 

**Non-expensive Single Molecular White Light Emitting Material**

**ROI# 15-005**

OLED technology is garnering more acceptance among end users as it is thinner, brighter, lightweight, power efficient and offers higher contrast compared to LCDs. OLEDs offer wide viewing angles, faster response times, higher contrast ratios and more saturated colors to enhance viewing experience of end users. OLED is one of the most promising display and lighting technologies that has the capability of offering power efficiency lighting and is superior compared to the fluorescent tubes and incandescent bulbs. OLED technology also enables end user to create flexible display and lighting panels.

According to a new market research report "[OLED Market](http://www.marketsandmarkets.com/Market-Reports/oled-market-200.html) by Display Application (Type - AMOLED & PMOLED, Panel-Size - Small, Medium & Large, Product - Smartphones & Others, Geography), Lighting Application (Type - Traditional & Flexible, End-User, Geography), & Geography - Global Forecast to 2020", the total OLED market is expected to reach $43.92 billion by 2020, at a CAGR of 16% between 2014 and 2020.

Due to the high fabrication cost of OLEDs as well as expensive materials needed to manufacture OLED devices, the best application of OLEDs at this time is in decorative luminaires, light-art installations, high-end feature spaces and architectural applications that exploit OLEDs’ unique properties.

**Invention:**

Scientists at the University of Saskatchewan have discovered a plant-source compound as a single molecule white light emitter and a technology to use this material to produce OLED devices. This game-changing technology has the potential of significantly reducing the costs of OLED devices and make OLED technology affordable for the main display and lighting industry. Key features of this invention include:

* **It works!** A prototype has been developed;
* **Low cost.** The cost of this material is only about 1/10 of other white light emitting materials such as FPt;
* **Secured supply:** The material is plant-sourced which can be easily produced in bulk quantities;
* **Durable:** The material has a very stable structure and is durable at high temperatures

Below is the key characterization of the OLED device prototype:

**Opportunity:**

We are looking for industry partners to maximize the commercialization potential of this technology by licensing as well as industry-engaged collaborative research.

***For more information, please contact:***

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