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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5701598

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|------------------------------|---------------------------------------|
| <b>SUBMISSION TYPE:</b>      | NEW ASSIGNMENT                        |
| <b>NATURE OF CONVEYANCE:</b> | SECOND LIEN PATENT SECURITY AGREEMENT |

**CONVEYING PARTY DATA**

| Name                      | Execution Date |
|---------------------------|----------------|
| DIAMOND INNOVATIONS, INC. | 08/28/2019     |

**RECEIVING PARTY DATA**

|                        |                          |
|------------------------|--------------------------|
| <b>Name:</b>           | UBS AG, STAMFORD BRANCH  |
| <b>Street Address:</b> | 600 WASHINGTON BOULEVARD |
| <b>City:</b>           | STAMFORD                 |
| <b>State/Country:</b>  | CONNECTICUT              |
| <b>Postal Code:</b>    | 06901                    |

**PROPERTY NUMBERS Total: 124**

| Property Type  | Number   |
|----------------|----------|
| Patent Number: | 10287824 |
| Patent Number: | 10017390 |
| Patent Number: | 7001577  |
| Patent Number: | 8105692  |
| Patent Number: | 9382463  |
| Patent Number: | 8182562  |
| Patent Number: | 9982176  |
| Patent Number: | 9095914  |
| Patent Number: | 9840649  |
| Patent Number: | 9598907  |
| Patent Number: | 9682460  |
| Patent Number: | 8927101  |
| Patent Number: | 8651204  |
| Patent Number: | 6242351  |
| Patent Number: | 6258721  |
| Patent Number: | 6350191  |
| Patent Number: | 6260640  |
| Patent Number: | 6322891  |
| Patent Number: | 6319608  |
| Patent Number: | 6372002  |

PATENT

| <b>Property Type</b> | <b>Number</b> |
|----------------------|---------------|
| Patent Number:       | 6375446       |
| Patent Number:       | 6666753       |
| Patent Number:       | 6593391       |
| Patent Number:       | 6315652       |
| Patent Number:       | 6475254       |
| Patent Number:       | 6596040       |
| Patent Number:       | 7070635       |
| Patent Number:       | 6811610       |
| Patent Number:       | 6852414       |
| Patent Number:       | 6814775       |
| Patent Number:       | 7097551       |
| Patent Number:       | 8070556       |
| Patent Number:       | 7469569       |
| Patent Number:       | 7435276       |
| Patent Number:       | 8067323       |
| Patent Number:       | 8500834       |
| Patent Number:       | 8029338       |
| Patent Number:       | 7322776       |
| Patent Number:       | 7377477       |
| Patent Number:       | 7316279       |
| Patent Number:       | 7562858       |
| Patent Number:       | 8394729       |
| Patent Number:       | 7932199       |
| Patent Number:       | 8597387       |
| Patent Number:       | 8679206       |
| Patent Number:       | 8591613       |
| Patent Number:       | 9758708       |
| Patent Number:       | 8148282       |
| Patent Number:       | 8354353       |
| Patent Number:       | 9845417       |
| Patent Number:       | 8404010       |
| Patent Number:       | 8327958       |
| Patent Number:       | 9123856       |
| Patent Number:       | 9555519       |
| Patent Number:       | 9739096       |
| Patent Number:       | 8667866       |
| Patent Number:       | 9403137       |
| Patent Number:       | 9010463       |

| Property Type  | Number   |
|----------------|----------|
| Patent Number: | 8652226  |
| Patent Number: | 9381617  |
| Patent Number: | 9181135  |
| Patent Number: | 8968436  |
| Patent Number: | 9327385  |
| Patent Number: | 10047566 |
| Patent Number: | 9242215  |
| Patent Number: | 8939238  |
| Patent Number: | 8955209  |
| Patent Number: | 9303462  |
| Patent Number: | 9097075  |
| Patent Number: | 9034064  |
| Patent Number: | 9216493  |
| Patent Number: | 9108301  |
| Patent Number: | 9222350  |
| Patent Number: | 9138872  |
| Patent Number: | 9216492  |
| Patent Number: | 9089900  |
| Patent Number: | 9388328  |
| Patent Number: | 9383304  |
| Patent Number: | 9381483  |
| Patent Number: | 10046436 |
| Patent Number: | 9243968  |
| Patent Number: | 9920578  |
| Patent Number: | 9827611  |
| Patent Number: | 9815176  |
| Patent Number: | 10363624 |
| Patent Number: | 9476258  |
| Patent Number: | 9649748  |
| Patent Number: | 9598908  |
| Patent Number: | 10196314 |
| Patent Number: | 10167675 |
| Patent Number: | 10232493 |
| Patent Number: | 10137557 |
| Patent Number: | 10029316 |
| Patent Number: | 10337256 |
| Patent Number: | 10213835 |
| Patent Number: | 10166654 |

| Property Type       | Number   |
|---------------------|----------|
| Patent Number:      | 10105826 |
| Patent Number:      | D682325  |
| Patent Number:      | D682326  |
| Patent Number:      | 6994615  |
| Application Number: | 13705741 |
| Application Number: | 14582542 |
| Application Number: | 15424936 |
| Application Number: | 15435581 |
| Application Number: | 15591447 |
| Application Number: | 15437893 |
| Application Number: | 15514325 |
| Application Number: | 15460419 |
| Application Number: | 15510547 |
| Application Number: | 15514371 |
| Application Number: | 15514429 |
| Application Number: | 15540787 |
| Application Number: | 15639768 |
| Application Number: | 15546080 |
| Application Number: | 15701694 |
| Application Number: | 15571618 |
| Application Number: | 15544620 |
| Application Number: | 16129874 |
| Application Number: | 16167902 |
| Application Number: | 16084582 |
| Application Number: | 15948158 |
| Application Number: | 15793098 |
| Application Number: | 16201436 |
| Application Number: | 16292982 |

**CORRESPONDENCE DATA**

**Fax Number:** (650)838-5109

*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:** 650-838-3743

**Email:** jlik@shearman.com

**Correspondent Name:** SOPHIE ZANDER

**Address Line 1:** 599 LEXINGTON AVENUE

**Address Line 2:** SHEARMAN & STERLING LLP

**Address Line 4:** NEW YORK, NEW YORK 10022

|                                |                 |
|--------------------------------|-----------------|
| <b>ATTORNEY DOCKET NUMBER:</b> | 38178/13        |
| <b>NAME OF SUBMITTER:</b>      | SOPHIE ZANDER   |
| <b>SIGNATURE:</b>              | /SOPHIE ZANDER/ |
| <b>DATE SIGNED:</b>            | 09/04/2019      |

**Total Attachments: 13**

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GRANT OF  
SECOND LIEN SECURITY INTEREST IN PATENT RIGHTS

This GRANT OF SECOND LIEN SECURITY INTEREST IN PATENT RIGHTS (this "Agreement"), dated as of August 28, 2019, is made by DIAMOND INNOVATIONS, INC., a Delaware corporation (the "Grantor"), in favor of UBS AG, STAMFORD BRANCH, as collateral agent (in such capacity, the "Agent") for the benefit of the Secured Parties in connection with that certain Second Lien Credit Agreement, dated as of August 28, 2019 (as amended, restated, supplemented or otherwise modified from time to time, the "Credit Agreement"), among SNOWBIRD ACQUISITION VEHICLE, INC., a Delaware corporation ("Holdings"), HYPERION MATERIALS & TECHNOLOGIES, INC., a Delaware corporation (a "Borrower" and the "Borrower Representative"), the subsidiary borrowers from time to time parties thereto, the lending institutions from time to time parties thereto (each a "Lender" and, collectively, the "Lenders") and UBS AG, STAMFORD BRANCH, as administrative agent and as collateral agent (in such capacity, together with its successors and assigns, the "Collateral Agent") for the benefit of the Secured Parties.

WITNESSETH:

WHEREAS, pursuant to the Credit Agreement, the Lenders have severally agreed to make Loans to the Borrowers upon the terms and subject to the conditions set forth therein;

WHEREAS, in connection with the Credit Agreement, each Grantor and any Subsidiaries that become a party thereto, have executed and delivered a Second Lien Security Agreement, dated as of August 28, 2019 in favor of the Collateral Agent (together with all amendments, restatements, supplements and modifications, if any, from time to time thereafter made thereto, the "Security Agreement");

WHEREAS, pursuant to the Security Agreement, Grantor has granted to the Collateral Agent, for the benefit of the Secured Parties, a lien on and security interest in, all of its right, title and interest in, to and under certain Intellectual Property, including the Patents, that is not Excluded Property; and

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and in order to induce the Lenders to make loans to the Borrowers, each Grantor agrees, for the benefit of the Collateral Agent and the Secured Parties, as follows:

1. Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided or provided by reference in the Credit Agreement and the Security Agreement.

2. Grant of Security Interest. Each Grantor hereby grants a lien on and security interest in all of Grantor's right, title and interest in, to and under the Patents that are not Excluded Property (including, without limitation, those items listed on Schedule A hereto), including the right to receive all Proceeds therefrom (collectively, the "Collateral"), to the Collateral Agent for the benefit of the Secured Parties as collateral security for the prompt and complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) of the Obligations.

3. Purpose. This Agreement has been executed and delivered by each Grantor for the purpose of recording the grant of security interest herein with the United States Patent and Trademark Office. The security interest granted hereby has been granted to the Secured Parties in connection with the Security Agreement and is expressly subject to the terms and conditions thereof. The Security Agreement (and all rights and remedies of the Secured Parties thereunder) shall remain in full force and effect in accordance with its terms.

4. Acknowledgment. Each Grantor does hereby further acknowledge and affirm that the rights and remedies of the Secured Parties with respect to the security interest in the Collateral granted hereby are more fully set forth in the Credit Agreement and the Security Agreement, the terms and provisions of which (including the remedies provided for therein) are incorporated by reference herein as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the terms of the Security Agreement, the terms of the Security Agreement shall govern. In the event of any conflict between the terms of this Agreement and the terms of the Credit Agreement, the terms of the Credit Agreement shall govern.


5. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, but all of which together constitute one and the same original.

**6. GOVERNING LAW: THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

7. Intercreditor Agreements. Notwithstanding anything herein to the contrary, the liens and security interests granted to the Collateral Agent pursuant to this Agreement and the exercise of any right or remedy by the Collateral Agent hereunder, are subject to the provisions of any Intercreditor Agreement then in effect. In the event of any conflict between the terms of any Intercreditor Agreement then in effect and the terms of this Agreement, the terms of such Intercreditor Agreement shall govern and control. No right, power or remedy granted to the Collateral Agent hereunder shall be exercised by the Collateral Agent, and no direction shall be given by the Collateral Agent, in contravention of any such Intercreditor Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered by their respective officers thereunto duly authorized as of the day and year first above written.

DIAMOND INNOVATIONS, INC.,  
as the Grantor


By:   
Name: Rick Jones  
Title: President

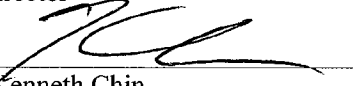
[Signature Page to Grant of Second Lien Security Interest in Patent Rights]

**PATENT**  
**REEL: 050272 FRAME: 0479**



UBS AG, STAMFORD BRANCH  
as the Collateral Agent

By:   
Name: Darlene Arias  
Title: Director

By:   
Name: Kenneth Chin  
Title: Director

[Signature Page to Grant of Second Lien Security Interest in Patent Rights]

**SCHEDULE A**

**U.S. Patent Registrations and Applications**

**Patent Registrations:**

| <b>OWNER</b>   | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>  |
|--|----------------------------|--------------------------|---|
| Baker Hughes Incorporated<br><br>Diamond Innovations, Inc.       | US 10287824 B2             | 2019-05-14               | Methods Of Forming Polycrystalline Diamond  |
| Baker Hughes, A GE Company, LLC<br><br>Diamond Innovations, Inc. | US 10017390 B2             | 2018-07-10               | Polycrystalline Diamond Bodies Incorporating Fractionated Distribution Of Diamond Particles Of Different Morphologies |
| Diamond Innovations Inc.   | US 7001577 B2              | 2006-02-21               | Low Oxygen Cubic Boron Nitride And Its Production   |
| Diamond Innovations Inc.   | US 8105692 B2              | 2012-01-31               | Process Equipment Wear Surfaces Of Extended Resistance And Methods For Their Manufacture                              |
| Diamond Innovations Inc.   | US 9382463 B2              | 2016-07-05               | Abrasive Particles Having A Unique Morphology   |
| Diamond Innovations Inc.   | US 8182562 B2              | 2012-05-22               | Slurries Containing Abrasive Grains Having A Unique Morphology  |
| Diamond Innovations Inc.   | US 9982176 B2              | 2018-05-29               | Abrasive Particles Having A Unique Morphology   |
| Diamond Innovations Inc.   | US 9095914 B2              | 2015-08-04               | Precision Wire Saw Including Surface Modified Diamond   |
| Diamond Innovations Inc.   | US 9840649 B2              | 2017-12-12               | Single Crystal CBN Featuring Micro-Fracturing During Grinding   |
| Diamond Innovations Inc.   | US 9598907 B2              | 2017-03-21               | Modification Of Diamond Feeds For Improving Polycrystalline Diamond Cutter  |
| Diamond Innovations, Inc   | US 9682460 B2              | 2017-06-20               | Induction Heating Aided Leaching Of Polycrystalline Diamond Compacts And A Process Thereof                            |
| Diamond  | US 8927101 B2              | 2015-01-06               | Abrasive Particles Having A   |

| <b>OWNER</b>              | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>  |
|---------------------------|----------------------------|--------------------------|---|
| Innovations, Inc          |                            |                          | Unique Morphology   |
| Diamond Innovations, Inc  | US 8651204 B2              | 2014-02-18               | Metal-Free Supported Polycrystalline Diamond And Method To Form   |
| Diamond Innovations, Inc. | US 10337256                | 2019-07-02               | Polycrystalline Diamond Cutters Having Non-Catalytic Material Addition And Methods Of Making The Same                         |
| Diamond Innovations, Inc. | US 6242351 B1              | 2001-06-05               | Diamond Slurry For Chemical-Mechanical Planarization Of Semiconductor Wafers  |
| Diamond Innovations, Inc. | US 6258721 B1              | 2001-07-10               | Diamond Slurry For Chemical-Mechanical Planarization Of Semiconductor Wafers  |
| Diamond Innovations, Inc. | US 6350191 B1              | 2002-02-26               | Surface Functionalized Diamond Crystals And Methods For Producing Same  |
| Diamond Innovations, Inc. | US 6260640 B1              | 2001-07-17               | Axisymmetric Cutting Element  |
| Diamond Innovations, Inc. | US 6322891 B1              | 2001-11-27               | Thermally-Diffused Boron Diamond And Its Production   |
| Diamond Innovations, Inc. | US 6319608 B1              | 2001-11-20               | Titanium Chromium Alloy Coated Diamond Crystals For Use In Saw Blade Segments And Method For Their Production                 |
| Diamond Innovations, Inc. | US 6372002 B1              | 2002-04-16               | Functionalized Diamond, Methods For Producing Same, Abrasive Composites And Abrasive Tools Comprising Functionalized Diamonds |
| Diamond Innovations, Inc. | US 6375446 B1              | 2002-04-23               | High Pressure Apparatus Having Transition Slope Binding Ring That Mitigates Tensile Stresses And Corresponding Method         |
| Diamond Innovations, Inc. | US 6666753 B2              | 2003-12-23               | Silver-Coated Abrasives, Tools Containing Silver-Coated Abrasives, And Applications Of These Tools                            |
| Diamond Innovations, Inc. | US 6593391 B2              | 2003-07-15               | Abrasive-Filled Thermoset Composition And Its Preparation, And Abrasive-Filled Articles And                                   |

| <b>OWNER</b>              | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>  |
|---------------------------|----------------------------|--------------------------|---|
|                           |                            |                          | Their Preparation   |
| Diamond Innovations, Inc. | US 6315652 B1              | 2001-11-13               | Abrasive Tool Inserts And Their Production  |
| Diamond Innovations, Inc. | US 6475254 B1              | 2002-11-05               | Functionally Graded Coatings For Abrasive Particles And Use Thereof In Vitreous Matrix Composites   |
| Diamond Innovations, Inc. | US 6596040 B2              | 2003-07-22               | Functionally Graded Coatings For Abrasive Particles And Use Thereof In Vitreous Matrix Composites   |
| Diamond Innovations, Inc. | US 7070635 B2              | 2006-07-04               | Self Sharpening Polycrystalline Diamond Compact With High Impact Resistance   |
| Diamond Innovations, Inc. | US 6811610 B2              | 2004-11-02               | Method Of Making Enhanced CVD Diamond   |
| Diamond Innovations, Inc. | US 6852414 B1              | 2005-02-08               | Self Sharpening Polycrystalline Diamond Compact With High Impact Resistance   |
| Diamond Innovations, Inc. | US 6814775 B2              | 2004-11-09               | Sintered Compact For Use In Machining Chemically Reactive Materials: Boron Nitride In Ceramic Binder; Abrasive Tools; Heating, Pressurization |
| Diamond Innovations, Inc. | US 7097551 B2              | 2006-08-29               | Cutting Tools With Two-Slope Profile  |
| Diamond Innovations, Inc. | US 8070556 B2              | 2011-12-06               | Grinding Wheel For Roll Grinding And Method Of Roll Grinding  |
| Diamond Innovations, Inc. | US 7469569 B2              | 2008-12-30               | Wire Drawing Die And Method Of Making   |
| Diamond Innovations, Inc. | US 7435276 B2              | 2008-10-14               | Abrasive Particles Having Coatings With Tortuous Surface Topography   |
| Diamond Innovations, Inc. | US 8067323 B2              | 2011-11-29               | Sintered Compact  |
| Diamond Innovations, Inc. | US 8500834 B2              | 2013-08-06               | Sintered Compact  |
| Diamond Innovations, Inc. | US 8029338 B2              | 2011-10-04               | Method Of Grinding a Ferrous Roll   |
| Diamond Innovations, Inc. | US 7322776 B2              | 2008-01-29               | Cutting Tool Inserts And Methods To Manufacture   |
| Diamond                   | US 7377477 B2              | 2008-05-27               | Product Forming Molds And   |

| <b>OWNER</b>              | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>  |
|---------------------------|----------------------------|--------------------------|---|
| Innovations, Inc.         |                            |                          | Methods To Manufacture Same   |
| Diamond Innovations, Inc. | US 7316279 B2              | 2008-01-08               | Polycrystalline Cutter With Multiple Cutting Edges  |
| Diamond Innovations, Inc. | US 7562858 B2              | 2009-07-21               | Wear And Texture Coatings For Components Used In Manufacturing Glass Light Bulbs                                    |
| Diamond Innovations, Inc. | US 8394729 B2              | 2013-03-12               | Increasing The Seebeck Coefficient Of Semiconductors By HPHT Sintering  |
| Diamond Innovations, Inc. | US 7932199 B2              | 2011-04-26               | Sintered Compact  |
| Diamond Innovations, Inc. | US 8597387 B2              | 2013-12-03               | Abrasive Compact With Improved Machinability  |
| Diamond Innovations, Inc. | US 8679206 B2              | 2014-03-25               | Graded Drilling Cutters   |
| Diamond Innovations, Inc. | US 8591613 B2              | 2013-11-26               | Abrasive Grains Having Unique Features  |
| Diamond Innovations, Inc. | US 9758708 B2              | 2017-09-12               | Abrasive Particles Having A Unique Morphology   |
| Diamond Innovations, Inc. | US 8148282 B2              | 2012-04-03               | Method Of Solid PCBN Sythesis   |
| Diamond Innovations, Inc. | US 8354353 B2              | 2013-01-15               | Cubic Boron Nitride Ceramic Composites And Methods Of Making Thereof  |
| Diamond Innovations, Inc. | US 9845417 B2              | 2017-12-19               | Abrasive Particles Having A Unique Morphology   |
| Diamond Innovations, Inc. | US 8404010 B2              | 2013-03-26               | Abrasive Compact With Improved Machinability  |
| Diamond Innovations, Inc. | US 8327958 B2              | 2012-12-11               | Abrasive Compact Of Superhard Material And Chromium And Cutting Element Including Same                              |
| Diamond Innovations, Inc. | US 9123856 B2              | 2015-09-01               | Affecting The Thermoelectric Figure Of Merit (ZT) And The Power Factor By High Pressure, High Temperature Sintering |
| Diamond Innovations, Inc. | US 9555519 B2              | 2017-01-31               | Incorporation Of Bulk Metal Foils To Increase Toughness Of Polycrystalline Diamond                                  |
| Diamond                   | US 9739096 B2              | 2017-08-22               | Cutter Assembly With At Least One Island And A Method Of  |

| <b>OWNER</b>              | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>   |
|---------------------------|----------------------------|--------------------------|--|
| Innovations, Inc.         |                            |                          | Manufacturing A Cutter Assembly  |
| Diamond Innovations, Inc. | US 8667866 B2              | 2014-03-11               | Machining Tool Blank And Method Of Forming   |
| Diamond Innovations, Inc. | US 9403137 B2              | 2016-08-02               | Polycrystalline Diamond Material With Extremely Fine Microstructures                               |
| Diamond Innovations, Inc. | US 9010463 B2              | 2015-04-21               | Multi-Axis Modulation Of Cutters   |
| Diamond Innovations, Inc. | US 8652226 B2              | 2014-02-18               | Abrasive Particles Having A Unique Morphology  |
| Diamond Innovations, Inc. | US 9381617 B2              | 2016-07-05               | Sintered Cubic Boron Nitride Cutting Tool  |
| Diamond Innovations, Inc. | US 9181135 B2              | 2015-11-10               | Composite Compacts Formed Of Ceramics And Low Volume Cubic Boron Nitride And Method Of Manufacture |
| Diamond Innovations, Inc. | US 8968436 B2              | 2015-03-03               | Increase Toughness Of Polycrystalline Diamond  |
| Diamond Innovations, Inc. | US 9327385 B2              | 2016-05-03               | Near-Net Cutting Tool Insert   |
| Diamond Innovations, Inc. | US 10047566 B2             | 2018-08-14               | Cutter Tool Insert Having Sensing Device   |
| Diamond Innovations, Inc. | US 9242215 B2              | 2016-01-26               | Infiltration Compositions For PCD By Using Coated Carbide Substrates                               |
| Diamond Innovations, Inc. | US 8939238 B2              | 2015-01-27               | High Quality PCD Compact   |
| Diamond Innovations, Inc. | US 8955209 B2              | 2015-02-17               | Method Of Joining Two Components To Ensure Axial And Angular Alignment Therebetween                |
| Diamond Innovations, Inc. | US 9303462 B2              | 2016-04-05               | Cutter Assembly With At Least One Island And A Method Of Manufacturing A Cutter Assembly           |
| Diamond Innovations, Inc. | US 9097075 B2              | 2015-08-04               | Cutting Element Structure With Sloped Superabrasive Layer  |
| Diamond Innovations, Inc. | US 9034064 B2              | 2015-05-19               | Methods For Improving Thermal Stability Of Silicon-Bonded Polycrystalline Diamond                  |
| Diamond                   | US 9216493 B2              | 2015-12-22               | Methods Of Improving Sintering Of  |

| <b>OWNER</b>              | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>   |
|---------------------------|----------------------------|--------------------------|--|
| Innovations, Inc.         |                            |                          | PCD Using Graphene   |
| Diamond Innovations, Inc. | US 9108301 B2              | 2015-08-18               | Delayed Diffusion Of Novel Species From The Back Side Of Carbide   |
| Diamond Innovations, Inc. | US 9222350 B2              | 2015-12-29               | Cutter Tool Insert Having Sensing Device   |
| Diamond Innovations, Inc. | US 9138872 B2              | 2015-09-22               | Polycrystalline Diamond Drill Blanks With Improved Carbide Interface Geometries  |
| Diamond Innovations, Inc. | US 9216492 B2              | 2015-12-22               | Functionalization Of Cubic Boron Nitride And Method Of Making The Same   |
| Diamond Innovations, Inc. | US 9089900 B2              | 2015-07-28               | Method Of Producing Holes And Countersinks In Polycrystalline Bodies   |
| Diamond Innovations, Inc. | US 9388328 B2              | 2016-07-12               | Lapping Slurry Having A Cationic Surfactant  |
| Diamond Innovations, Inc. | US 9383304 B2              | 2016-07-05               | Laboratory Assessment Of PDC Cutter Design Under Mixed-Mode Conditions   |
| Diamond Innovations, Inc. | US 9381483 B2              | 2016-07-05               | Polycrystalline Diamond Compacts Having Improved Wear Characteristics, And Method Of Making The Same                                       |
| Diamond Innovations, Inc. | US 10046436 B2             | 2018-08-14               | Delayed Diffusion Of Novel Species From The Back Side Of Carbide   |
| Diamond Innovations, Inc. | US 9243968 B2              | 2016-01-26               | Method For Measuring Pressures In A High Pressure Cell By Monitoring Continuous Changes In Physical Properties Of Geo2-Sio2 Solid Solution |
| Diamond Innovations, Inc. | US 9920578 B2              | 2018-03-20               | PDC Cutter With Chemical Addition For Enhanced Abrasion Resistance   |
| Diamond Innovations, Inc. | US 9827611 B2              | 2017-11-28               | Diamond Composite Cutting Tool Assembled With Tungsten Carbide   |
| Diamond Innovations, Inc. | US 9815176 B2              | 2017-11-14               | Polycrystalline Diamond Compact Fabricated From Surface Functionalized Diamond Particles   |

| <b>OWNER</b>   | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>   |
|--|----------------------------|--------------------------|--|
| Diamond Innovations, Inc.                                    | US 10363624 B2             | 2019-07-30               | Active Metal Braze Joint With Stress Relieving Layer   |
| Diamond Innovations, Inc.                                    | US 9476258 B2              | 2016-10-25               | PDC Cutter With Chemical Addition For Enhanced Abrasion Resistance                                     |
| Diamond Innovations, Inc.                                    | US 9649748 B2              | 2017-05-16               | Polycrystalline Diamond Compact With A Modified Substrate  |
| Diamond Innovations, Inc.                                    | US 9598908 B2              | 2017-03-21               | Multilayer Coating Process Protecting The Substrate Of Thermally Stable Polycrystalline Diamond Cutter |
| Diamond Innovations, Inc.                                    | US 10196314 B2             | 2019-02-05               | Method Of Preparing A Multimodal Cubic Boron Nitride Powder  |
| Diamond Innovations, Inc.                                    | US 10167675 B2             | 2019-01-01               | Polycrystalline Diamond Cutting Elements Having Lead Or Lead Alloy Additions                           |
| Diamond Innovations, Inc.                                    | US 10232493 B2             | 2019-03-19               | Polycrystalline Diamond Cutting Elements Having Non-Catalyst Material Additions                        |
| Diamond Innovations, Inc.                                    | US 10137557 B2             | 2018-11-27               | High-Density Polycrystalline Diamond   |
| Diamond Innovations, Inc.                                    | US 10029316 B2             | 2018-07-24               | Polycrystalline Diamond Drill Bit Having A Laser Cut Chip Breaker                                      |
| Diamond Innovations, Inc.                                    | US 10337256 B2             | 2019-07-02               | Polycrystalline Diamond Cutters Having Non-Catalytic Material Addition And Methods Of Making The Same  |
| Diamond Innovations, Inc.                                    | US 10213835 B2             | 2019-02-26               | Polycrystalline Diamond Compacts Having Parting Compound And Methods Of Making The Same                |
| Diamond Innovations, Inc.                                    | US 10166654 B2             | 2019-01-01               | Dense Packing Particle Size Distribution For PDC Cutters   |
| Diamond Innovations, Inc.                                    | US 10105826 B2             | 2018-10-23               | Methods Of Making Polycrystalline Diamond Bodies Having Annular Regions With Differing Characteristics |
| Diamond Innovations Inc.<br>Sandvik Intellectual Property Ab | US D682325 S1              | 2013-05-14               | Drill Bit  |



| <b>OWNER</b>   | <b>REGISTRATION NUMBER</b> | <b>REGISTRATION DATE</b> | <b>TITLE</b>   |
|--|----------------------------|--------------------------|--|
| Diamond Innovations Inc.<br>Sandvik Intellectual Property Ab | US D682326 S1              | 2013-05-14               | Drill Bit  |
| Diamond Innovations, Inc.                                    | 6994615                    | 2006-02-07               | CUTTING TOOLS WITH TWO-SLOPE PROFILE: BIBLIO DATA ONLY |

**Patent Applications:**

| <b>OWNER</b>   | <b>APPLICATION NUMBER</b> | <b>APPLICATION DATE</b> | <b>TITLE</b>  |
|--|---------------------------|-------------------------|---|
| Diamond Innovations, Inc.                                    | 13/705,741                | 2012-12-05              | Sintered Cubic Boron Nitride Cutting Tool   |
| Diamond Innovations, Inc.                                    | 14/582,542                | 2014-12-24              | PDC Cutter With Chemical Addition For Enhanced Abrasion Resistance  |
| Diamond Innovations, Inc.                                    | 15/424,936                | 2017-02-06              | Multilayer Coating Process Protecting The Substrate Of Thermally Stable Polycrystalline Diamond Cutter                |
| Diamond Innovations, Inc.<br>Baker Hughes, a GE Company, LLC | 15/435,581                | 2017-02-17              | Polycrystalline Diamond Compacts Having Interstitial Diamond Grains And Methods Of Making The Same                    |
| Diamond Innovations, Inc.                                    | 15/591,447                | 2017-05-10              | Interface Modification Of Polycrystalline Diamond Compact   |
| Diamond Innovations, Inc.                                    | 15/437,893                | 2017-02-21              | Polycrystalline Diamond Cutting Elements With Modified Catalyst Depleted Portions And Methods Of Making The Same      |
| Diamond Innovations, Inc.                                    | 15/514,325                | 2017-03-24              | Substrates For Polycrystalline Diamond Cutters With Unique Properties   |
| Diamond Innovations, Inc.                                    | 15/460,419                | 2017-03-16              | Polycrystalline Diamond Bodies Having Annular Regions With Differing Characteristics                                  |
| Diamond Innovations, Inc.                                    | 15/510,547                | 2017-03-10              | Polycrystalline Diamond Compact Cutter Having Surface Texturing   |
| Diamond Innovations, Inc.                                    | 15/514,371                | 2017-03-24              | Substrates For Polycrystalline Diamond Cutters With Unique Properties   |
| Diamond Innovations, Inc.                                    | 15/514,429                | 2017-03-24              | Cutters Comprising Polycrystalline Diamond Attached To A Hard Metal Carbide Substrate                                 |
| Diamond Innovations, Inc.                                    | 15/540,787                | 2017-06-29              | Polycrystalline Cubic Boron Nitride (PCBN) Comprising Microcrystalline Cubic Boron Nitride (CBN) And Method Of Making |

| <b>OWNER</b>              | <b>APPLICATION NUMBER</b> | <b>APPLICATION DATE</b> | <b>TITLE</b>  |
|---------------------------|---------------------------|-------------------------|---|
| Diamond Innovations, Inc. | 15/639,768                | 2017-06-30              | Abrasive Tool Having A Braze Joint With Insoluble Particles   |
| Diamond Innovations, Inc. | 15/546,080                | 2017-07-25              | Friable Ceramic-Bonded Diamond Composite Particles And Methods To Produce Same  |
| Diamond Innovations, Inc. | 15/701,694                | 2017-09-12              | Determining Temperature Inside A High Pressure Cell By Evaluating Solid Solution Composition                          |
| Diamond Innovations, Inc. | 15/571,618                | 2017-11-03              | Cutting Elements Having Accelerated Leaching Rates And Methods Of Making The Same                                     |
| Diamond Innovations, Inc. | 15/544,620                | 2017-07-19              | Polycrystalline Diamond Cutters Having Non-Catalytic Material Addition And Methods Of Making The Same                 |
| Diamond Innovations, Inc. | 16/129,874                | 2018-09-13              | Methods Of Making Polycrystalline Diamond Bodies Having Annular Regions With Differing Characteristics                |
| Diamond Innovations, Inc. | 16/167,902                | 2018-10-23              | Polycrystalline Diamond Cutting Elements Having Lead Or Lead Alloy Additions  |
| Diamond Innovations, Inc. | 16/084,582                | 2018-09-13              | Polycrystalline Diamond Bodies Having Annular Regions With Differing Characteristics                                  |
| Diamond Innovations, Inc. | 15/948,158                | 2018-04-09              | Polycrystalline Diamond Bodies Incorporating Fractionated Distribution Of Diamond Particles Of Different Morphologies |
| Diamond Innovations, Inc. | 15/793,098                | 2017-10-25              | PCBN Compact For Machining Of Ferrous Alloys  |
| Diamond Innovations, Inc. | 16/201,436                | 2018-11-27              | Dense Packing Particle Size Distribution For PDC Cutters  |
| Diamond Innovations, Inc. | 16/292,982                | 2019-03-05              | Polycrystalline Diamond Compacts And Earth-Boring Tools Including Such Compacts                                       |