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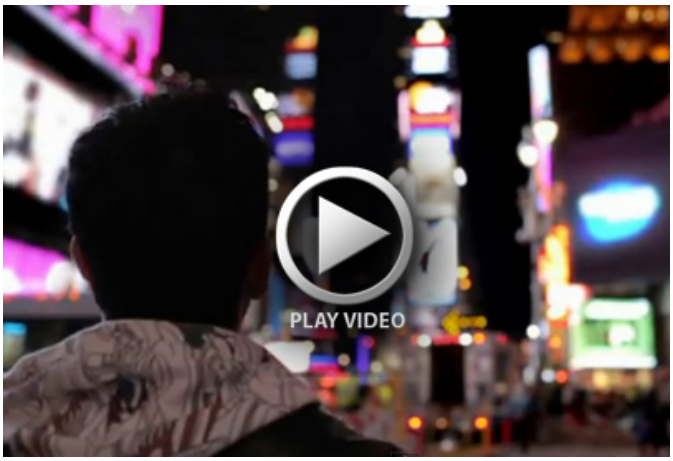
UCTV Series "Lighting the World" Tells Remarkable Story of Shuji Nakamura's Discovery of White LEDs

We take light for granted, but more than two billion people in the world go through their entire lives without reliable lighting. But that is changing, thanks in part to the brilliant discovery of UC Santa Barbara Professor Shuji Nakamura.

This UCTV four-part series, made possible by UC Santa Barbara's Solid State Lighting and Energy Center , tells the story of Nakamura's determined effort to develop the white LED and the revolution in lighting that his discovery has brought to the world.

The development of nitride based semiconductors by Dr. Nakamura represents one of the most important achievements in the materials science of semiconductors in the last 30 years. Specifically, the discovery of *p*-type doping in Gallium Nitride (GaN) and the development of blue, green, and white light emitting diodes (LEDs) and blue laser diodes (LDs) has enabled energy efficient lighting and displays.



Episode 1: Lights in the Darkness

We may take light for granted, but for some two-billion people around the globe, reliable, economical light sources are unavailable. In this episode of Lighting the World, John Bowers of UC Santa Barbara's Institute for Energy Efficiency describes this problem and how they are using the highly efficient white LED, discovered by Shuji Nakamura, as a solution.

Episode 2: Journey to a Brilliant Discovery

In this episode of Lighting the World, we meet UC Santa Barbara's Shuji Nakamura, creator of the white LED, and explore the decades-long quest to develop the white-light emitting LED.

Episode 3: Unleashing the Light

After years of effort, Shuji Nakamura discovers the breakthrough that enables the creation of the white-light emitting LED, unleashing a revolution in the way the world uses light and power..

Episode 4: Lights in the Darkness

In the final episode of Lighting the World, a look at research at UC Santa Barbara's Solid State Lighting and Energy Center, what the future of lighting and power use may be, and how Shuji Nakamura's work continues to affect the world of light and energy use.

About Shuji Nakamura

Professor Nakamura had received numerous awards for his work, including the Nishina Memorial Award (1996), the Materials Research Society Medal Award (1997), the Institute of Electrical and Electronics Engineers Jack A. Morton Award, the British Rank Prize (1998), the Benjamin Franklin Medal Award (2002), the Millennium Technology Prize (2006), the Czochralski Award (2007), the Prince of Asturias Award for Technical Scientific Research (2008), The Harvey Award (2009), and the Technology & Engineering Emmy

Award (2012) awarded by The National Academy of Television Arts & Sciences (NATAS). He was elected as a member of the U.S. National Academy of Engineering in 2003.

Since 2000, he has been a professor of Materials at the University of California, Santa Barbara. He holds more than 100 patents and has published more than 400 papers in his field. Professor Nakamura is the Research Director of the Solid State Lighting & Energy Center.

Images

Related Links

UCTV: Lighting the World

Episode 1: Lights in the Darkness

Episode 2: Journey to a Brilliant Discovery

Episode 3: Unleashing the Light
