**EXHIBIT 10.1**

**EMPLOYEE AGREEMENT**

THIS EMPLOYEE AGREEMENT made as of January 13, 2010, by and between Lightwave Logic, Inc., a Nevada corporation (the “**Company**”), whose principal place of business is at 121 Continental Drive, Suite 110, Newark, Delaware 19713; and Philips W. Smith (“**Employee**”), who resides at 5636 E. Mockingbird Lane, Paradise Valley Arizona 85253.

**WHEREAS**, the Company wishes to procure the services of Employee under the terms and conditions set forth and Employee wishes to be employed on these terms and conditions.

**WHEREAS**, the parties to this Employee Agreement wish to enter into a written expression of their relationship as Employer and Employee.

**THEREFORE**, in consideration of the agreements contained in this Employee Agreement, the parties, intending to be legally bound, agree as follows:

**ARTICLE 1**

**Employment**

1.1.

Employment. The Company agrees to employ Employee, and Employee accepts employment with the Company, on and subject to the terms and conditions set forth in this Employee Agreement.

1.2.

Term.

Subject to the provisions for termination as provided in Article 9 of this Employee Agreement, the term of this agreement shall begin on January 13, 2010 and shall terminate 36 months thereafter.

**ARTICLE 2**

**Duties**

2.1.

Position and Duties. The Company agrees to employ Employee to act as its full-time, non-executive Chair of the Board of Directors. Employee shall be responsible for performing the following duties: (i) chair the board of directors of the Company; (ii) provide support and advice to the CEO and other executive officers; (iii) serve as the Company’s representative and spokesperson to the business and financial community; and (iv) perform such other duties that may be delegated to him by the CEO and/or the board of directors commensurate with Employee’s position. Employee agrees that he will serve the Company faithfully and to the best of his ability during the term of employment, under the direction of the chief executive officer and the board of directors of the Company. The Company and Employee may jointly from time to time to change the nature of Employee’s duties and job title.

2.2.

Time Devoted to Work.  Employee agrees that he will devote all of the necessary business time, attention, and energies, as well as Employee’s best talents and abilities to the business of the Company in accordance with the Company’s instructions and directions.

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Employee may engage in other business activities unrelated to the Company during the term of this Employee Agreement so long as such other business activities do not interfere with the terms and conditions of this Employee Agreement.

**ARTICLE 3**

**Place of Employment**

3.1.

Place of Employment.   Employee shall perform his duties under this Employee Agreement at 5636 E. Mockingbird Lane, Paradise Valley Arizona 85253.

**ARTICLE 4**

**Compensation of Employee**

4.1.

Base Compensation.  For all services rendered by Employee under this Employee Agreement, the Company agrees to compensate Employee as follows:  Employee will be issued a warrant, of even date hereof, to purchase up to 650,000 shares of the Company’s common stock at an exercise price of $1.51 per share for a period of up to five years. The warrant will vest pursuant to the terms of the warrant agreement as follows: 162,500 warrants vest on January 13, 2009, and the remaining warrants vest in three (3) equal annual installments of 162,500 warrants per year commencing on January 13, 2010.  No additional compensation will be paid to Employee for him serving as a member of the Company’s board of directors.

4.2.

 Reimbursement for Business Expenses.  Subject to the approval of the Company, the Company shall promptly pay or reimburse Employee for all reasonable business expenses incurred by Employee in performing Employee’s duties and obligations under this Employee Agreement, but only if Employee properly accounts for expenses in accordance with the Company’s policies.

**ARTICLE 5**

**Vacations and Other Paid Absences**

5.1.

Vacation Days.  Employee shall be entitled to the same paid vacation days each calendar year during the term of this Employee Agreement as authorized by the Company for its other employees.

5.2.

Holidays.   Employee shall be entitled to the same paid holidays as authorized by the Company for its other employees.

5.3.

Sick Days and Personal Absence Days.  Employee shall be entitled to the same number of paid sick days and personal absence days as authorized by the Company for its other employees.

**ARTICLE 6**

**Intentionally Left Blank**

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**ARTICLE 7**

**Intentionally Left Blank**

**ARTICLE 8**

**Maintenance of Liability Insurance**

So long as Employee shall serve as an officer of the Company pursuant to this Employee Agreement, the Company shall obtain and maintain in full force and effect a policy of director’s and officer’s liability insurance in reasonable amounts from an established and reputable insurer. In all policies of such insurance, Employee shall be named as an insured in such manner as to provide Employee the same rights and benefits as are accorded to the most favorably insured of the Company’s officers or directors.

**ARTICLE 9**

**Termination of Employment**

9.1.

Termination of Employment. Employee’s employment hereunder shall automatically terminate upon (i) his death (ii) the expiration of the term of this Employee Agreement; or (iii) Employee voluntarily leaving the employ of the Company.

9.2.

Termination For Employee’s Failure to Meet Performance Standard.  Employee’s employment with the Company shall terminate, at the Company’s discretion, upon 15 days prior written notice to Employee if the Company terminates his employment hereunder for "cause". For purposes hereof, "cause" shall include (i) Employee’s willful malfeasance, misfeasance, nonfeasance or gross negligence, (ii) any willful misrepresentation or concealment of a material fact made by Employee in connection with this Employee Agreement; (iii) the willful breach of any covenant made by Employee hereunder; or (iv) the failure of Employee to meet the performance standards more fully described in **Appendix A** attached hereto and made a part hereof.

Notwithstanding the above, if the Employee is terminated by the Company without cause, the Company shall be obligated to pay to Employee the compensation set forth in Section 4 hereof for the remainder of the term of this Employee Agreement.

**ARTICLE 10**

**Confidential Information**

10.1.

 Disclosures While Employed by the Company.  Employee acknowledges that, in performing the duties required by this Employee Agreement, Employee will be making use of, acquiring and adding to the confidential and proprietary information of the Company and/or those persons or entities directly or indirectly controlling or controlled by, or under direct or indirect common control with, the Company (each an “**Affiliate**” and collectively, the “**Affiliates**”), which (i) is of a special nature and value, (ii) is not public information or is not generally known or available to the Company’s and/or the Affiliates’ competitors, (iii) is known only by the Company and/or the Affiliates and those of their respective employees, independent contractors, consultants, suppliers, customers or agents to whom such data and information must be confided in order to apply it to the uses intended, and (iv) relates to matters such as, but not

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limited to, the Company’s and the Affiliates’ respective methods of operation, internal structure, financial affairs, programs, software, equipment and techniques, existing and contemplated facilities, products and services, know-how, inventions, systems, devices (whether or not patentable), methods, ideas, procedures, manuals, confidential studies and reports, lists of suppliers and customers and prospective suppliers and customers, financial information and practices, plans, pricing, selling techniques, sales and marketing programs and methods, names, addresses and telephone numbers of the Company’s and/or the Affiliates’ suppliers and customers, credit and financial data of the Company’s and/or the Affiliates’ suppliers and customers, particular business requirements of the Company’s and/or the Affiliates’ suppliers and customers, special methods and processes involved in designing, producing and selling the Company’s and/or the Affiliates’ products and services, any other information related to the Company’s and/or the Affiliates’ suppliers and customers that could be used as a competitive advantage by the Company’s and/or the Affiliates’ competitors if revealed or disclosed to such competitors or to persons or entities revealing or disclosing same to such competitors, and all “**trade secrets**” (as that term is defined in O.C.G.A.  s. 10-1-761, as amended) of the Company and/or the Affiliates, all of which, together with any and all extracts, summaries and photo, electronic or other copies or reproductions, in whole or in part thereof, stored in whatever medium (including electronic or magnetic), shall be deemed the Company’s and/or the Affiliates’ exclusive property, as applicable, and shall be deemed to be “**Confidential Information**.”Employee acknowledges that the Confidential Information has been and will continue to be of central importance to the business of the Company and the Affiliates, and that disclosure of it to, or its use by, others could cause substantial loss to the Company and the Affiliates.  In consideration of Employee’s employment hereunder, Employee agrees that, at all times during the term of this Employee Agreement, and (i) with respect to all Confidential Information constituting “trade secrets,” for so long thereafter as such Confidential Information continues to constitute “trade secrets” (or for the period beginning on the last day of the term of this Employee Agreement and ending five (5) years thereafter, whichever is longer); and (ii) with respect to all Confidential Information not constituting “trade secrets,” for the period beginning on the last day of the term of this Employee Agreement and ending five (5) years thereafter, Employee shall not, directly or indirectly, use, divulge or disclose to any person or entity, other than those persons or entities employed or engaged by the Company who or which are authorized to receive such information, any of such Confidential Information, and Employee shall hold all of the Confidential Information confidential and inviolate and will not use such Confidential Information against the best interests of the Company or any of the Affiliates.

10.2.

Disclosures After Employment Terminates; Return of Records.  Employee acknowledges and agrees that all supplier, customer, employee and contractor files, contracts, agreements, financial books, records, instruments and documents, supplier and customer lists, memoranda, data, reports, sales documentation and literature, software, rolodexes, telephone and address books, letters, research, listings, and any other instruments, records or documents relating or pertaining to (i) the customers or suppliers of the Company and/or any of the Affiliates serviced by or serving the Company, any of the Affiliates or Employee, (ii) the duties performed hereunder by Employee, or (iii) the business of the Company and/or any of the Affiliates (collectively, the “**Records**”) shall at all times be and remain the exclusive property of the Company and/or the Affiliates, as applicable.  Upon termination of Employ ee’s employment hereunder for any reason whatsoever, Employee shall promptly return to the Company all

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Records (whether furnished by the Company or any of the Affiliates or prepared by Employee), and Employee shall neither make nor retain, nor allow any third party to make or retain, any photo, electronic or other copy or other reproduction of any of such Records after such termination.

10.3

Assignment of Inventions and Works Made for Hire.   Employee hereby irrevocably assigns and transfers, and agrees to assign and transfer, to the Company all of Employee’s right, title and interest in and to any and all Inventions and Works Made for Hire (each as hereinafter defined) made, generated or conceived by Employee at any time during the term of this Employee Agreement, whether alone or with the assistance of others, whether or not made, generated or conceived during normal business hours, and whether or not his employment with the Company is hereafter terminated for any reason whatsoever.  For purposes of this Employee Agreement, “**Inventions**” shall mean any and all discoveries, improvements, innovations, ideas, formulae, devices, systems, software programs, processes, products and any other creations similar thereto which pertain or relate to the Company’s e lectro-optical polymer technology.  For purposes of this Employee Agreement, “**Works Made for Hire**” shall mean any and all “work made for hire”, as that term is defined in Section 101 of the United States Copyright Law, Title 17 of the United States Code, as amended.  Upon the Company’s request, Employee will promptly execute and sign any and all applications, assignments, and other documents, and will promptly render all assistance, which may be reasonably necessary for the Company to obtain patent, copyright or any other form of intellectual property protection.

**ARTICLE 11**

**Protective Covenants**

Employee acknowledges that his specialized skills, abilities and contacts are important to the success of the Company, and agrees that he shall faithfully and strictly adhere to the following covenants:

11.1.

Non-competition. Employee acknowledges that by reason of the character and nature of the Company’s business activities and operations, and further by reason of the scope of the territory in which Employee will perform the services under this Employee Agreement, in order to protect the Company’s legitimate business interests it is necessary for Employee to agree not to engage in certain specified activities in such territory at any time during the term of this Employment Agreement and for a period of time thereafter.  Therefore, at all times during the term of this Employee Agreement, and for a period of five (5) years thereafter, Employee will not, directly or indirectly, within the Territory (as defined below), (a) for himself, in his capacity as a Competing Business, (b) as a consultant, manager, supervisor, employee or owner of a Competing Business (as defined below), or (c) as an independent cont ractor for a Competing Business, engage in any business in which Employee provides services which are the same as or substantially similar to the services Employee is providing hereunder. “**Competing Business**” shall mean any person, business or entity who or which sells, markets or distributes products and/or sells, furnishes or provides services substantially the same as those sold, marketed, distributed, furnished or supplied or expected to be sold, marketed, distributed, furnished or supplied by the Company during the term of this Employee Agreement. “**Territory**” shall mean the (i) the United States of America; (ii) any market area that the Company conducts its business;

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or (iii) any contemplated market area that the Company intends to conduct its business within the following five (5) years of the date of Employee’s termination. “**Contemplated Market Area**” shall mean any market area which the Company has evaluated, is evaluating, or expects to evaluate and the Company has a reasonable expectation that the Company will conduct business in such area. Employee agrees that he and the Company may amend the definition of “Territory” from and after the date hereof to reflect any significant contraction or expansion of the geographical area in which he performs the services hereunder.

11.2

Non-solicitation of Customers. Employee agrees that all customers whose relationships are managed by Employee, or with whom Employee has contact during the term of this Employee Agreement, are the Company’s customers, and that all fees and revenues produced from such relationships or contacts are the exclusive property of the Company.  Employee hereby waives and releases all claims and rights of ownership to such customer relationships, fees and revenues.  Furthermore, at all times during the term of this Employee Agreement and for a period of five (5) years thereafter, Employee will not directly or indirectly, on his own behalf or on behalf of any person, firm, partnership, association, corporation, business organization, entity or enterprise, solicit, call upon or attempt to solicit or call upon, any customer or prospective customer of the Company, or any representative of any customer or prospecti ve customer of the Company, with a view to the sale or provision of any product or service competitive or potentially competitive with any product or service sold or provided, or under development, by the Company at any time during the shorter in duration of the term of this Employee Agreement and the last five (5) years thereof; provided that the restrictions set forth in this sentence shall apply only to customers or prospective customers of the Company, or representatives of customers or prospective customers of the Company, with which Employee had contact at any time during the shorter in duration of the term of this Employee Agreement and the last five (5) years thereof.

11.3

Non-solicitation of Employees and Independent Contractors.  At all times during the term of this Employee Agreement and for a period of five (5) years thereafter, Employee will not directly or indirectly solicit or encourage any employee or independent contractor of the Company to leave such employment or engagement with the Company, or directly or indirectly employ or engage in any capacity any former employee or independent contractor of the Company, unless such former employee or independent contractor of the Company shall have ceased to be so employed or engaged by the Company for a period of at least two (2) years immediately prior to such action by Employee.

**ARTICLE 12**

**Construction**

Employee acknowledges and agrees that the covenants and agreements contained in Sections 10 and 11 of this Employee Agreement are the essence of this Employee Agreement, and that each of such covenants and agreements is reasonable and necessary to protect and preserve the interests and business of the Company.  Employee further acknowledges and agrees that: (i) each of such covenants and agreements is separate, distinct and severable, not only from the other of such covenants and agreements, but also from the remaining provisions of this Employee Agreement, (ii) the unenforceability of any such covenants or agreements shall not

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affect the validity or enforceability of any other such covenants or agreements or any other provision or provisions of this Employee Agreement, and (iii) in the event any court of competent jurisdiction or arbitrator, as applicable, determines, rules or holds that any such covenant or agreement hereof is overly broad or against the public policy of the state, then said court or arbitrator, as the case may be, is specifically authorized to reform and narrow said covenant or agreement to the extent necessary to make said reformed and narrowed covenant or agreement valid and enforceable to the maximum enforceable restriction permitted by law.

**ARTICLE 13**

**Remedies**

It is specifically understood and agreed that (i) any breach of any of the provisions of Section 10 or 11 of this Employee Agreement is likely to result in irreparable injury to the Company, (ii) the remedy at law alone will be an inadequate remedy for such breach, and (iii) in addition to any other remedy it may have for such breach, the Company shall be entitled to enforce the specific performance of this Employee Agreement by Employee and to seek both temporary and permanent injunctive relief (to the extent permitted by law) without the necessity of proving actual damages.  Notwithstanding any other provision of this Employee Agreement to the contrary, any and all obligations of the Company to pay any compensation to Employee for any reason shall cease and terminate upon the breach by Employee of any of the obligations of Employee under Sections 10 or 11 of this Employee Agreement.

**ARTICLE 14**

**Existing Restrictive Covenants and Indemnification**

Employee represents and warrants that (i) Employee is not a party to or subject to any outstanding contract, agreement or order whereby Employee is prohibited from entering into this Employee Agreement, or any outstanding restrictive covenant or noncompetition agreement which would interfere with or prevent Employee’s employment hereunder as contemplated by this Employee Agreement; (ii) Employee has performed any and all duties or obligations that he may have under any contract or agreement with a former Employer or other party, including, without limitation, the return of all confidential materials; and (iii) Employee is currently not in possession of any confidential materials or property belonging to any such former Employer or other party.  Employee acknowledges and agrees that he shall advise the Company in the event that his duties with the Company should be changed or enlarged in such a manner as to confl ict with any such prior contract, agreement, order or restrictive covenant.  Without limitation on any other rights or remedies available to the Company with respect to Employee’s breach of his obligations hereunder, Employee shall defend, indemnify and hold the Company, the Affiliates, and each of their respective shareholders, officers, directors, employees, counsel, agents, affiliates and assigns (collectively, the “**Company Indemnities**”) harmless from and against any and all direct or indirect demands, claims, payments, obligations, recoveries, deficiencies, fines, penalties, assessments, actions, causes of action, suits, losses, diminution in the value of assets of the Company, compensatory, punitive, exemplary or consequential damages (including, without limitation, lost income and profits and interruptions of business), liabilities, costs, expenses, and interest on any amount payable to a third party as a result of the foregoing, whether accrued, absolute, contingent, known, unknown or otherwise asserted against, imposed upon or incurred

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by Company Indemnities, or any of them, by reason of or resulting from, arising out of, based upon or otherwise in respect of (1) any conflict between Employee’s employment hereunder and any prior employment, duty, contract, express or implied agreement, order or restrictive covenant, or (2) any misrepresentation by Employee hereunder as to any facts which are the subject matter of any conflict or violation of any prior contract, agreement, order or restrictive covenant on the part of Employee.

**ARTICLE 15**

**Notice to Future Employers**

If Employee’s employment hereunder terminates for any reason, (i) Employee shall, during the five (5) year period after the effective date of such termination, inform any subsequent employers, business partners or colleagues of the existence and provisions of Sections 11.1 and 11.2 of this Employee Agreement and, if requested, provide a copy of such Sections of this Employee Agreement to any such employer, business partner or colleague; and the Company may, at any time, notify any future employer, business partner or colleague of Employee of the existence and provisions of Sections 11.1 and 11.2 of this Employee Agreement.

**ARTICLE 16**

**Notices**

Any notice given under this Employee Agreement to either party shall be made in writing.  Notices shall be deemed given when delivered by hand, document delivery service, or when mailed by registered or certified mail, return receipt requested, postage prepaid, and addressed to the party at the address set forth below.

Employee address:

Mr. Philips W. Smith

5636 E. Mockingbird Lane

Paradise Valley Arizona 85253

with a copy to:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Company address:

Mr. James S. Marcelli

Lightwave Logic, Inc.

121 Continental Drive, Suite 110

Newark, Delaware 19713

with a copy to:

David M. Bovi, Esq.

319 Clematis Street, Suite 700

West Palm Beach, Florida 33401

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Each party may designate a different address for receiving notices by giving written notice of the different address to the other party. The written notice of the different address will be deemed given when it is received by the other party.

**ARTICLE 17**

**Binding Agreement**

17.1.

Company’s Successors.  The rights and obligations of the Company under this Employee Agreement shall inure to the benefit of and shall be binding upon the successors and assigns of the Company.

17.2.

Employee’s Successors.  This Employee Agreement shall inure to the benefit and be enforceable by Employee’s personal representatives, legatees, and heirs. If Employee dies while amounts are still owed, such amounts shall be paid to Employee’s legatees or, if no such person or persons have been designated, to Employee’s estate.

**ARTICLE 18**

**Waivers**

The waiver by either party of a breach of any provision of this Employee Agreement shall not operate or be construed as a waiver of any subsequent breach.

**ARTICLE 19**

**Entire Agreement**

19.1.

No Other Agreements.  This instrument contains the entire agreement of the parties pertaining to the employment of Employee by the Company.  The parties have not made any agreements or representations, oral or otherwise, express or implied, pertaining to the employment of Employee by the Company other than those specifically included in this Employee Agreement.

19.2.

Prior Agreements. This Employee Agreement supersedes any prior employee agreements pertaining to or connected with or arising in any manner out of the employment of Employee by the Company. All such agreements are terminated and are of no force or effect whatsoever.

**ARTICLE 20**

**Amendment of Agreement**

No change or modification of this Employee Agreement shall be valid unless it is in writing and signed by the party against whom the change or modification is sought to be enforced. No change or modification by the Company shall be effective unless it is approved by the Company’s Board of Directors and signed by an officer specifically authorized to sign such documents.

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**ARTICLE 21**

**Severability of Provisions**

If any provision of this Employee Agreement is invalidated or held unenforceable, the invalidity or unenforceability of that provision or provisions shall not affect the validity or enforceability of any other provision of this Employee Agreement.

**ARTICLE 22**

**Assignment of Agreement**

Otherthan as otherwise provided for in this Employee Agreement, so long as Employee is an Employee pursuant to this Employee Agreement, the Company shall not assign this Employee Agreement without Employee’s prior written consent, which consent shall not be unreasonably withheld. Employee may not assign this Employee Agreement.

**ARTICLE 23**

**Governing Law and Venue**

 This Agreement shall be deemed to have been entered into by all parties within the State of Delaware and all questions regarding the validity and interpretation of this Employee Agreement shall be governed by and construed and enforced in all respects in accordance with the laws of the State of Delaware as applied to contracts made and to be performed entirely within Delaware without regard to choice of law provisions.  The sole and proper venue shall be New Castle County, Delaware.

**ARTICLE 24**

**Arbitration of Disputes**

If a dispute arises out of or relates to this Employee Agreement, or the breach thereof, and if the dispute cannot be settled through negotiation, the parties agree first to try in good faith to settle the dispute by mediation administered by the American Arbitration Association under its Employment Mediation Rules before resorting to arbitration, litigation or some other dispute resolution procedure.

**IN WITNESS**, the parties have executed this Employee Agreement in duplicate on the date and year first above written.

Employee,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Witness

Philips W. Smith

Lightwave Logic, Inc.,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Witness

      James S. Marcelli, CEO

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