that may be deemed necessary by the said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

hael J. Sierakowski

Residence: Stillwater, Minnesota, U.S.A. Citizenship: United States of America

STATE OF MINNESOTA )

) ss.

COUNTY OF RAMSEY

\_\_\_\_\_, 2002, before me personally day of \_ appeared the above-named Michael J. Sierakowski, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

JOYCE M. COURTNEY NOTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005

Joyce M. Courtney
Notary Public

	L. Charles Harden
	L. Charles Hardy
	Residence: St. Paul, Minnesota, U.S.A.
	Citizenship: United States of America
STATE OF MINNESOTA ) ) ss.	
COUNTY OF RAMSEY )	
~rA′	of Ally . 2002, before me personally
appeared the above-named L. Charles	Hardy, personally known by me, and known by me to be the person
described in and who executed the for	egoing instrument, and who acknowledged that said person executed
the same as said person's free act and o	leed, on the day and year aforesaid.
E	
NOTARY PUBLIC MINNESOTA	Jours M. Courtney Notary Bublic
My Comm. Expires Jan. 31 2005	Notary Public
	Mine Den Den
	Michael S. Terrazas
	Residence: Prescott, Wisconsin, U.S.A.
CTATE OF MADDICOTA	Citizenship: United States of America
STATE OF MINNESOTA )	
<i>j</i> 55.	
COUNTY OF RAMSEY .)	
COUNTY OF RAMSEY	of Old VIII 2003 before me memorally
On this $3^{\vee 0}$ day	of, 2002, before me personally Terrazas personally known by me, and known by me to be the
On this 3vd day appeared the above-named Michael S	Terrazas, personally known by me, and known by me to be the
On this day appeared the above-named Michael S person described in and who executed	
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.   Outtrey  Notary Public
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.    A
On this day appeared the above-named Michael S person described in and who executed	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A.
On this day appeared the above-named Michael S person described in and who executed	Terrazas, personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.    A
On this	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A.
On this	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael S person described in and who executed executed the same as said person's free  JOYCE M. COURTNEY ROTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY  On this day	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael S person described in and who executed executed the same as said person's free  LOYCE M. COURTNEY NOTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY  On this day appeared the above-named Jennifer E	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  Personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.  Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael Sperson described in and who executed executed the same as said person's free NOTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY )  On this day appeared the above-named Jennifer Eperson described in and who executed	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  Page 1. 2002, before me personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.  Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael Sperson described in and who executed executed the same as said person's free NOTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY )  On this day appeared the above-named Jennifer Eperson described in and who executed	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  Personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.  Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael Sperson described in and who executed executed the same as said person's free NOTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY )  On this day appeared the above-named Jennifer Eperson described in and who executed	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  Page 1. 2002, before me personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.  Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael S person described in and who executed executed the same as said person's free  JOYCE M. COURTNEY ROTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY  On this day appeared the above-named Jennifer E person described in and who executed executed the same as said person's free	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  Page 1. 2002, before me personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.  Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America
On this day appeared the above-named Michael Sperson described in and who executed executed the same as said person's free NOTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY )  On this day appeared the above-named Jennifer Eperson described in and who executed	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  2002, before me personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.
On this day appeared the above-named Michael S person described in and who executed executed the same as said person's free  JOYCE M. COURTNEY ROTARY PUBLIC MINNESOTA My Comm. Expires Jan. 31 2005  My Comm. Expires Jan. 31 2005  STATE OF MINNESOTA ) ss.  COUNTY OF RAMSEY  On this day appeared the above-named Jennifer E person described in and who executed executed the same as said person's free	Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America  Page 1. 2002, before me personally known by me, and known by me to be the the foregoing instrument, and who acknowledged that said person act and deed, on the day and year aforesaid.  Jennifer E. Waddell Residence: Monument, Colorado, U.S.A. Citizenship: United States of America

STATE OF MINNESOTA	)		Austin, Texas, United States o		
COUNTY OF RAMSEY	) ss. )				
On thisappeared the above-named described in and who executhe same as said person's fr	Bryan J. Jou uted the fore	hnson, perso going instru	nally known by a nent, and who a	me, and known to cknowledged that	
(Seal)					

## ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

## ELECTROLYTIC PROCESSES WITH REDUCED CELL VOLTAGE AND GAS FORMATION

and have contemporaneously executed an application for Letters Patent of the United States of America based thereon;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by 3M Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as we lawfully may, that may be deemed necessary by the said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

		Michael J. S	ierakowski	
		Residence:	Stillwater, Minnesota, U.S.A.	
		Citizenship:	United States of America	
STATE OF MINNESOTA	)	_		
	) ss.			
COUNTY OF RAMSEY	)			
On this	dav	of	, 2002,	before me personally
person described in and wh	no executed	the foregoing	personally known by me, and g instrument, and who acknow, on the day and year aforesaid.	
(Seal)				
				Notary Public

		L. Charles Hardy
		Residence: St. Paul, Minnesota, U.S.A.
	OT A TE OF A MARIESOT A	Citizenship: United States of America
	STATE OF MINNESOTA ) ss.	
	COUNTY OF RAMSEY )	
	,	of, 2002, before me personally
	appeared the above-named L. Charles	Hardy, personally known by me, and known by me to be the person
	described in and who executed the fore	egoing instrument, and who acknowledged that said person executed
	the same as said person's free act and d	eed, on the day and year aforesaid.
	(Seal)	
		Notary Public
		Michael S. Terrazas
		Residence: Prescott, Wisconsin, U.S.A.
		Citizenship: United States of America
	STATE OF MINNESOTA )	
	COUNTY OF RAMSEY )	
	On this day	of, 2002, before me personally . Terrazas, personally known by me, and known by me to be the
		the foregoing instrument, and who acknowledged that said person
		act and deed, on the day and year aforesaid.
	•	• •
	(Cont)	
	(Seal)	Notary Public
		/
		1 / Manans
		James (, property)
		Jennifer E. Waddell Residence: Monument, Colorado, U.S.A.
	Colorado C	Citizenship: United States of America
	STATE OF MINNESOTA )	<b>,</b>
	El Paso ) ss.	
	COUNTY OF RAMSEY )	1 1
		of <u>July</u> , 2002, before me personally
		E. Waddell, personally known by me, and known by me to be the
		I the foregoing instrument, and who acknowledged that said person
	executed the same as said person's nee	e act and deed, on the day and year aforesaid.
10000		1 16 2 10 1
CAPA B. TA	(Seal)	1 letora VI Octob
(EO: HOTARLOS)		Notary Public
SEAL :		
FR PUBLIC ST		
OF COLOR		
My Commission		
Expires 11/27/200	)4	

Docket No. 56613US002

		Bryan J. Jo	hnson	
		Residence:	Austin, Texas, U.S.A	<b>.</b> .
		Citizenship	: United States of Ame	erica
STATE OF MINNESOTA	<b>v</b> )	•		
	) ss.			
COUNTY OF RAMSEY	)			
On this		day of		_, 2002, before me personally
appeared the above-named	d Bryan . cuted the	J. Johnson, person foregoing instru	mally known by me, an ment, and who acknow	nd known by me to be the person dedged that said person executed
(Seal)				
				Notary Public

# **ASSIGNMENT**

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

## ELECTROLYTIC PROCESSES WITH REDUCED CELL VOLTAGE AND GAS FORMATION

and have contemporaneously executed an application for Letters Patent of the United States of America based thereon;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by 3M Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by us or any of us had this assignment and transfer not been made.

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And we do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

		Michael J. S	Sierak	owski	i						
		Residence:	Still	water	, Minn	esota, I	J.S.A.				
		Citizenship:	: Uni	ted St	ates of	Americ	ca				
STATE OF MINNESOTA	)	-									
	) ss.										
COUNTY OF RAMSEY	)										
On this	day	of of					2002.	before	me per	rsonally	
ppeared the above-named person described in and whexecuted the same as said person to the same as said	Michael J ho execute	. Sierakowski, d the foregoin	, persong ins	onally trume	know: ent, and	n by m d who a	e, and lacknowl	known 1	by me to	be the	,
Seal)											
,									Notary	Public	

		I Charles Hardy
		L. Charles Hardy
		Residence: St. Paul, Minnesota, U.S.A.
STATE OF MINNESOTA	)	Citizenship: United States of America
JAME OF MININESOTA	) ss.	
COUNTY OF RAMSEY	)	
On this	day	of, 2002, before me personally
appeared the above-named I described in and who execut	L. Charles ted the fo	Hardy, personally known by me, and known by me to be the person regoing instrument, and who acknowledged that said person executed leed, on the day and year aforesaid.
Seal)		
, sear)		Notary Public
		Michael S. Terrazas
		Residence: Prescott, Wisconsin, U.S.A.
		Citizenship: United States of America
STATE OF MINNESOTA	1	
	) ss.	
	)	of, 2002, before me personally
person described in and who	o execute	S. Terrazas, personally known by me, and known by me to be the d the foregoing instrument, and who acknowledged that said person e act and deed, on the day and year aforesaid.
Seal)		Notary Public
		Jennifer E. Waddell Residence: Monument, Colorado, U.S.A.
		Citizenship: United States of America
STATE OF MINNESOTA	)	
	) ss.	
COUNTY OF RAMSEY	)	
appeared the above-named Je described in and who execut	ennifer E. ted the for	Waddell, personally known by me, and known by me to be the person regoing instrument, and who acknowledged that said person executed leed, on the day and year aforesaid.
ne same as said persons nee	o act and t	aced, on the day and year atoresaid.
Seal)		

Docket No. 56613US002

Bryan J. Johnson

Residence: Austin, Texas, U.S.A.
Citizenship: United States of America

STATE OF MINNESOTA )

TRAVIS ) ss. COUNTY OF RAMSEY )

THERESA T. COLLIER
MY COMMISSION EXPIRES
November 16, 2004

huse J. Collin-

Notary Public

PATENT REEL: 013097 FRAME: 0886

**RECORDED: 07/10/2002**