

Sony TVs show high-end color via quantum dot tech

January 15 2013, by Nancy Owano



(Phys.org)—Sony's Bravia LCD TVs, in selected models, have incorporated quantum dot technology to boost sales of these high-end televisions by featuring exceptionally high-end color. The technology is from the Massachusetts-based company, QD Vision, and that technology involves nanoscale particles known as quantum dots. They are to significantly improve color viewing for the new Sony TVs.

"By integrating [QD Vision's "Color IQ"](#) optical component with Sony's unique display technologies, our Bravia television sets achieve significantly wider [color gamut](#), that provides a far more natural and vivid viewing experience," said Masashi Imamura, President, Home Entertainment and Sound Business Group, of Sony, in a press statement.

QD Vision's technology works with major LCD applications, including [LCD TVs](#), LCD monitors and mobile displays. The technology harnesses the unique light-emitting properties of quantum dots, which is a class of nanomaterials. The approach used by QD Vision increases the range of colors that an LCD television can display by about 50 percent, allowing for purer colors. QD Vision describes itself as a nanomaterials product company delivering advanced display and lighting solutions, and it has been working to commercialize the technology advances it made at MIT some years ago.

Its edge is as, in its words, "the only quantum dot company solely focused on displays and lighting." The co-founders have worked on their technology along with scientific advisors, MIT professors Vladimir Bulovic and Mounqi Bawendi, who the company said "is considered the father of quantum dot technology." Bawendi's work has been focused on uses for quantum dots as alternatives to fluorescent [organic dyes](#) and proteins for labeling, imaging, and monitoring biological systems and for better understanding and battling cancer.

[Technology Review](#), explaining how QD Vision technology translates into a Sony TV viewing experience, noted how in [LCD televisions](#), each pixel is illuminated from behind by a white backlight, and different colors are created by changing the amount of light allowed to pass through three different filters. QD Vision's technology eliminates the white backlight and uses quantum dots to enhance the backlight. It starts with a conventional blue LED, which produces pure blue light. The blue light stimulates two kinds of [quantum dots](#) that emit pure green and pure

red.

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