Cross was very proud of his long association with the US Department of Defense and particularly the US Navy, which supported much of his work in the field of sonar undersea transducers. Through his lifelong friendship with Newnham, Cross helped to build a culture of cooperation and collegiality that aided in establishing the Materials Research Laboratory as a preeminent, interdisciplinary research facility.

During his career, Cross was named a Fellow of the Materials Research Society, the American Physical Society, the Optical Society of America, The American Ceramic Society, and IEEE. In 1983, he was elected to the National Academy of Engineering for his contributions to the development of electroceramic, dielectric, and piezoelectric materials. He was also the 2010 recipient of the Von Hippel Award of the Materials Research Society, its highest honor. Cross joined Penn State as a senior research associate in 1961, rose through the ranks, and in 1985, was named the Evan Pugh Professor of Electrical Engineering. An Evan Pugh Professorship is the highest distinction that the university can bestow on a faculty member. He was the author or co-author of more than 850 refereed papers, held 20 patents, and published a comprehensive textbook, *Domains in Ferroic Crystals and Thin Films*. At Penn State, he mentored >50 graduate students from across the world.

Cross shared his ideas and his time freely with everyone that he met, from graduate students to senior leaders in the field. He and his family opened their home to generations of students and colleagues. We will miss his trademark exclamation of "Jolly Good!", his spark of mischievous humor, and his tendency to wear socks and sandals with suits.

A set of memories embodying the scholar, the passion, and the personality of Prof. Cross can be found at http://ethw.org/Oral-History:L._Eric_Cross.

Clive A. Randall and
Susan Trolier-McKinstry
The Pennsylvania State University

DeSimone to present Kavli lecture during 2017 MRS Spring Meeting plenary session

Joseph M. DeSimone has been selected to present The Fred Kavli Distinguished Lectureship in Materials Science during the 2017 Materials Research Society (MRS) Spring Meeting to be held April 17–21 in Phoenix, Ariz. He is the Chancellor's Eminent Professor of Chemistry at The University of North Carolina (UNC) at Chapel Hill, and William R. Kenan, Jr. Distinguished Professor of Chemical Engineering at North Carolina State University, and of Chemistry at UNC. DeSimone is the CEO/co-founder of Carbon, Inc. in Silicon Valley.

DeSimone's presentation is titled "Future Fabricated with Light: Continuous Liquid Interface Production to Drive Additive Manufacturing." Despite the increasing popularity of 3D printing, also known as additive manufacturing (AM), it has not developed beyond the realm of rapid prototyping. This confinement of the field can be attributed to the inherent flaws of layer-by-layer printing and, in particular, anisotropic mechanical properties that depend on print direction, visible by the stair-casing surface finish effect.

This lecture will describe a new advance in AM that is rapid, continuous, and no longer layer-by-layer that promises to advance industry beyond basic prototyping to 3D manufacturing. Continuous Liquid Interface Production (CLIP) technology harnesses light and oxygen to continuously grow objects from a pool of resin instead of printing them layer by layer. CLIP capitalizes on the fundamental principle of oxygen-inhibited photopolymerization to generate a continual liquid interface of uncured resin between the growing part and the exposure window. This interface eliminates the necessity of an iterative layer-by-layer process, allowing for continuous production.

Continuous production has several advantages, including the fabrication of large overhangs without the use of supports, reduction of the stair-casing effect without compromising print time, and isotropic mechanical properties. Combined, these advantages result in multiple indicators of layerless and monolithic fabrication using CLIP technology.

DeSimone is one of less than 20 individuals who have been elected to all three branches of the US National Academies: National Academy of Medicine (2014), National Academy of Sciences (2012), and the National Academy of Engineering (2005). He is also a member of the American Academy of Arts & Sciences (2005). DeSimone has received more than 50 major awards and recognitions, including the inaugural Kabiller Prize in Nanoscience and Nanomedicine; the 2015 Dickson Prize from Carnegie Mellon University; the 2014 Industrial Research Institute Medal; and the 2014 Kathryn C. Hach Award for Entrepreneurial Success.

DeSimone is the co-founder of several companies, including Micell Technologies, Bioabsorbable Vascular Solutions, Liquidia Technologies, and Carbon. He received his BS degree in chemistry in 1986 from Ursinus College in Collegeville, Pa., and his PhD degree in chemistry in 1990 from Virginia Tech. DeSimone has published more than 300 scientific articles and has more than 150 issued patents. In June 2016, DeSimone was recognized by former US President Barack Obama with the National Medal of Technology and Innovation. □

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