504525253 08/29/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4571959

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
KARTHIK KADIRVEL	08/16/2017
ANKUR GUPTA	08/14/2017
HUA CHEN	07/21/2017
CHRISTOPHER C. BRANSON	08/11/2017
DAVID M. DEMURO	08/22/2017
ALESSANDRO PELOSI	08/29/2017

RECEIVING PARTY DATA

Name:	APPLE INC.
Street Address:	1 INFINITE LOOP
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	15650888	

CORRESPONDENCE DATA

Fax Number: (415)576-0300

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: 4155760200

Email: pcaldwell@kilpatricktownsend.com

Correspondent Name: KILPATRICK TOWNSEND & STOCKTON LLP/APPLE

Address Line 1: 1100 PEACHTREE STREET
Address Line 2: MAILSTOP: IP DOCKETING 22
Address Line 4: ATLANTA, GEORGIA 30309

ATTORNEY DOCKET NUMBER: 090911-P33010US1-1042403	
NAME OF SUBMITTER:	PATRICIA CALDWELL
SIGNATURE:	/Patricia Caldwell/
DATE SIGNED:	08/29/2017

PATENT 504525253 REEL: 043441 FRAME: 0001

Total Attachments: 11 source=P33010US1 Assignment fully executed#page1.tif source=P33010US1 Assignment fully executed#page2.tif source=P33010US1 Assignment fully executed#page3.tif source=P33010US1 Assignment fully executed#page4.tif source=P33010US1 Assignment fully executed#page5.tif source=P33010US1 Assignment fully executed#page6.tif source=P33010US1 Assignment fully executed#page7.tif source=P33010US1 Assignment fully executed#page8.tif source=P33010US1 Assignment fully executed#page9.tif source=P33010US1 Assignment fully executed#page10.tif source=P33010US1 Assignment fully executed#page11.tif

Attorney Docket No.: 090911-P33010US1-1042403

ASSIGNMENT

(Patent Application)

JOINT

WHEREAS, Karthik Kadirvel, Ankur Gupta, Hua Chen, Christopher C. Branson, David M. DeMuro, and Alessandro Pelosi, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention:

DYNAMIC BATTERY CELL IMPEDANCE

MONITORING

Filing Date:

July 15, 2017

Application No.:

15/650,888

WHEREAS, APPLE INC., a corporation of the state of California, located at 1 Infinite Loop, Cupertino, CA 95014, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignors, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates

indicated.

Signature:

Karthik Kadirvel

Date: Au 15, 2017

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Title of Invention: DYNAMIC BATTERY CELL IMPEDANCE

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Signature:		Date:	
	Karthik Kadirvel	· 	

Assignment Attorney Docket No.: 090911-P33010US1-1042403 Page 2 of 2

Signature:	Ankur Gupta	Date:	8/14/17
Signature:	Hua Chen	Date:	
Signature:	Christopher C. Branson	Date:	
Signature:	David M. DeMuro	Date:	
Signature:	Alessandro Pelosi	Date:	

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Signature:		Date:	
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Page 1 of 2

Assignment Attorney Docket No.: 090911-P33010US1-1042403 Page 2 of 2

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Signature:	Hua Chen	Date: July, 2/81, 201)
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	Karthik Kadirvel		

Assignment Attorney Docket No.: 090911-P33010US1-1042403 Page 2 of 2

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Signature:	Christopher C. Branson	Date: _	8-11-2017
Signature:	David M. DeMuro	Date:	
Signature:	Alessandro Pelosi	Date:	

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Signature:	Hua Chen	Date:	
Signature:		Date:	
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Signature:		Date:	

Alessandro Pelosi

(Patent Application)

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Page 1 of 2

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	Ankur Gupta	
Signature:		Date:
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Signature:	,	Date:
	David M. DeMuro	
Signature:	9/1/	Date: 16 29 20/7
	Alessandro Pelosi	

RECORDED: 08/29/2017