

Lightwave Logic, Inc. Reports on Positive Patent Activities

WILMINGTON, Del., May 29, 2009. PRNewswire-FirstCall/-Lightwave Logic, Inc. (OTC Bulletin Board: LWLG- News; <http://lightwavelogic.com>), a technology company focused on the development of electro-optic polymer materials for applications in high speed fiber-optic telecommunications and optical computing, announced today a progress report on recent patent activities.

In February of 2009 Lightwave received a first office action on one of its patent applications entitled “Heterocyclic Chromophore Architectures,” which was previously described in our March 19, 2009 press release. This action required us to respond to the U.S. Patent Office (“USPTO”) by May 6, 2009, which we did on May 5, 2009. We believe our response will place this application in condition for allowance as to some of the pending claims. We intend to pursue additional subject matter of the original application in one or more continuing applications based upon the original application.

On April 28, 2009, we received a first office action on another of our patent applications. This application, “Tricyclic Spacers for Nonlinear Optical (NLO) Devices,” describes a range of structures that can be used as auxiliary substituents on our chromophore backbones, which we believe can confer various chemical and physical properties to our nonlinear chromophores. These include solubility and space-filling packing shapes that enhance polar orientation in poled NLO devices. We consider these spacer architectures to be yet another important part of our intellectual property portfolio and we are pleased to begin substantive examination in this application. The office action requires the election of a spacer for initial search and examination purposes by the USPTO. Our response to this office action was filed with the USPTO Wednesday, May 27, 2009.

Dr. David Eaton, Lightwave’s CTO, commented that “these two office actions move our Company forward in our continued procurement and protection of our valuable intellectual property portfolio.”

Lightwave will continue to provide updates as it receives official communications from the USPTO.

About Lightwave Logic, Inc.

Lightwave Logic, Inc. is a development stage company, moving toward prototype demonstration and 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.

For more information contact:

Jim Marcelli, CEO

302-356-2717

jmarcelli@lightwavelogic.com