

# Blue LED, scientific breakthrough with real world impact

**IVA, Chemical Society of Japan, Japan Society for the Promotion of Science, Meijo University, Sweden-Japan Foundation and The Japanese Embassy welcome you to a seminar on 21 May 2014**

In the 1960's red and yellow-green light-emitting diodes (LEDs) and infrared semiconductor lasers (LDs) were already realized. But there was no prospect of practical blue-light-emitting devices. In 1973, Professor *Isamu Akasaki* decided to develop high-performance blue-light-emitting devices based on GaN p-n junctions. And in 1986 he and his group at Nagoya University created the first electronic-grade high-quality GaN single crystalline material. In 1989, they developed the first GaN p-n junction blue LED.

The development of blue and green LEDs has completed the set of LEDs for the three primary emission colors. Coupled with available high-brightness red LEDs, they imply the development of solid-state full-color displays, traffic lights, signage, and specialized lighting applications.

White LEDs are now being used in TVs, cell phones and displays and beginning to be applied to lighting equipments in houses, offices, factories and outdoors. The UV-LEDs will be used in sterilization, microscopic level diagnoses, and medical treatment.

All of these GaN-based devices are robust, and they enable significant energy savings. Their use will be a major weapon in the fight against global warming.



Prof. Akasaki  
Meijo University

## Registration and more information

- Date:** Wednesday 21 May 2014, 17:30–20:00 followed by dinner.  
**Venue:** IVA's Conference Center, Grev Turegatan 16, Stockholm, Sweden.  
**Streaming:** [www.iva.se/live](http://www.iva.se/live)  
**Registration:** Please register at [www.iva.se/seminar-20140521](http://www.iva.se/seminar-20140521) no later than 14 May. The cost of dinner is SEK 400 (incl. SEK 80 VAT) and should be paid into "bankgiro 5108-2527." Participation in the seminar is free of charge. IVA's corporate id number is 262000-1160.  
**More info:** Contact *Johan Persson*, e-mail [johan.persson@iva.se](mailto:johan.persson@iva.se), tel +46-8-791 29 41.



## Programme

17:30 **Welcome**  
*Johan Weigelt, Vice President IVA*

**Presentation of Prof. Akasaki**  
*Nobuyuki Kawashima, Executive Director, CSJ*

**Development of GaN-based semiconductors of excellent quality and their p-n junction blue-light-emitting devices**  
*Prof. Isamu Akasaki, Meijo University, Nagoya*

18:30 **Nanowire-based LEDs: from materials science to applications**  
*Prof. Lars Samuelson, Lund University*

**Properties of GaN and related materials, and the relevance for visible light LEDs**  
*Prof. Bo Monemar, Lund University*

**Sweden, a solid state for LED**  
*Christofer Sifvenius, Swedish Energy Agency*

20:00 **Dinner**

Seminar chaired by: *Prof. Satoshi Kamiyama, Meijo University*



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