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Coldren recognized by IEEE Photonics Society

Larry Coldren, Professor of Electrical and Computer Engineering and Acting Dean of the College of Engineering at UC Santa Barbara, has been selected to receive the IEEE Photonics Society's Aron Kressel Award. The award is "given to recognize those individuals who have made important contributions to opto-electronic device technology." Coldren and fellow photonics pioneer Dr. Jack Jewell are being honored with the award "for original contributions enabling low threshold, manufacturable *VCSELs (*vertical-cavity surface-emitting lasers*)*." The honorees will receive the award and accompanying stipend on October 5 at the society's annual meeting in Belek-Antalya, Turkey.

VCSELs are semiconductor laser diodes which emit their laser beams perpendicularly from their top surfaces, in contrast to "conventional" edge-emitting lasers. VCSELs can be tested at multiple points in the manufacturing process, while edge emitters have to be cleaved from the semiconductor wafer at the end of the process before they can be tested. The result is that VCSELs are more economical to produce, and easier to connect in both electronic and optoelectronic systems, than edge emitters. VCSELs are found in virtually every o ptical fiber data transmission system, as well as in laser mouses and laser printers.

Professor Coldren holds the endowed Fred Kavli Chair in Optoelectronics and Sensors in the Department of Electrical and Computer Engineering; he also holds a joint appointment in the Department of Materials, and directs UCSB's Optoelectronics Technology Center.

He received his Ph.D. in electrical engineering from Stanford University. Prior to joining UC Santa Barbara in 1984, he spent 13 years conducting research at Bell Laboratories. His pioneering contributions in many aspects of diode laser design, fabrication, and analysis have had important practical impact in commercializing new sources for fiber optic communications, particularly in the areas of VCSELs and widely tunable DBR lasers. He has authored or co-authored over a thousand papers, seven book chapters, and a textbook, and has been issued 63 patents. Professor Coldren has received numerous honors for his achievements and contributions, including election to the National Academy of Engineering and the 2004 John Tyndall Award from the Optical Society of America.

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