



LIGHTWAVE LOGIC™

Lightwave Logic, Inc. CEO Issues Shareholder Letter Regarding the Company's Direction, and Goals

Newark, DE, July 12, 2011 Lightwave Logic, Inc. (OTC Bulletin Board: LWLG) a technology company focused on the development of the 'Next Generation Nonlinear Optical Polymer Material Platform' for applications in high speed fiber-optic data communications and optical computing, announced today that Jim Marcelli, its chief executive officer sent the following open letter to its shareholders:

Open Letter to Lightwave Logic, Inc. Shareholders

Fellow Shareholders,

I want to update you on the progress we have made toward reaching the 2011 milestones that we discussed in our December 2010 and May 2011 shareholder conference calls. I also want to provide a progress report for our "Next Generation" materials platform.

Revenues

We are still on track to generate revenues in the second half of 2011, but our shareholders should understand that because the markets we address are so large, our customers are necessarily large. And though the devices move at or near the speed of light, behemoth companies often move at a snail's pace. These revenues will be comprised of a combination of prototype optical devices, system and application engineering charges along with sales of our patented non-linear optical polymer materials for specialty electro-optical and optical devices.

Formation of an Operations Committee

We recently have made some changes to our corporate structure that will help us move the company forward toward commercialization. I have recently established an *Operations Committee* in order to leverage the tremendous pool of talent on our Board of Directors. Thomas E. Zelibor, Rear Admiral, USN (Ret) is the first board member assigned to the committee.

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RADM Zelibor has served as a director of our Company since July 2008. With over twenty years of strategic planning and senior leadership experience, Tom's expertise will contribute greatly to the planning and implementation of our corporate goals.

- Tom's first Operations Committee assignment will be to work with Terry Turpin, our *Optical Computing Guru*, in direct support of all Government, Aerospace and Military opportunities and business development.

2011 Corporate Accomplishments

In May we entered into an agreement with Lincoln Park Capital (LPC) who has committed \$20 million in capital to the company. This should provide us the liquidity necessary to commercialize our technology. Prior to making this commitment Lincoln Park Capital conducted extensive due diligence on the company.

At Lightwave's sole discretion, LPC is obligated over the next 28 Months to purchase the Company's common stock under our Purchase Agreement. Our interests in the creation of long term shareholder value are perfectly aligned with those of LPC who profits the same way as we do—by a higher stock price.

In May I was very pleased to announce the addition of Dr. Joseph A. Miller, Jr. to our Board of Directors. Dr. Miller currently serves as Executive Vice President and Chief Technology Officer of Corning, Incorporated. Joe's many years of experience in a variety of senior positions and experience in polymer science will be of great value to our Company. I look forward to working with Joe going forward.

Earlier this year, Lehigh University tested our new Third-order, non-linear optical polymer, Perkinamine™ NR. As we previously announced, this material is 100 times stronger than the highest off-resonance small molecule currently known and 2600 times more powerful than fused silica, the general on resonance response measurement standard.

- We developed this material 2 years ahead of our own internal forecast.

Recently, the photonics team at City University of New York successfully deposited Perkinamine™ NR in a slot waveguide design. We are happy to report that the material survived the 170C deposition process without any apparent loss of photo-optical effect. The team further tested the material and found it to be 10 times more responsive than gallium arsenide and 4 times more powerful than other known organic non-linear materials. This correlates with Lehigh University's test results that used a different methodology.



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These all-optical waveguides will allow us to fabricate a next generation all-optical switch that will be capable of transmitting data at greater than a terabit per second. By way of example, this would allow the downloading of an average size movie in less than one minute! Additionally, this moves us closer to the development of an all-optical transistor.

- We are currently in the process of fabricating the first prototype modulators that we intend to make available to potential customers later this year.

In April our company was issued 2 United States patents. US Patent No. 7,919,619 for Heterocyclical Chromophore Architectures directed to Perkinamine™ chromophores, the foundation of Lightwave's unique electro-optic materials platform. Additionally, our company was issued US Patent No. 7,894,695 covering its Tricyclic Spacer System for Non-Linear Optical devices.

- Together these two patents protect the core of our revolutionary electro-optical materials platform.

Existing Business Opportunities

We continue to make progress moving potential customers from material evaluations to design wins. We are at different levels of engagement and currently have submitted proposals to Lockheed Martin and Celestech. Due to timing issues beyond our control, these projects have run behind where we thought they would be by this point in time.

- We are now waiting for the release of purchase orders for prototype devices after which we will begin to generate initial engineering revenue followed by what we anticipate will be more significant device and material sales.

Micro Electronics Customers

With regard to our ongoing evaluation with a major micro-electronics device company, our material performed as we said it would during their extensive R&D evaluations for use in one of its proprietary devices. They have asked us if we could make some chemistry changes to our polymer to make it more compatible with their device design.

- We believe we're close to satisfying the specific request and will let you know when we have validated this.



Platform Expansion Capabilities

We have spent the last 6-months improving our chemical synthesis processes to better understand the inner workings of our molecules in order to gain greater control over the resulting properties of our materials.

- We eventually hope to know the ultimate cause and effect of every change we make to a molecule.

This kind of knowledge will ensure the transformation of our Perkinamine™ family of chromophores into a vastly more powerful materials platform with the ability not only to be able to respond to specific customer requests (as in the case of the micro-electronics opportunity), but also give us the capability to spawn new materials with different properties for entirely new applications.

Our shareholders should understand that this is no small task. It involves a lot of hard work by our outstanding team of scientists and university collaborators involving many different aspects of polymer science from molecular modeling to chemical synthesis and testing.

- I firmly believe that having the ability to “tune” our material will be viewed as a valuable *hidden asset* of our company.

New Business Opportunities

Medical Diagnosis and Testing for Infectious Agents

We have recently entered into initial discussions with a company that has expressed an interest in using our advanced polymer materials in various detection devices that they are intending to commercialize. Our initial scientific discussion has determined that there is a good fit between our material platform and their proprietary designs.

- We will have more to say about this shortly, so stay tuned.

Micro-Electronics, Telecommunications/Data Communications, Military Aerospace

We continue to explore other opportunities in the micro-electronic components, telecommunications/data communications, computer and military aerospace markets as well as government agencies.



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- We have identified several areas of opportunity and will provide more color on these at the shareholder meeting.

Solar Energy/Photovoltaic Cells

As we have previously announced, the University of Alabama has received funding to study our chromophore for use in photovoltaic cells. Progress has already been made with material design development.

- We are anxiously awaiting the initiation of the prototype development which we expect will commence in the fourth quarter of this year.

Academic Institution Research Programs:

University of Alabama

Our existing agreement with the University of Alabama at Tuscaloosa to conduct cooperative development, analytical testing, optimization and scale-up of our proprietary materials platform runs through January 2012. We expect to enter into a new two-year agreement soon.

City University of New York

We have recently signed a research and development agreement to fabricate and test an all-optical waveguide device using our Third-order material, Perkinamine™ NR. This agreement runs through November 2011.

We will have a lot more to say about these exciting accomplishments and opportunities at the upcoming shareholder meeting on August 11th in Delaware. We also will issue further progress reports on:

- Targeted Market Applications
- Specific Device Projects in Development
- Progress with our University Research Programs
- New Intellectual Property



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I can assure you that everyone on the Lightwave Logic team is working hard to effect the transition from a pre-revenue R&D company to a commercial enterprise to ensure the long-term success of our company.

I appreciate the support our shareholders have given us and look forward to seeing all of you in Delaware next month.

Sincerely,

Jim Marcelli
Chief Executive Officer
July 12, 2011

“Powered by Lightwave Logic”™

Lightwave Logic, Inc. is a development stage company that is producing prototype electro-optic demonstration devices and is moving toward commercialization of its high-activity, high-stability organic polymers for applications in electro-optical device markets. Electro-optical devices convert data from electric signals into optical signals for use in high-speed fiber-optic telecommunications systems and optical computers. Please visit the Company's website, www.lightwavelogic.com, for more information.

Safe Harbor Statement

The information posted in this release may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. You can identify these statements by use of the words "may," "will," "should," "plans," "explores," "expects," "anticipates," "continue," "estimate," "project," "intend," and similar expressions. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. These risks and uncertainties include, but are not limited to, general economic and business conditions, effects of continued geopolitical unrest and regional conflicts, competition, changes in technology and methods of marketing, delays in completing various engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, shortages in components, production delays due to performance quality issues with outsourced components, and various other factors beyond the Company's control.



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