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Form PTO-159: 09-03-2003 U.S. DEPARTMENT OF COMMERCE Г U.S. Patent and Trademark Office OMB No. 0651-0027 (exp. 6/30/2005) 102539865 ne attached documents or copy thereof. To the Honorable Commission Aress of receiving party(ies): 1. Name of conveying party(ies): Tsutomu SADA Kazunari TAKEDA Yumiko TAKASHIMA Name: DAI-ICHI KOGYO SEIYAKU CO., LTD **Naoto NISHIMURA Internal Address:** Takehito MITATE Kazuo YAMADA Motoaki NISHIJIMA Naoto TORATA Street Address: of 55 Nishishichijo Additional name(s) of conveying party(ies) attached?

Yes

No 3. Nature of Conveyance: Higashikubo-cho, Shimogyo-ku Assignment Assignment ☐ Merger City: Kyoto State: Japan Zip: ☐ Change of Name Security Agreement Other No additional names(s) or address(es) attached 🖾 Yes 🔲 No Execution Date: 5/23/2003 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) 10/381,516 Additional numbers attached? Yes No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37CFR 3.41) MILLEN, WHITE, ZELANO Name: & BRANIGAN, P.C. Authorized to be charged to deposit account Address: Arlington Court Plaza I 8. DEPOSIT ACCOUNT NO. 13-3402 **Suite 1400** 2200 Clarendon BLVD. (Attach duplicate copies of this page if paying by deposit account) Arlington, VA 22201 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.

Anthony J. Zelano
Names of Person Signing

Signature

Anthony J. Zelano
Signature

Anthony J. Zelano
Date Total number of pages including cover sheet, attachments, and documents 3 Attorney Docket No. AKA-277

PATENT

REEL: 014435 FRAME: 0654

Name and address of receiving party(ies):

SHARP CORPORATION of 22-22 Nagaikecho, Abeno-ku, Osaka-shi Osaka, Japan

> PATENT REEL: 014435 FRAME: 0655

WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement relating to

LITHIUM SECONDARY BATTERY

	for which an applicat	ion for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.
X	for which U.S. Applie	cation Serial No. 10/381516 for Letters Patent was filed in the U.S. Patent and Trademark
W	for which an Internati designating the Unite	onal Application was filed on September 28, 2001 PCT/JP01/08524
	AND WHEREAS	DAI-ICHI KOGYO SEIYAKU CO., LTD. of 55 Nishishichijo, Higashikubo-cho, Shimogyo-ku, Kyoto, Japan

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereof, including any and all renewals, reissues, and prolongations thereof.

NOW, THIS WITNESSETH that for good and valuable considerations, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, ASSIGNEE and its assigns and legal representatives to have, hold, exercise, and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patents which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, prolongations thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States for said invention and to assign the same to said ASSIGNEE or its assigns or legal representative and to execute any other papers that may be needed in connection with filing said application and securing a Letters Patent thereon.

AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on said application, and on any and all divisions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.

IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR.

201	FULL NAME OF SOLE OR FIRST INVENTOR	INVENTOR'S SIGNATURE	DATE
	Tsutomu Sada	Jacam Ad	May 23, 2003
202	FULL NAME OF SECOND JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
203	FULL NAME OF THIRD JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
204	FULL NAME OF FOURTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
205	FULL NAME OF FIFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
206	FULL NAME OF SIXTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
207	FULL NAME OF SEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
208	FULL NAME OF EIGHTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
209	FULL NAME OF NINTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
210	FULL NAME OF TENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
211	FULL NAME OF ELEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
212	FULL NAME OF TWELFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
WZ 16	à		

PATENT REEL: 014435 FRAME: 0656

WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement relating to

LITHIUM SECONDARY BATTERY

	for which an application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.
4	for which U.S. Application Serial No. 10/381516 for Letters Patent was filed in the U.S. Patent and Trademark Office on March 27, 2003
Í	for which an International Application was filed on designating the United States. September 28, 2001 PCT/ JP01/08524
	AND WHEREAS DAI-ICHI KOGYO SEIYAKU CO., LTD. of 55 Nishishichijo,

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereof, including any and all renewals, reissues, and prolongations thereof.

NOW, THIS WITNESSETH that for good and valuable considerations, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, ASSIGNEE and its assigns and legal representatives to have, hold, exercise, and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patents which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, prolongations thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

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IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR.

201	FULL NAME OF SOLE OR FIRST INVENTOR	INVENTOR'S SIGNATURE	DATE
202	FULL NAME OF SECOND JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Kazunari Takeda	Hazurari Takeda	May 23, 2003
203	FULL NAME OF THIRD JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
204	FULL NAME OF FOURTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
205	FULL NAME OF FIFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
206	FULL NAME OF SIXTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
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207	FULL NAME OF SEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
208	FULL NAME OF EIGHTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
			•
209	FULL NAME OF NINTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
210	FULL NAME OF TENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
211	FULL NAME OF ELEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
212	FULL NAME OF TWELFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
			PATENT

PATENT REEL: 014435 FRAME: 0657

WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement relating to

LITHIUM SECOYDARY BATTERY

 for which an application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date. 10/381516 for which U.S. Application Serial No
for which U.S. Application Serial No. Office on March 27, 2003 for which an International Application was filed on PCT/JP01/08524
designating the United States. AND WHEREAS DAI-ICHI KOGYO SEIYAKU CO., LTD. of 55 Nishishichijo,
Higashikubo-cho, Shimogyo-ku, Kyoto, Japan

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereof, including any and all renewals, reissues, and prolongations thereof.

NOW, THIS WITNESSETH that for good and valuable considerations, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, ASSIGNEE and its assigns and legal representatives to have, hold, exercise, and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patents which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, prolongations thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

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IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR.

201	FULL NAME OF SOLE OR FIRST INVENTOR	INVENTOR'S SIGNATURE	DATE
202	FULL NAME OF SECOND JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE .
203	FULL NAME OF THIRD JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Yumiko Takashima	Yumiko Jakashima	May 23, 2003
204	FULL NAME OF FOURTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
		•	
205	FULL NAME OF FIFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
206	FULL NAME OF SIXTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
207	FULL NAME OF SEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
		·	
208	FULL NAME OF EIGHTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
209	FULL NAME OF NINTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
210	FULL NAME OF TENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	·		. '
211	FULL NAME OF ELEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE.	DATE
212	FULL NAME OF TWELFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
			•
		1	PATENT

REEL: 014435 FRAME: 0658

WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement relating to

LITHIUM SECONDARY BATTERY

	for which an application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.		
Q	for which U.S. Application Serial No		
for which an International Application was filed on designating the United States. September 28, 2001 PCT/JP01/08524			
	AND WHEREAS SHARP CORPORATION of 22-22 Nagaikecho, Abeno-ku, Osaka-shi, Osaka, Japan		

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereof, including any and all

renewals, reissues, and prolongations thereof.

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IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR.

201	FULL NAME OF SOLE OR FIRST INVENTOR	INVENTOR'S SIGNATURE	DATE
02	FULL NAME OF SECOND JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
			. 4
203	FULL NAME OF THIRD JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
204	FULL NAME OF FOURTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Naoto Nishimura	naoto nishimua	May 23, 2003
205	FULL NAME OF FIFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Takehito Mitate	Tabelute Intuta	May 23, 2003
206	FULL NAME OF SIXTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Kazuo Yamada	Kazwo Yamada	May 23, 2003
207	FULL NAME OF SEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Motoaki Nishijima	Protoaki Nishijinsa	May 23, 2003
208	FULL NAME OF EIGHTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
	Naoto Torata	haoto Torata	May 23, 2003
209	FULL NAME OF NINTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
210	FULL NAME OF TENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
011			
211	FULL NAME OF ELEVENTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
212	FULL NAME OF TWELFTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	· DATE
			PATENT
		1	1

RECORDED: 08/12/2003

REEL: 014435 FRAME: 0659