**Exhibit 10.16**

**EXECUTIVE AGREEMENT**

This Executive Agreement (this “**Agreement**”) is dated as of December 16, 2015 and will be effective as of January 1, 2016 (the “**Effective Date**”), by and between Aspen Aerogels, Inc., a Delaware corporation (the “**Company**”), and Donald R. Young (the “**Executive**”).

**Recitals:**

**A.** The Company and the Executive previously entered into an executive agreement, dated as of August 5, 2011, as amended by the First Amendment thereto, dated as of October 23, 2012, which the Company and the Executive intend to replace in its entirety with this Agreement on the new terms and conditions contained herein.

**B.** The Company and the Executive desire to amend and restate the agreement referenced in (A) above in the form of this Agreement to provide for the terms and conditions of the Executive’s employment with the Company.

**C.** As an employee of the Company, the Executive has previously received and will continue to be given access to or come into contact with certain proprietary and/or confidential information of the Company.

**D.** As additional consideration for the rights and benefits granted to the Executive hereunder, the Company and the Executive desire to reaffirm the Executive’s obligations and covenants under the Employment, Confidentiality and Non-Competition Agreement (as defined below), by amending and restating such agreement in its entirety and by executing and delivering to the Company the Confidentiality and Non-Competition Agreement in the form attached hereto as Exhibit A.

**E.** The foregoing recitals shall be incorporated into and be a part of this Agreement.

**Agreement:**

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

**1. Definitions**. As used herein, the following terms shall have the following meanings.

“**Board**” means the Company’s board of directors.

“**Cause**” means: (i) willful misconduct, dishonesty, fraud or breach of fiduciary duty to the Company; (ii) deliberate disregard of the lawful rules or policies of the Company, failure to perform assigned duties, or breach of an employment or other agreement with the Company, which results in direct or indirect loss, damage or injury to the Company; (iii) the unauthorized disclosure of any trade secret or confidential information of the Company; (iv) the commission of an act which constitutes unfair competition with the Company or which induces any customer or supplier to breach a contract with the Company; (v) conduct substantially prejudicial to the business of the Company; or (vi) the indictment of Executive for any felony involving deceit, dishonesty or fraud, or any criminal conduct by the Executive that would reasonably be expected to result in material injury or reputational harm to the Company. For purposes hereof, whether or not the Executive has committed an act or omission of the type referred to in subparagraphs (i) through (vi) above will be determined by the Board in its reasonable, good faith discretion, based upon the facts known to the Board at the relevant time.

“**Change of Control**” shall mean the first to occur of any of the following events: (i) the consummation of a reorganization, merger, consolidation or other similar transaction of the Company with or into any other Person or Group (within the meaning of Section 13(d)(3) of the Securities Act of 1934, as amended) in which holders of the Company’s voting securities immediately prior to such reorganization, merger, consolidation or other similar transaction will not, directly or indirectly, continue to hold at least a majority of the outstanding voting securities of the Company; (ii) a sale, lease, exchange or other transfer (in one transaction or a related series of transactions) of all or substantially all of the Company’s assets; (iii) the acquisition by any Person or any Group of such quantity of the Company’s voting securities as causes such Person or Group (other than a Person or Group who is a shareholder of the Company on the Effective Date) to own beneficially, directly or indirectly, as of the time immediately after such transaction or series of transactions, 50% or more of the combined voting power of the voting securities of the Company other than as a result of (a) an acquisition of securities directly from the Company or (b) an acquisition of securities by the Company which by reducing the voting securities outstanding increases the proportionate voting power represented by the voting securities owned by any such Person or Group to 50% or more of the combined voting power of such voting securities; or (iv) a change in the composition of the Board within a two (2) year period such that a majority of the members of the Board are not Continuing Directors. As used herein, the term “**Continuing Directors**” shall mean as of any date of determination, any member of the Board who (a) was a member of the Board immediately after the Effective Date, or (b) was nominated for election or elected to the Board with the approval of, or whose election to the Board was ratified by, at least a majority of the Continuing Directors who were members of the Board at the time of that nomination or election; provided, however, that in no case shall (1) the public offering and sale of the Company’s common stock by its shareholders pursuant to a registered secondary offering or (2) the voluntary or involuntary bankruptcy of the Company constitute a Change of Control.

“**Employment, Confidentiality and Non-Competition Agreement**” means that certain Employment, Confidentiality and Non-Competition Agreement dated November 12, 2001 by and between the Executive and the Company.

“**Good Reason**” means: (i) any material breach by the Company of this Agreement that is not cured by the Company within thirty (30) days after written notice specifying in reasonable detail the nature of such material breach is provided to the Company by the Executive; (ii) a material reduction or material adverse change in the Executive’s current duties, responsibilities and authority, without his consent; (iii) the demand by the Company for the Executive to relocate or commute more than 40 miles from Northborough, Massachusetts without his consent; or (iv) any reduction by the Company in the Executive’s Base Salary or the Executive’s Performance Bonus Target without his consent, except for across-the-board compensation reductions based on the Company’s financial performance similarly affecting all or substantially all senior management employees of the Company. For purposes hereof, whether or not the Executive has Good Reason to terminate his employment by the Company pursuant to subparagraphs (i) through (iv) above will be determined by the Board in its reasonable, good faith discretion, based upon the facts known to the Board at the relevant time.

“**Permanent Disability**” means the Executive is unable to perform, by reason of physical or mental incapacity, his then duties or obligations to the Company, for a total period of one hundred eighty (180) days in any three hundred sixty (360) day period.

“**Person**” means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization or any other entity, including a governmental entity or any department, agency or political subdivision thereof.

**2. Employment**. The Company agrees to employ the Executive, and the Executive hereby accepts employment with the Company consistent with the Executive’s position and duties, upon the terms and conditions set forth in this Agreement.

**(a) Term**. The term of this Agreement shall commence on the Effective Date and continue until the earlier of (i) the third (3rd) anniversary of the Effective Date or (ii) the termination or this Agreement in accordance with the provisions of Section 3 (the “Employment Period”). The Executive’s employment with the Company shall be “at will,” meaning that the Executive’s employment may be terminated by the Company or the Executive at any time and for any reason.

**(b) Position and Duties**.

**(i)** During the Employment Period, the Executive shall serve as the Chief Executive Officer of the Company and shall have the duties, responsibilities and authority consistent with such position that are designated by the Board, subject to the direction and supervision of the Board.

**(ii)** The Executive shall devote his best efforts and his full business time and attention (except for permitted vacation periods and reasonable periods of illness or other incapacity) to the business and affairs of the Company. The Executive shall perform his duties and responsibilities to the best of his abilities in a diligent, trustworthy businesslike and efficient manner. Notwithstanding the foregoing, the Executive may, to the extent not otherwise prohibited by this Agreement, devote such amount of time as does not interfere or compete with the performance of the Executive’s duties under this Agreement to any one or more of the following activities: (i) engaging in charitable activities, including serving on the boards of directors of charitable organizations or (ii) serving on the board of directors of any other company with the prior written approval of the Board.

**(iii)** The Executive agrees to abide by the Company’s Code of Business Conduct and Ethics, Anti-Corruption Policy, Complaints Handling Policy, Insider Trading Policy, Disclosure Controls and Procedures Under the Securities Exchange Act of 1934, Form 8-K Disclosure Compliance Policy, Regulation FD Disclosure Policy, the Chief Executive Officer’s Delegation of Authority and the Short-Term Investment Policy, each as in effect from time to time and such other policies, rules and regulations as the Company may adopt from time to time.

**(c) Salary and Benefits**.

**(i)** During the Employment Period, the Executive’s base salary shall be $480,000 (such annual salary, as it may be adjusted upward by the Board in its discretion, being referred to as the “**Base Salary**”). The Base Salary shall be payable in regular installments in accordance with the Company’s general payroll practices, shall be subject to customary withholding and may be increased (but not decreased) at the discretion of the Board.

**(ii)** In addition to the Base Salary, the Executive shall be eligible to earn an annual cash incentive bonus of not less than 90% of the Executive’s then effective Base Salary (each, a “**Performance Bonus Target**”), subject in all respects to the terms and conditions established by the Board.

**(iii)** The Company will reimburse the Executive for all reasonable travel and other expenses incurred by the Executive in connection with the performance of his duties and obligations under this Agreement. The Executive shall comply with such reasonable limitations and reporting requirements with respect to expenses as may be established by the Company from time to time.

**(iv)** In addition, the Executive will be entitled to participate in all compensation or employee benefit plans or programs and receive all benefits and perquisites for which salaried employees of the Company generally are eligible under any plan or program now or established later by the Company on the same basis as similarly situated senior executives of the Company. The Executive will participate to the extent permissible under the terms and provisions or such plans or programs, in accordance with program provisions. Nothing in this Agreement will preclude the Company from amending or terminating any of the plans or programs applicable to salaried employees or senior executives of the Company as long as such amendment or termination is applicable to all salaried employees or senior executives, as the case may be, so long as such plans or programs are replaced with plans no less favorable, in the aggregate, than existing plans.

**(v)** The Executive shall also be eligible for grants of long-term incentive compensation, including, options to purchase the Company’s common stock, restricted stock and/or restricted stock units, all on terms and conditions established by the Board.

**(vi)** All compensation shall be subject to any forfeiture or clawback policy established by the Company generally for senior executives from time to time and any other such policy required by applicable law.

**3. Termination**. During the Employment Period, the Executive’s employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

**(a) Death**. The Executive’s employment hereunder shall terminate upon his death.

**(b) Disability**. The Company may terminate the Executive’s employment upon the Executive’s Permanent Disability. If any question shall arise as to whether the Executive has a Permanent Disability so as to be unable to perform the essential functions of the Executive’s then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive’s guardian has no reasonable objection as to whether the Executive is so disabled or how long such disability is expected to continue, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. If such question shall arise and the Executive shall fail to submit such certification, the Company’s determination of such issue shall be binding on the Executive. Nothing in this Section 3(b) shall be construed to waive the Executive’s rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 et seq. and the Americans with Disabilities Act, 42 U.S.C. §12101 et seq.

**(c) Termination by Company for Cause**. The Company may terminate the Executive’s employment hereunder for Cause.

**(d) Termination by Company Without Cause**. The Company may terminate the Executive’s employment hereunder at any time without Cause. Any termination by the Company of the Executive’s employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or Permanent Disability of the Executive under Section 3(a) or (b) shall be deemed a termination without Cause.

**(e) Termination by the Executive**. The Executive may terminate his employment hereunder at any time for any reason, including but not limited to Good Reason. For purposes of this Agreement, “Good Reason” shall mean that the Executive has complied with the “Good Reason Process” (hereinafter defined) following the occurrence of any purported Good Reason event without the Executive’s express written consent. “**Good Reason Process**” shall mean that (i) the Executive reasonably determines in good faith that a “Good Reason” condition has occurred; (ii) the Executive notifies the Company in writing of the first occurrence of the Good Reason condition within sixty (60) days of the first occurrence of such condition; (iii) the Executive cooperates in good faith with the Company’s efforts, for a period not less than thirty (30) days following such notice (the “**Cure Period**”) to remedy the condition; (iv) notwithstanding such efforts, the Good Reason condition continues to exist; and (v) the Executive terminates his employment within sixty (60) days after the end of the Cure Period. If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred.

**(f) Notice of Termination**. Except for termination as specified in Section 3(a), any termination of the Executive’s employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a “Notice of Termination” shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

**(g) Date of Termination**. **“Date of Termination”** shall mean: (i) if the Executive’s employment is terminated by his death, the date of his death; (ii) if the Executive’s employment is terminated on account of Permanent Disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive’s employment is terminated by the Company under Section 3(d), the date on which a Notice of Termination is given; (iv) if the Executive’s employment is terminated by the Executive under Section 3(e) without Good Reason, thirty (30) days after the date on which a Notice of Termination is given, and (v) if the Executive’s employment is terminated by the Executive under Section 3(e) with Good Reason, the date on which a Notice of Termination is given after the end of the Cure Period. Notwithstanding the foregoing, in the event that either party gives a Notice of Termination, the Company may unilaterally accelerate the Date of Termination.

**4. Compensation on Termination**.

**(a) Termination Generally**. If the Executive’s employment with the Company is terminated for any reason, the Company shall pay or provide to the Executive (or to his authorized representative or estate) (i) any Base Salary earned through the Date of Termination, unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement) and, to the extent required by law, unused vacation that accrued through the Date of Termination, such amounts to be paid no more than thirty (30) days after the Executive’s Date of Termination; and (ii) any vested benefits the Executive may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans (collectively, the “**Accrued Benefits**”).

**(b) Termination by the Company Without Cause or by the Executive with Good Reason**. During the Employment Period, if the Executive’s employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates his employment for Good Reason as provided in Section 3(e), then the Company shall pay the Executive his Accrued Benefits. In addition, subject to the Executive signing a separation agreement containing, among other provisions, a general release of claims in favor of the Company and related persons and entities, confidentiality, return of property and non-disparagement, in a form and manner satisfactory to the Company (the “**Separation Agreement and Release**”) and the Separation Agreement and Release becoming fully effective, all within fifty-two (52) days of the Date of Termination:

**(i)** the Company shall pay the Executive an amount equal to the sum of (a) two hundred percent (200%) of the Executive’s then effective Base Salary and (b) a pro rata portion of the Executive’s then effective Performance Bonus Target (calculated by dividing the number of full and partial months of the current fiscal year in which the Executive is employed through the Date of Termination by 12, and multiplying this fraction by the Executive’s then effective Performance Bonus Target) (the “**Severance Amount**”).

**(ii)** the Company shall pay the Executive any accrued but unpaid Performance Bonus for the prior fiscal year then owed or fully earned by the Executive in accordance with Section 2(c)(ii) above;

**(iii)** the COBRA eligible health care insurance benefits (e.g., health, dental) being provided by the Company to the Executive on the Date of Termination shall continue in place at the same cost to the Executive as applied to “active” participants on the Date of Termination for a period equal to the lesser of (i) the COBRA Benefit Period or (ii) twenty-four (24) months. The “COBRA Benefit Period” means the period of time after such termination during which COBRA benefits are available to the Executive as of the Date of Termination as set forth in the Company’s health care plan. The Executive shall be responsible for applying for the COBRA eligible health care insurance benefit, paying for the same and submitting evidence of such premium costs to the Company for reimbursement during the COBRA Benefit Period. The Company shall reimburse the Executive for the employer’s portion of such premiums (as applicable to the active rate) within 15 days of receipt of evidence of the payment of the premium costs to the Company. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that such reimbursement of the premiums would result in a violation of the nondiscrimination rules of Section 105(h)(2) of the Internal Revenue Code of 1986, as amended (the “**Code**”) or any statute or regulation of similar effect (including but not limited to the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of reimbursing the premiums, the Company, in its sole discretion, may elect to instead pay the Executive on the first day of each month of such period, a fully taxable cash payment equal to the premiums for that month, subject to applicable tax withholdings (such amount, the “**Special Severance Payment**”), for the remainder of such period. The Executive may, but is not obligated to, use such Special Severance Payment toward the cost of premiums;

**(iv)** if the Executive wishes, the Company will pay for an outplacement service (to be selected by the Company) for services rendered in assisting the Executive in locating another job, for a period of six (6) months following the Date of Termination or until the Executive begins working for another employer, whichever occurs first. These payments are contingent upon the Executive’s cooperation with the outplacement service and upon active efforts by the Executive to locate another position;

**(v)** notwithstanding anything to the contrary in any applicable option agreement or stock-based award agreement outstanding as of December 1, 2015, (a) the vesting of such number of stock options and other stock-based awards outstanding and held by the Executive as would have vested in the three (3) months immediately following the Date of Termination had the Executive continued his employment for such three (3) month period shall immediately accelerate and become vested and exercisable as of the Date of Termination and (b) subject to any permitted action by the Board upon a Change of Control or other merger, sale, dissolution or liquidation of the Company under Company’s applicable equity plan to terminate the stock options or other stock-based awards, any such vested stock option shall be exercisable for not less than one (1) year from the Date of Termination; and

**(vi)** the amounts payable under this Section 4(b) shall be paid out in substantially equal installments in accordance with the Company’s payroll practice over twenty-four (24) months commencing within sixty (60) days after the Date of Termination; provided, however, that if the 60-day period begins in one (1) calendar year and ends in a second calendar year, the Severance Amount shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2).

**(c) Rights to Severance**. The receipt of any severance payments or benefits pursuant to Section 4 shall be subject to the Executive not violating any of the provisions set forth in the Confidentiality and Non-Competition Agreement. In the event the Executive breaches any of the provisions set forth in the Confidentiality and Non-Competition Agreement, in addition to all other legal and equitable remedies, the Company shall have the right to terminate or suspend all continuing payments and benefits to which the Executive may otherwise be entitled pursuant to Section 4 without affecting the Executive’s release or the Executive’s obligations under the Separation Agreement and Release.

**(d) Other Termination Events**. The Executive hereby agrees that no severance compensation shall be payable upon termination of the Executive’s employment with the Company (i) by the Company with Cause; (ii) by the Executive without Good Reason; or (iii) as a result of the Executive’s death or Permanent Disability, and the Executive hereby waives any claim for severance compensation except as set forth in Section 4(b).

**5. Change of Control**. The provisions of this Section 5 shall apply in lieu of, and expressly supersede, other than with respect to the requirement for the execution and delivery of a Separation Agreement and Release, the provisions of Section 4(b) regarding severance pay and benefits upon a termination of employment by the Company without Cause or by the Executive for Good Reason, if such termination of employment occurs within twenty-four (24) months after the occurrence of the first event constituting a Change of Control. This Section 5 shall terminate and be of no force or effect beginning twenty-four (24) months after the occurrence of a Change of Control.

**(a) Change of Control Payment**. During the Employment Period, if within twenty-four (24) months after a Change of Control, the Executive’s employment is terminated by the Company without Cause or the Executive terminates his employment for Good Reason, then the Company shall pay the Executive his Accrued Benefits. In addition, subject to the signing of the Separation Agreement and Release by the Executive and the Separation Agreement and Release becoming irrevocable, all within sixty (60) days after the Date of Termination:

**(i)** the Company shall pay the Executive an amount equal to two hundred percent 200%) of the sum of the Executive’s then effective Base Salary and the Executive’s then effective Performance Bonus Target;

**(ii)** the Company shall pay the Executive any accrued but unpaid Performance Bonus for the prior fiscal year then owed or fully earned by the Executive in accordance with Section 2(c)(ii) above;

**(iii)** notwithstanding anything to the contrary in any applicable option agreement or stock-based award agreement outstanding as of December 1, 2015, (a) the vesting of all stock options and other stock-based awards outstanding and held by the Executive shall immediately accelerate and become fully vested and exercisable as of the Date of Termination, and subject to any permitted action by the Board upon a Change of Control under the Company’s applicable equity plan to terminate the stock options or other stock-based awards upon a Change of Control, any such vested stock option shall be exercisable for not less than one (1) year from the Date of Termination, and (b) to the extent any such stock options and other stock-based awards are not assumed by the Company’s successor in such Change of Control, the vesting of all stock options and other stock-based awards outstanding and held by the Executive as of the Change of Control shall immediately accelerate and become fully vested and exercisable and may be terminated by the Company in connection with the Change of Control.

**(iv)** the COBRA eligible health care insurance benefits (e.g., health, dental) being provided by the Company to the Executive on the Date of Termination shall continue in place at the same cost to the Executive as applied to “active” participants on the Date of Termination for a period equal to the lesser of (i) the COBRA Benefit Period or (ii) twenty-four (24) months. The “COBRA Benefit Period” means the period of time after such termination during which COBRA benefits are available to the Executive as of the Date of Termination as set forth in the Company’s health care plan. The Executive shall be responsible for applying for the COBRA eligible health care insurance benefit, paying for the same and submitting evidence of such premium costs to the Company for reimbursement during the COBRA Benefit Period. The Company shall reimburse the Executive for the employer’s portion of such premiums (as applicable to the active rate) within 15 days of receipt of evidence of the payment of the premium costs to the Company. Notwithstanding the foregoing, if the Company determines, in its sole discretion, that such reimbursement of the premiums would result in a violation of the nondiscrimination rules of Section 105(h)(2) of the Code or any statute or regulation of similar effect (including but not limited to the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of reimbursing the premiums, the Company, in its sole discretion, may elect to instead pay the Executive on the first day of each month of such period the Special Severance Payment, for the remainder of such period. The Executive may, but is not obligated to, use such Special Severance Payment toward the cost of premiums;

**(v)** if the Executive wishes, the Company will pay for an outplacement service (to be selected by the Company) for services rendered in assisting the Executive in locating another job, for a period of six (6) months following the Date of Termination or until the Executive begins working for another employer, whichever occurs first. These payments are contingent upon the Executive’s cooperation with the outplacement service and upon active efforts by the Executive to locate another position; and

**(vi)** The amounts payable under this Section 5(a) shall be paid out in substantially equal installments in accordance with the Company’s payroll practice over twenty-four (24) months commencing within sixty (60) days after the Date of Termination; provided, however, that if the 60-day period begins in one (1) calendar year and ends in a second calendar year, such payment shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2).

**(b) Continued Compliance**. The receipt of any severance payments or benefits pursuant to Section 5 shall be subject to the Executive not violating any of the provisions set forth in the Confidentiality and Non-Competition Agreement. In the event the Executive breaches any of the provisions set forth in the Confidentiality and Non-Competition Agreement, in addition to all other legal and equitable remedies, the Company shall have the right to terminate or suspend all continuing payments and benefits to which the Executive may otherwise be entitled pursuant to Section 5 without affecting the Executive’s release or the Executive’s obligations under the Separation Agreement and Release.

**(c) Other Termination Events**. The Executive hereby agrees that no severance compensation shall be payable upon termination of the Executive’s employment with the Company (i) by the Company with Cause; (ii) by the Executive without Good Reason; or (iii) as a result of the Executive’s death or Permanent Disability, and the Executive hereby waives any claim for severance compensation except as set forth in Section 5(a).

**(d) Parachute Payments**. If Independent Tax Counsel (as that term is defined below) determines that the aggregate payments and benefits provided or to be provided to the Executive pursuant to this Agreement, and any other payments and benefits provided or to be provided to the Executive from the Company or any of its subsidiaries or other affiliates or any successors thereto constitute “parachute payments” as defined in Section 280G of the Code (“**Parachute Payments**”) that would be subject to the excise tax imposed by Section 4999 of the Code (the “**Excise Tax**”), then, except as otherwise provided in the next sentence, such Parachute Payments shall be reduced to the extent the Independent Tax Counsel shall determine is necessary (but not below zero) so that no portion thereof shall be subject to the Excise Tax. If Independent Tax Counsel determines that the Executive would receive in the aggregate greater payments and benefits on an after tax basis if the Parachute Payments were not reduced pursuant to this Section 5(d), then no such reduction shall be made. The determination of which payments or benefits shall be reduced to avoid the Excise Tax shall be made by the Independent Tax Counsel, provided that the Independent Tax Counsel shall reduce or eliminate, as the case may be, payments or benefits in the following order (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits. To the extent any payment is to be made over time (e.g., in installments, etc.), then the payments shall be reduced in reverse chronological order. The determination of the Independent Tax Counsel under this Section 5(d) shall be final and binding on all parties hereto. For purposes of this Section 5(d), “**Independent Tax Counsel**” shall mean a lawyer, a certified public accountant with a nationally recognized accounting firm, or a compensation consultant with a nationally recognized actuarial and benefits consulting firm with expertise in the area of executive compensation tax law, who shall be selected by the Board, and whose fees and disbursements shall be paid by the Company.

**6. Tax and Insurance**.

**(a) Insurance**. In no event shall the termination of the Executive’s employment by the Company or any such termination by the Executive pursuant to this Agreement release any claim by the Executive for indemnification that he is otherwise entitled to under any director or officer’s insurance policy or any articles, bylaws or other foundation documents of the Company. Without limiting the foregoing, the Company shall provide Executive with reasonable director’s and officer’s insurance coverage that is at least as favorable as the coverage in existence on the date of this Agreement (the “**Existing D&O Coverage**”); provided, however, that in no event shall the Company be obligated to maintain director’s and officer’s insurance coverage to the extent that premiums thereunder exceed 200% of the premiums payable by the Company under the Existing D&O Coverage on the date hereof (the “**Threshold**”); provided, further, that to the extent such premiums exceed the foregoing Threshold, the Company shall obtain director’s and officer’s insurance coverage on terms as similar as reasonably practicable to the terms of the Existing D&O Coverage without exceeding the Threshold. Such insurance coverage shall continue in effect during the Employment Period and after the Employment Period ends for a period of six (6) years thereafter. The cost of such coverage shall be paid by the Company. Notwithstanding anything to the contrary in this Agreement, upon the occurrence of a Change of Control, the obligations set forth in this section shall terminate, provided that the Company shall (x) secure “tail insurance” with respect to the Existing D&O Insurance on reasonable terms and conditions of coverage, and (y) require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company to honor any indemnification obligations that the Executive is otherwise entitled to under any articles, bylaws or other foundation documents of the Company in the same manner as the Company’s directors and officers immediately prior to such Change of Control.

**(b) 409A**.

**(i)** Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive’s separation from service within the meaning of Section 409A of the Code, the Company determines that the Executive is a “specified employee” within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement on account of the Executive’s separation from service would be considered deferred compensation otherwise subject to the twenty percent (20%) additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six (6) months and one (1) day after the Executive’s separation from service, or (B) the Executive’s death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule.

**(ii)** All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one (1) taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

**(iii)** To the extent that any payment or benefit described in this Agreement constitutes “non-qualified deferred compensation” under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive’s termination of employment, then such payments or benefits shall be payable only upon the Executive’s “separation from service.” The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

**(iv)** The parties intend that this Agreement shall be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with Section 409A of the Code. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

**(v)** The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

**7. Representations and Warranties of the Executive**. Executive hereby represents and warrants to the Company that:

**(a) The Executive**:

**(i)** has not been convicted within the last five (5) years of any felony or misdemeanor in connection with the offer, purchase, or sale of any security or any felony involving fraud or deceit, including, but not limited to, forgery, embezzlement, obtaining money under false pretenses, larceny, or conspiracy to defraud;

**(ii)** is not currently subject to any state administrative enforcement order or judgement entered by a state securities administrator within the last five (5) years and is not subject to any state’s administrative enforcement order or judgement in which fraud or deceit (including, but not limited to, making untrue statements of material facts and omitting to state material facts) was found in which the order or judgement was entered within the last five (5) years; and

**(iii)** legally authorized to work in the United States of America.

**(b)** This Agreement constitutes the legal, valid and binding obligations of the Executive, enforceable in accordance with its terms, and execution, delivery and performance of this Agreement by the Executive does not and will not conflict with, violate or cause a breach of any agreement, contract or instrument to which the Executive is a party or any judgement, order or decree to which the Executive is subject.

**8. Representations and Warranties of the Company**. The Company hereby represents and warrants to the Executive that:

**(a)** The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. The Company has all requisite corporate power and authority to carry out the transactions contemplated by this Agreement.

**(b)** The execution, delivery and performance of this Agreement has been duly authorized by the Company. This Agreement constitutes a valid and binding obligation of the Company, enforceable in accordance with its terms. The execution and delivery by the Company of this Agreement, and the fulfillment of and compliance with the respective terms hereof by the Company, do not and shall not (i) conflict with or result in a breach of the terms, (ii) constitute a default under, (iii) result in the creation of any lien, security interest, charge or encumbrance upon the Company’s capital stock or assets pursuant to, (iv) give any third party the right to modify, terminate or accelerate any obligation under, (v) result in a violation of, or (vi) require any authorization, consent, approval, exemption or other action by or notice to any court or administrative or governmental body pursuant to, the charter or bylaws of the Company, or any law, statute, rule or regulation to which the Company is subject, or any agreement, instrument, order judgement or decree to which the Company is subject.

**9. Confidentiality, Non-Competition and Non-Solicitation**. The Executive hereby reaffirms, confirms and approves the Confidentiality and Non-Competition Agreement as a binding obligation of the Executive, enforceable in accordance with its terms. The Executive acknowledges and agrees that any Base Salary and/or Performance Bonus paid to the Executive pursuant to this Agreement shall serve as additional consideration for the Executive’s obligations under the Confidentiality and Non-Competition Agreement.

**10. Notices**. All notices, demands or other communications to be given or delivered under or by reason of the provisions of this Agreement will be in writing and will be deemed to have been given when delivered personally, mailed by certified or registered mail, return receipt requested and postage prepaid, or sent via a nationally recognized overnight courier, or sent via facsimile to the recipient with a confirmation of receipt and accompanied by a certified or registered mailing. Such notices, demands and other communications will be sent to the address indicated below:

To the Company:

Aspen Aerogels, Inc.

30 Forbes Road

Northborough, MA 01532

Telephone:    (508) 691-1111

Facsimile:     (508) 691-1200

Attention:      Board of Directors

with copies (which shall not constitute notice) to:

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

One Financial Center

Boston, MA 02111

Telephone:    (617) 348-3013

Facsimile:     (617) 542-2241

Attention:      Sahir Surmeli

To the Executive:

Address specified on signature page

or to such other address or to the attention of such other person as the recipient party has specified by prior written notice to the sending party.

**11. Miscellaneous**.

**(a) Severability**. Whenever possible, each provision of this Agreement will he interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provision had never been contained herein.

**(b) Complete Agreement**. This Agreement and the agreements referred to herein (including, without limitation, the Confidentiality and Non-Competition Agreement) embody the complete agreement and understanding among the parties and supersede and preempt any prior understandings, agreements or representations by or among the parties, written or oral, which may have related to the subject matter hereof. This Agreement supersedes and terminates that certain Executive Agreement dated , dated as of August 5, 2011, as amended by the First Amendment thereto, dated as of October 23, 2012, by and between the Executive and the Company.

**(c) Waiver of Jury trial**. **The parties to this Agreement each hereby waives, to the fullest extent permitted by law, any right to trial by jury of any claim, demand, action, or cause of action (i) arising under this Agreement or (ii) in any way connected with or related or incidental to the dealings of the parties hereto in respect of this Agreement or any of the transactions related hereto, in each case whether now existing or hereafter arising, and whether in contract, tort, equity, or otherwise. The parties to this Agreement each hereby agrees and consents that any such claim, demand, action, or cause of action shall be decided by court trial without a jury and that the parties to this Agreement may file an original counterpart or a copy of this Agreement with any court as written evidence of the consent of the parties hereto to the waiver of their right to trial by jury.**

**(d) Counterparts; Facsimile Transmission**. This Agreement may be executed simultaneously in two or more counterparts, any one of which need not contain the signatures of more than one party, but all such counterparts taken together will constitute one and the same Agreement. This Agreement may also he executed and delivered by facsimile transmission.

**(e) Successors and Assigns**. The provisions hereof shall inure to the benefit of, and be binding upon and assignable to, successors of the Company by way of merger, consolidation or sale. The Executive may not assign or delegate to any third person the Executive’s obligations under this Agreement. The rights and benefits of the Executive under this Agreement are personal to him and no such right or benefit shall be subject to voluntary or involuntary alienation, assignment or transfer. The Company shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would have been required to perform it if no such succession had taken place. As used in this Agreement, “the Company” shall mean both the Company as defined above and any such successor that assumes and agrees to perform this Agreement, by operation of law or otherwise.

**(f) Governing Law**. **All issues concerning this Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, without giving effect to any choice of law or conflict of law provision or rule (whether of the Commonwealth of Massachusetts or any other jurisdiction) that would cause the application of the law of any jurisdiction other than the Commonwealth of Massachusetts.**

**(g) Remedies**. The parties hereto agree and acknowledge that money damages may not be an adequate remedy for any breach of the provisions of the Agreement and that any party may in its sole discretion apply to any court of law or equity of competent jurisdiction (without posting any bond or deposit) for specific performance and/or injunctive or other relief in order to enforce or prevent any violations of the provisions of this Agreement.

**(h) Amendment and Waiver**. The provisions of this Agreement may be amended and waived only with the prior written consent of the Company and the Executive.

**(i) Certain Expenses**. The Company agrees to pay, as incurred, to the fullest extent permitted by law, or indemnify the Executive if such payment is not legally permitted, for all legal fees and expenses that the Executive may in good faith incur as a result of any contest by the Company, the Executive or others of the validity or enforceability of or liability under, or otherwise involving, any provision of this Agreement; provided, however, that the Executive shall reimburse the Company for all such payments made by the Company in connection with a contest by the Company if a court of competent jurisdiction or an arbitrator shall find that the Executive did not act in good faith in connection with such contest.

**(j) Withholding**. All payments made by the Company to the Executive under this Agreement shall be net of any tax or other amounts required to be withheld by the Company under applicable law.

**(k) Litigation and Regulatory Cooperation**. During and after the Executive’s employment, the Executive shall cooperate fully with the Company in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company. The Executive’s full cooperation in connection with such claims or actions shall include, but not be limited to, being available to meet with counsel to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times. During and after the Executive’s employment, the Executive also shall cooperate fully with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive’s performance of obligations pursuant to this Section 11(k).

**(l) Survival**. The provisions of Sections 1, 2, 4, 5, 6, 9, 10 and 11 of this Agreement shall survive any termination of this Agreement in accordance with the terms of such sections.

**[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]**

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

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|  |  |  |
| **THE COMPANY:** | | |
|  | | |
| **ASPEN AEROGELS, INC.** | | |
|  |  | |
| By: |  | /s/ John Fairbanks |
|  |  | Name: John Fairbanks |
|  |  | Title: Chief Financial Officer |
|  | | |
| **THE EXECUTIVE:** | | |
|  |  | |
| By: |  | /s/ Donald R. Young |
|  |  | Name: Donald R. Young |
|  | | |
| Address: [x] | | |

**EXHIBIT A:**

**CONFIDENTIALITY**

**AND NON-COMPETITION AGREEMENT**

Exhibit A