

## 2016 Award Recipients

### The Nathaniel H. Sugerman Award

The Nathaniel H. Sugerman Memorial Award was established in 1992 to commemorate the enduring efforts of Nat Sugerman (1922-1991) in founding, nurturing, and supporting the Society of Vacuum Coaters.

### 2016 Nathaniel Sugerman Award Recipient

**André Anders**, Lawrence Berkeley National Laboratory, Berkeley, CA  
**For his many contributions to the science of plasmas, particularly time dependent effects in magnetrons, and vacuum coating technology education.**



André Anders grew up in East Germany where he developed a taste for geographic and scientific exploration. He applied to study physics abroad with the (communist) government and he was told to learn Polish and go to at the University of Wrocław, Poland. The precursors of the collapse of the "Soviet empire" were most obvious in Poland of 1980, and after only one year abroad, in the Summer of 1981, he and other students were called back at the eve of Poland's Martial Law. André continued his studies at Humboldt University in (East) Berlin to get his Dipl. Phys. (M.S.) Degree in 1984 with a topic on dielectric barrier discharges. He again applied to study abroad, this time being told to learn Russian and to attend Lomonosov Moscow State University, where he researched atmospheric pressure discharges. In 1987, he completed his PhD at Humboldt University, his first son was born, he got his first job at the Academy of Sciences, and was drafted to the East German military service. He learned to drive a truck and, on the side, started to compile fundamental and practical formulas for plasma physics. He arranged this collection as a book. It appeared in print in 1990, just months after the fall of the Berlin Wall.

The fall of the Berlin Wall was a turning point in his life. It opened the door to apply for funding and to also to pursue opportunities abroad.

After completing research on cathode spot plasmas (1990-91) at the Academy, André joined Lawrence Berkeley National Laboratory, in Berkeley, California, initially as a visiting researcher and later as Staff Scientist. His research at Berkeley shifted from plasmas to materials, thin films, and surface engineering. For example, he worked on filtered arc technology for the deposition of ultrathin diamond-like carbon films, which is still used today by manufacturers of read-write heads in the magnetic storage industry. The range of topics and applications of the research at Berkeley Lab is wide, including optical and protective coatings, switchable materials and layer systems for electrochromic windows, formation of nanoparticles, ion implantation, plasma immersion ion

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implantation to produce graded interfaces and well-adherent coatings, doped diamond-like carbon for biointerfaces, transparent conducting oxides, etc.

André has published three books and about 300 papers in peer-reviewed journals. He has given numerous talks and educational seminars at universities and conferences, including many SVC Annual TechCons. His publications are cited more than 11,200 times, and his work has been recognized by several awards, including two R&D100 Awards, the IEEE Merit Award, the Walter P. Dyke Award, and the Mentor Award of the Society of Vacuum Coaters. He served on the Editorial Board of Surface and Coatings Technology and as Associate Editor (2009-2014) for Journal of Applied Physics and was promoted to Editor-in-Chief in 2014. He was the 2015 Chair of the Executive Committee of Advances Surface Engineering Division of the AVS. For his contributions to plasma and material sciences, André was elected Fellow of the American Physical Society (APS), the American Vacuum Society (AVS), the Institute of Electrical and Electronic Engineers (IEEE), and the Institute of Physics (IoP).

### The SVC Mentor Awards

The SVC Mentor Award program was established to recognize those who have made or are making significant contributions to the SVC and/or the industry by their example or guidance, including one-on-one and one-on-many interactions.

### 2016 SVC Mentor Award Recipients



**David J. Christie**, Advanced Energy Industries, Inc., Fort Collins, CO

**For his contributions to the understanding of, and power supply technology supporting, reactive magnetron sputtering**

Dave Christie married the love of his life, Claudia, in 1984, and celebrated 32 years of marriage, and tandem road biking, this year. Dave's career moved to the vacuum coating world in 1995 when he joined Advanced Energy, where he is currently Director, Applications Technology, previously serving as Director, Engineering and Senior Scientist. Before joining Advanced Energy, he held various positions at IXYS Colorado, Lawrence Livermore National Laboratory, and General Motors. In addition, he also had an adjunct faculty appointment at Colorado State University. He received his PhD from Colorado State University, MSEE from University of Illinois, and BEE from Kettering University. His experience and expertise include product development, technology development, advanced power applications for thin films, and intellectual property. He has numerous thin film related publications, and several patents.



**Paolo Raugei**, Deposition Technology Innovations, Jeffersonville, IN

**For his key roles in championing an SVC strategic plan, as a founder of the SVC scholarship program and the SVC Foundation, for service on both boards of directors, and as Foundation Chair**

Paolo's vacuum coating career began in 1976 when he joined the Italian vacuum metallizing equipment maker Galileo Vacuum Systems. He has fond memories of the company's pioneering spirit in vacuum web coating technology. His career with Galileo took him all over the world and in 1989, he finally landed in the US as VP for the Americas. The same year coincides with his introduction to the SVC where he has served in different roles over the years, most recently as Chair of the SVC Foundation. In 2012 he joined DTI, a fast growing web sputter coater, which gave him the opportunity to transition from equipment to product. As Paolo reflects back over the last 40 years, he has been blessed with the support of many individuals, especially his mother as well as Seien, his wife of 32 years.