

REVIEW OF OPERATIONS FOR THE YEAR ENDED 30 JUNE 2013

The 2013 Financial Year was a year of major technical breakthroughs for the Company with the achievement of a number of key technology and commercial milestones. The Company is now closer to taking the breakthrough RPCVD technology to the rapidly expanding LED market. The key achievements during the year are discussed below:

In July 2012, the Company announced that SPTS had agreed to sell to BluGlass its 49% interest in the Joint Venture company, EpiBlu Technologies Pty. Ltd. This restructure was designed to provide BluGlass sufficient freedom to pursue the full range of commercialisation avenues potentially involving one of the major LED equipment manufacturers. This capital restructure also delivered a number of core benefits to BluGlass being:

- 100% ownership of the RPCVD technology that was developed by the EpiBlu joint venture along with the future benefits from commercialisation of the technology
- Continued support from SPTS who will continue to provide marketing assistance to promote the commercialisation of the technology
- BluGlass also retains a license to the background intellectual property required in order to exploit the technology

In September 2012, BluGlass announced that the claims of one of its key patents was accepted and granted by the US Patent and Trademarks Office. This brought the total granted patent portfolio of the company to 17 international patents in five patent families, a significant advancement for the company which commenced with three provisional patents in 2006.

Critically in October 2012, the Company announced that it had been successful in bringing key impurity levels (carbon, hydrogen and oxygen) on par with the industry standard process, MOCVD. This was a significant step forward for the Company that represented the overcoming of a major technical hurdle. Carbon and oxygen were well known inhibitors of RPCVD for commercial application in the LED industry, and the demonstration of industry accepted levels of these materials was recognised by the LED community as an important achievement for BluGlass.

Compound Semiconductor Magazine followed this announcement with the first BluGlass feature interview since 2006 and said "The breakthrough has been a long time coming... but could have a profound effect on LED manufacturing".

This key technical achievement enabled BluGlass to achieve its Proof of Concept Milestone shortly afterwards.

In November 2012, BluGlass announced that it had successfully demonstrated n-GaN films with electrical properties that meet industry performance benchmarks.

ROOM TEMPERATURE HALL MEASUREMENT RESULTS OF AN RPCVD n-GaN FILM GROWN ON A UN-DOPED COMMERCIAL GaN TEMPLATE COMPARED TO A TYPICAL MOCVD GROWN n-GaN FILM

	TYPICAL MOCVD p-GaN SPECIFICATION	RECENT RPCVD p-GaN DATA	
		IQE Data	ANU Data
Mobility	≥ 250 cm2/V.s	297 cm2/V.s	300 cm2/V.s
For a Carrier Concentration of	2.0 x 1018 cm-3	2.0 x 1018 cm-3	2.1 x 1018 cm- 3

REVIEW OF OPERATIONS (Cont)

In December 2012 BluGlass was successful in raising \$4.75M through an Institutional Placement and Share Purchase Plan. This funding will be used to continue operations and commence the commercialisation and scaling activities in line with the published roadmaps.

Also in December 2012, BluGlass announced that its initial laboratory experiments in the development of p-GaN had been successful. A low temperature p-GaN layer was grown on a commercially produced MOCVD 456nm blue multiquantum well structure. Preliminary testing was carried out on the sample using a 0.5 mm diameter size p-type indium contact. The light output was measured with a UV-detector positioned under the wafer calibrated at the wavelength of the light emission.

- At 20 mA, 4.7V the light output was 270 μW (Light emission at 458 nm, FWHM of 19 nm)
- At 50 mA, 5.5V the light output was 1.23 mW (Light emission at 456 nm, FWHM of 18 nm)

The current was applied continuously for more than 60 minutes without the loss of function.

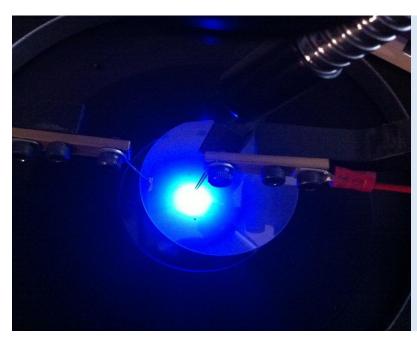


FIGURE TWO: Demonstration of light emission from a BluGlass low temperature RPCVD p-GaN layer grown on a MOCVD grown multiquantum well structure.

In February 2013, BluGlass announced that it had succeeded in producing p-type gallium nitride (GaN) films with industry equivalent performance properties using its low temperature RPCVD technology when grown on top of MOCVD GaN templates. This breakthrough followed on from the company's proof of concept milestone achievement in November 2012.

ROOM TEMPERATURE HALL MEASUREMENT RESULTS OF AN RPCVD p-GaN FILM GROWN ON A COMMERCIAL GAN TEMPLATE COMPARED TO A TYPICAL MOCVD GROWN p-GaN FILM

	TYPICAL MOCVD p-GaN SPECIFICATION	RECENT RPCVD p-GaN DATA
Resistivity	< 3 Ohm.cm	0.7 Ohm.cm
For a Carrier Concentration of	$\geq 1 \times 10^{17}$	1 x 10 ¹⁷

This is possibly the most significant technical milestone achieved to date; and the Company is now focussed on demonstrating improved LED device efficiency using RPCVD grown p-GaN layers to prove the commercial value of a low temperature technology.

REVIEW OF OPERATIONS (Cont)

In July 2013, BluGlass announced that it had won almost \$3 million in funding under the Australian Federal Government's Clean Technology Innovation Program to demonstrate higher efficiency, energy saving, lower cost nitride based LED's on various substrates, including silicon. This funding support for the continued advancement of our RPCVD technology represents an enormous commitment from the Commonwealth Government and demonstrates their continued belief in BluGlass' ability to bring its breakthrough technology to market.

Furthermore, in July 2013 BluGlass received final development consent to put in place the remaining infrastructure upgrades to BluGlass' state of the art Silverwater facility. This was a lengthy Development Application (DA) process, and to receive full consent is a good step for BluGlass as it completes the facility upgrades that will allow the company to take the Silverwater facility from a predominately research focused facility to one that is ready to meet the company's commercialisation and technology scaling milestones.

The team has been meticulously designing and developing these facility improvements since early 2013. This has involved sourcing a suitable larger scale MOCVD deposition tool (compared to the existing RPCVD tool employed at BluGlass) and it's shipping and installation at Silverwater. This MOCVD machine arrived in Australia in March 2013 and following the recent DA approval it is now in the final stages of installation and commissioning and it is expected to come online at Silverwater in the coming weeks.

This new machine will initially operate as an MOCVD machine which the technology team will use to produce the MOCVD LED and multi-quantum well base structures for the demonstration of the *Brighter LEDs* milestone. While this machine is operating as an MOCVD machine, the design phase for its retrofit as an RPCVD machine will commence in order to demonstrate the scalability of the RPCVD technology from a 7x2" deposition machine capable cycle to a 19x2" deposition machine.

BluGlass has also purchased a Photoluminescence (PL) Mapper. This machine will be a great asset for the company, as it will enable BluGlass to demonstrate easily and in-house the photoluminescence and thickness profiles of RPCVD material at a wafer scale, particularly the effect of high quality, low temperature p-GaN material on top of an MOCVD grown multi-quantum well LED structure. This will significantly reduce the time it takes to evaluate material and allow us to test more of our growth runs for PL. The acquisition of the PL Mapper adds to a state of the art set of characterisation tools (like the XRD) enabling us to quickly process wafers and show progress to the industry.

Based on the technical successes during the year, BluGlass has been able to re-engage with companies in the LED value chain, including the major industry leaders to develop future commercial interest in the RPCVD technology. We look forward to furthering these discussions as the Company continues to advance the technology roadmaps.

In conclusion, 2013 has been the most significant year to date for the Company and bodes very well for an exciting 2014 as BluGlass evolves from a pure research and development company to one pursuing its commercial and market goals. The next milestone to produce Brighter LEDs using our revolutionary RPCVD approach is not just an achievement for BluGlass, but one that will have implications for the entire LED industry.

The Company will also continue to develop its low temperature RPCVD technology for other emerging market applications such as Concentrated Photovoltaics (CPV) and GaN on Silicon and other optical and electrical device applications. The installation of the new tool will help expedite activity on these roadmaps objectives.

This industry continues to face two major challenges and is continually seeking ways to increase the efficiency of LED devices and also to drive down the cost of manufacture in order to enable the mass adoption of energy saving LEDs in the overhead lighting market.

The RPCVD technology has the potential to address both of these industry concerns. The Company is working towards delivering the RPCVD technology platform with its low temperature advantages as the natural choice for the industry to meet these critical challenges in a single technology solution.

REVIEW OF OPERATIONS (Cont) - DEVELOPMENT ROADMAPS

