

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6025831

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAE WOONG KIM	02/07/2020
SANG SHIN LEE	02/07/2020
SO LA CHUNG	02/07/2020
MAN JU OH	02/07/2020
YOUNG JIN KIM	01/29/2020
JONG HYUN PARK	01/29/2020

RECEIVING PARTY DATA

Name:	HYUNDAI MOTOR COMPANY
Street Address:	12, HEOLLEUNG-RO, SEOCHO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	06797
Name:	KIA MOTORS CORPORATION
Street Address:	12, HEOLLEUNG-RO, SEOCHO-GU
City:	SEOUL
State/Country:	KOREA, REPUBLIC OF
Postal Code:	06797
Name:	POSTECH ACADEMY-INDUSTRY FOUNDATION
Street Address:	(JIGOK-DONG) 77, CHEONGAM-RO, NAM-GU
City:	POHANG-SI, GYEONGSANGBUK-DO
State/Country:	KOREA, REPUBLIC OF
Postal Code:	37673

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16824907

CORRESPONDENCE DATA

Fax Number:

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.

PATENT

Phone: 2027393000
Email: patents@morganlewis.com, Sandra.Johnson@morganlewis.com
Correspondent Name: MORGAN, LEWIS & BOCKIUS LLP
Address Line 1: 1111 PENNSYLVANIA AVENUE NW
Address Line 4: WASHINGTON, D.C. 20004

ATTORNEY DOCKET NUMBER:	123229-5435
NAME OF SUBMITTER:	SANDRA JOHNSON
SIGNATURE:	/Sandra Johnson/
DATE SIGNED:	03/20/2020

Total Attachments: 8

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**ASSIGNMENT
(Joint Inventors)**

WHEREAS, the undersigned,

(1) **KIM, Jae Woong**, resident of (Banwol-dong, SK View Park) 114-1701, 382-37, Dongtanwoncheon-ro, Hwaseong-si, Gyeonggi-do 18396, Republic of Korea,

(2) **LEE, Sang Shin**, resident of (Hwaseo-dong, Blooming Purcunsup Apt.) 118-602, 50, Hwayang-ro, Paldal-gu, Suwon-si, Gyeonggi-do 16438, Republic of Korea,

(3) **CHUNG, So La**, resident of (Guro-dong, Samsung Raemian Apt.) 101-1704, 90, Digital-ro 31-gil, Guro-gu, Seoul 08371 Republic of Korea ,

(4) **OH, Man Ju**, resident of 106-1502, Yehyeonmaeul Hyundai Hometown, Seocheon-dong, Giheung-gu, Yongin-si, Gyeonggi-do 17103, Republic of Korea,

(5) **KIM, Young Jin**, resident of (Gyosu Apt.) 7-801, 155, jigok-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do 37673, Republic of Korea,

(6) **PARK, Jong Hyun**, resident of 103, Muse, 442, Hyoja-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do 37655, Republic of Korea,

(hereinafter termed "Inventor(s)"), respectively, has/have invented certain new and useful improvements in **DEEP LEARNING-BASED COOLING SYSTEM TEMPERATURE PREDICTION APPARATUS ACCORDING TO PHYSICAL CAUSALITY AND METHOD THEREFOR** and executed therefore an application for Letters Patent of the United States and

☒ having an oath or declaration executed on even date herewith.
☐ bearing U.S. Patent Application No. _____ and filed on _____.

WHEREAS, (1) **HYUNDAI MOTOR COMPANY**, a corporation of the Republic of Korea, having a place of business at 12, Heolleung-ro, Seocho-gu, Seoul 06797, Republic of Korea, (2) **KIA MOTORS CORPORATION**, a corporation of the Republic of Korea, having a place of business at 12, Heolleung-ro, Seocho-gu, Seoul 06797, Republic of Korea (hereinafter termed "Assignees") and (3) **POSTECH ACADEMY-INDUSTRY FOUNDATION**, a corporation of the Republic of Korea, having a place of business at (Jigok-dong) 77, Cheongam-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do 37673, Republic of Korea are desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventors to have

been received in full from said Assignee(s):

1. Said Inventor(s) does/do hereby sell, assign, transfer and convey unto said Assignee(s), the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventor(s) does/do hereby jointly and severally covenant and agree to cooperate with said Assignee(s) to enable said Assignee(s) to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventor(s) shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee(s) (a) for perfecting in said Assignee(s) the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventor(s) in providing such cooperation shall be paid for by said Assignee(s).

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee(s), its successors, assigns and other legal representatives, and shall be binding upon said Inventor(s), its/their respective heirs, legal representatives and assigns.

4. Said Inventor(s) does/do hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Inventor(s) has/have executed and delivered this instrument to said Assignee(s) as follows:

PATENT

Attorney Docket No. 123229-5435

(1) KIM, Jae Woong

Date:

2020. 2. 7

Kim, Jae Woong

State of _____)
County of _____) SS.

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

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PATENT

Attorney Docket No. 123229-5435

(2) LEE, Sang Shin

Date:

2020. 2. 17

Lee, Sang Shin

State of _____)
County of _____) ss.

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the Laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

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DB1/63677996 1

PATENT

Attorney Docket No. 123229-5435

(3) CHUNG, So La

Date:

2020. 2. 7

Chung, So La

State of _____)
County of _____) SS.

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

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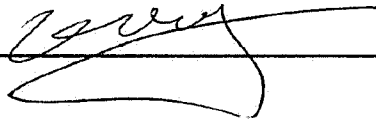
PATENT

Attorney Docket No. 123229-5435

(4) OH, Man Ju

Date:

2020, 2, 7



State of _____)
County of _____) SS.

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

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REEL: 052189 FRAME: 0863

PATENT

Attorney Docket No. 123229-5435

(5) KIM, Young Jin

Date:

01.29.2020.

Young Jin Kim

State of _____)
County of _____) SS

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public

PATENT

Attorney Docket No. 123229-5435

(6) **PARK, Jong Hyun**

Date:

01.29.2020

박종현

State of _____)
County of _____) SS.

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Notary Public