505281422 01/16/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT5328196

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| CHAD A. MIRKIN | 05/11/2009 |
| FENGWEI HUO | 04/27/2009 |
| ZIJIAN ZHENG | 04/27/2009 |
| GENGFENG ZHENG | 05/07/2009 |

RECEIVING PARTY DATA

| Name: | NORTHWESTERN UNIVERSITY |
|-----------------|-------------------------|
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| City: | EVANSTON |
| State/Country: | ILLINOIS |
| Postal Code: | 60208 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15159148 |

CORRESPONDENCE DATA

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|-------------------------|---------------------|--|
| NAME OF SUBMITTER: | PATRICK ROTHSTEIN | |
| SIGNATURE: | /Patrick Rothstein/ | |
| DATE SIGNED: | 01/16/2019 | |

Total Attachments: 3

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PATENT 505281422 REEL: 048033 FRAME: 0246

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PATENT REEL: 048033 FRAME: 0247

ASSIGNMENT

U.S. Serial No: 61/047,910 Filed: April 25, 2008 U.S. Serial No: 61/049,679 Filed: May 1, 2008

U.S. Serial No: 61/076,199 Filed: June 27, 2008

PCT Patent Application No: PCT/US09/41738 Filed: April 25, 2009

litle: Polymer Pen Lithography

For good and sufficient consideration, the receipt and sufficiency whereof are hereby acknowledged, the undersigned hereby assigns to NORTHWESTERN UNIVERSITY, 633 Clark Street, Evanston, Illinois 60208, its successors and assigns ("Assignee") the entire right, title and interest in the invention or improvements of the undersigned disclosed in an application for Letters Patent of the United States in said application and any and all other applications, both United States and foreign, which may be filed, either solely or jointly with others, on said invention or improvements, and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any reissue or extension thereof.

The undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks and the foreign counterparts thereof to issue said Letters Patents to Assignee.

The undersigned hereby authorizes and requests the attorneys of record in said application to insert in this assignment the execution date and/or filing date and social number of said application when officially known.

Each the undersigned warrants that such undersigned is the owner of the interest herein assigned, has the right to make this assignment and that there are no prior assignments, licenses, or other rights in the interest herein assigned.

The undersigned hereby agrees, upon the request and at the expense of Assignoc to execute any and all divisional, continuation, continuation-in-part and substitute applications for said invention or improvements, and any necessary oath or affidavit relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application, and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, that Assignee may deem necessary or expedient, and upon the request of Assignee, in the event of any application or Letters Patent assigned herein becoming involved in an interference or opposition proceeding, to cooperate to the best of the ability of the undersigned with Assignee to perform, upon request, any and all affirmative acts to obtain said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in Assignce whereby said Letters Patents will be held and enjoyed by Assignee to the full end of the term for which said Letters Patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made

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| WITNESS my hand this | 11 +4 | day of Mosey | 200 9 |
|--|--|--|------------------|
| State of Illing County of Capo V | S - | Chad A. Mirkin | |
| Notary Public in and for the County: person whose name is subscribed to instrument as their free and voluntary | the foregoing instrument, and | d acknowledged that they exec rposes therein expressed. | be the same |
| OFFICIAL SEAL SABINE STURM NOTAL VALUE SHATE GRALISHOR | 12/105/10 | Sellis 2 Notary Pub | Sturm lic |
| WITNESS my hand this State of STUDY County of COOK | ng f | day of April | , 200 9 . |
| On this Notary Public in and for the County as person whose name is subscribed to the instrument as their free and voluntary: WITNESS my hand and seal | e foregoing instrument, and : act and for the uses and purp | to me personally known to be acknowledged that they execu- oses therein expressed. | the same |
| My Commission Expires: | 12/05/10 | Solen Si Notary Public | term |
| OFFICIAL SEAL SABINE STURM NOTANY PUBLIC - STATE OF ELINOIS MY COMMISSION EXPRES: 1205/10 | | | |

| State of County of Circles 27th day of April 2009. |
|---|
| On this day of A Doll 2009, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that they executed said instrument as their free and voluntary act and for the uses and purposes therein expressed. WITNESS my hand and seal the same day and year last above given. |
| My Commission Expires: 12/05/10 Sculp Sturm Notary Public OFFICIAL SEAL SABINE STURM NOTARY PUBLIC - STATE OF ELLINOIS MY COMMISSION EXPIRES: 1205/10 |
| State of Jlling County of Work Gengfeng Zheng |
| On this day of Core, 2007, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that they executed said instrument as their free and voluntary act and for the uses and purposes therein expressed. WITNESS my hand and seal the same day and year last above given. |
| OFFICIAL SEAL SABINE STURM NOTARY PUBLIC - STATE OF ILLING'S IN COMMISSION EXPIRES: 12/05/10 |

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