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Andrea Estrada

Professors Elected to the National Academy of Engineering

Two UC Santa Barbara engineers are among the 102 new members elected to the National Academy of Engineering (NAE) for 2016. Materials professor Chris Van de Walle and chemical engineering professor Michael Doherty join the 80 American and 22 foreign engineers so honored.

Van de Walle was recognized “for contributions to the theory of semiconductor interfaces and its impact on optoelectronic devices.” With research interests that lie in the field of semiconductors and a specialty in computational materials research, his work delves into the behavior of materials at the atomic level, with applications that benefit fields such as energy efficiency and quantum computing.

Doherty was cited “for the design of methods for complex distillation and crystallization processes,” techniques that can lead to advanced design and manufacturing of pharmaceuticals, specialty chemicals and improved crystal quality.

“I am honored to congratulate Professor Michael Doherty and Professor Chris Van de Walle on their election to the National Academy of Engineering,” said UCSB Chancellor Henry T. Yang. “Election by their peers to this prestigious academy is an exciting career milestone and a meaningful affirmation of years of innovation, creativity and hard work. We are proud of their pioneering contributions to their respective fields of chemical engineering and computational materials, and of the far-reaching impact of their research in service to the world’s engineering

community and our global society.”

The election of Doherty and Van de Walle brings to 29 the number of NAE members from UCSB.

“The College of Engineering is very proud to add these two faculty members to our growing number of NAE members,” said Rod Alferness, dean of the UCSB College of Engineering. “Professors Doherty and Van de Walle are world leaders in their fields, and have made outstanding contributions to the areas of complex distillation and crystallization and semiconductor theory, respectively. In addition to being inspirational figures in their departments, their mentorship to colleagues and students makes an important contribution to the development and advancements of engineering principles and technologies that will positively impact society and the study of engineering.”

“While a lot of my work is based on fundamental physics, I have always approached research with the mindset of an engineer, and therefore I feel particularly honored to have been recognized by the National Academy of Engineering,” Van de Walle said. “It is extremely gratifying to find out that one’s work has had an impact, and I feel I share this honor with the materials department, the College of Engineering and the UCSB campus, which provide such a supportive and stimulating environment for our research.”

The first to hold the recently established Herbert Kroemer Endowed Chair in Materials Science, Van de Walle has been a member of the faculty at UCSB since 2004. He is the recipient of numerous honors and awards, including the Minerals, Metals and Materials Society’s 2014 John Bardeen Award; the American Vacuum Society’s 2013 Medard W. Welch Award; and the American Physical Society’s David Adler Award in 2002.

“The best thing about my job is the daily interaction with our outstanding undergraduate and graduate students at UCSB,” said Doherty. “They are a joy to teach and to mentor. While I am happy and grateful to be elected to the NAE, the real powerhouse behind the research articles and books that have emerged from my lab over the decades are the brilliant and dedicated doctoral and postdoctoral students and scholars who I have been privileged to have supervised throughout my career.”

Doherty came to UCSB in 2000. Among his numerous honors and awards are the E.V. Murphree Award for Industrial & Engineering Chemistry from the American Chemical Society in 2012 and the Alpha Chi Sigma Award for Chemical Engineering Research by the American Institute of Chemical Engineers in 2004. In addition, in 2008 the institute named Doherty among the “One Hundred Chemical Engineers of the Modern Era.”

Van de Walle and Doherty will be formally inducted into the academy during a ceremony at the NAE’s annual meeting in Washington, D.C., in October.

Election to the National Academy of Engineering is among the highest professional distinctions accorded an engineer. Academy membership honors those who have made outstanding contributions to “engineering research, practice or education, including, where appropriate, significant contributions to the engineering literature” and to “the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering or developing/implementing innovative approaches to engineering education.”

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.