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PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date | |
|---------------------------|----------------|--|
| Jin-Ho Ahn | 01/16/2013 | |
| Ardemis Anoush Boghossian | 01/17/2013 | |
| Rene Ortiz-Garcia | 01/18/2013 | |
| Hyeonseok Yoon | 01/16/2013 | |
| Jingqing Zhang | 01/16/2013 | |

RECEIVING PARTY DATA

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| City: | Cambridge | |
| State/Country: | MASSACHUSETTS | |
| Postal Code: | 02142 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12659193 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | 14952.0391 |
|-------------------------|---------------------|
| NAME OF SUBMITTER: | Kristen M. Williams |

Total Attachments: 6

PATENT REEL: 029786 FRAME: 0622 126 H

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PATENT REEL: 029786 FRAME: 0623 Attorney Docket No: 14952.0391 / MIT Case 13588

ASSIGNMENT

For valuable consideration, we, Jin-Ho Ahn of Gyeonggi-Do, SOUTH KOREA; Ardemis Anoush Boghossian of White Lake, MI; Rene Ortiz-Garcia of Dresden, GERMANY; Hyeonseok Yoon of Gwangju, SOUTH KOREA; and Jingqing Zhang of Cambridge, MA hereby assign to: Massachusetts Institute of Technology, a corporation of Massachusetts, having a place of business at 77 Massachusetts Avenue, Cambridge, MA 02142; its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of applications for United States Patent signed by us, entitled SYSTEMS AND METHODS USING PHOTOLUMINESCENT NANOSTRUCTURE BASED HYDRYOGELS, filed February 26, 2010, and assigned U.S. Application Number 12/659,193, and we authorize and request the attorneys appointed in said applications to hereafter complete these assignments by inserting above the filing date and serial number of said applications when known; these assignments including said applications, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said applications under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully these assignments.

Attorney Docket No: 14952.0391 / MIT Case 13588

| Inventor Signa Printed Name: | oture: Jo | -Celin | | Date: | 1/16/201 | 3 |
|---------------------------------|--|---------------------------------------|------------------------------------|---------------------------------------|---|----------------|
| Address: | Biochemicals Group / R& Mt.14-1, Nongseo-Dong, Gyeonggi-Do, South Kore | <u>Giheung-Gu, Y</u> | | hemical (| <u>Co., LTD., SAI</u> | <u>T,</u> |
| <u> </u> | Signature witnessed by: | WITNESS: Printed Name: Address: | -SAIT Gibeung | -4t-1 -Gu.4 | . , | - Tyeonggi_ |
| 2013 / 1 / Date | Signature witnessed by: | WITNESS: Printed Name: Address: | Jor SAIT Giheung- South h | gwon Mt. 14 Gu. You Cosen, 2 | Byun I-I Nongseo ngin-Si, Gy 446-712 | |

Attorney Docket No: 14952.0391 / MIT Case 13588 Inventor Signature: Date: 1/17/13 Printed Name: Ardemis Anoush Boghossian Address: 2745 Haley Road White Lake, MI 48383 Signature witnessed by: WITNESS: Cahn Date Printed Name! BWA 1020 € Del Mar #303 Address: 91106 Signature witnessed by: WITNESS:

Printed Name:

Address:

Date

Attorney Docket No: 14952.0391 / MIT Case 13588 Inventor Signature: Date: 12.01.2013 Printed Name: Rene Ortiz-Garcia Address: Schlossstrasse 1 Dresden, Germany 01067 Signature witnessed by: 18.91.2013 WITNESS: Date SCHMIDT Printed Name: Address: Signature witnessed by: 18.01.7013 WITNESS: Date Printed Name: Walter,

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Attorney Docket No: 14952.0391 / MIT Case 13588 Inventor Signature: _ Printed Name: Hyeonseok Yoon Address: Engineering Building 5A-343, Department of Polymer and Fiber System Engineering, Chonnam National University, Yongbong-ro 77 Gwangju, South Korea 500-757 Signature witnessed by: Jan, 16,2013 WITNESS: Ji Eun Lee Date Printed Name: 67-1 Unam-dong, Buk-gu, Address: Gwangju, South Korea 500-923 Signature witnessed by: WITNESS: Date

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Attorney Docket No: 14952.0391 / MIT Case 13588 Inventor Signature: Date: 81/16/2013 Printed Name: Jingqing Zhang 79 5th Street, Apt. 2 Address: Cambridge, MA 02141 Signature witnessed by: WITNESS: Printed Name: Address: Signature witnessed by: WITNESS: Date Printed Name: Address:

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