

In Memoriam, Victor S.-Y. Lin

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Victor S.-Y. Lin, Professor of Chemistry at Iowa State University and a scientist with Ames Laboratory, passed away on May 4, 2010, at the age of 43. Victor was born in Taiwan, and after receiving his bachelor's degree in chemistry from National Chung-Hsing University in Taiwan, he moved to the University of Pennsylvania where he completed his Ph.D. degree under the direction of Michael J. Therien. He worked as a postdoctoral fellow at The Scripps Research Institute in La Jolla, California until starting as an independent faculty member at Iowa State University in 1999.

During his Ph.D., Victor became an extremely accomplished synthetic organic chemist as well as a photochemist, preparing highly functional, conjugated porphyrins for light-harvesting applications. Clearly, Victor was a very productive graduate student, with several *JACS* publications,^{1–3} as well as a *Science* paper coauthored with Therien that has been cited well over 400 times.⁴ Therien writes about Victor's "warmth, boyish charm, boundless energy, quick wit, humorous stories, sharp insights, endless enthusiasm, self-deprecating humor, up-beat personality, disarming smile, and infectious laugh. Victor was not only a singularly gifted young chemist, he was simply fun to be with."

After finishing his doctorate, Victor then went to work as a Skaggs postdoctoral fellow with M. Reza Ghadiri at The Scripps Research Institute in La Jolla, California, where he helped to tease out a complex biosensor device in collaboration with the group of Michael J. Sailor at the University of California, San Diego. Sailor remembers Victor in the following way: "Two things that stand out most in my memories of Victor are his joyous enthusiasm for science and his disarmingly good nature. In the weeks since his death, whenever I try to recall Victor I just see that big smile on his warm face." Victor also contributed to a project on DNA-based photonic logic gates. Again, papers in *Science*⁵ and *JACS*^{6,7} followed as Victor

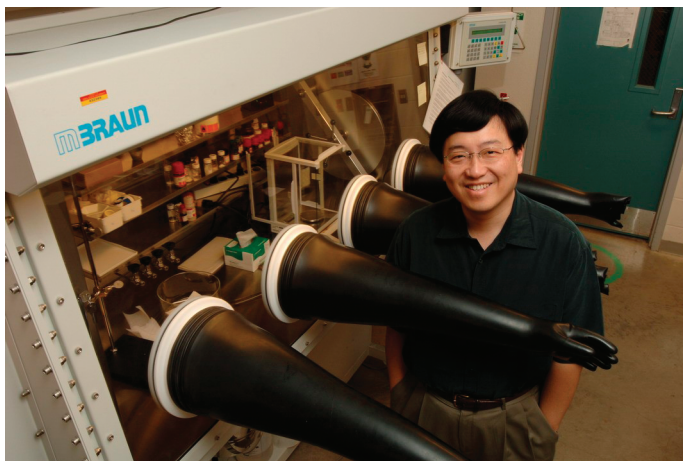


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proved his tenacity and motivation to make his projects work. Victor and I were post-docs together in Reza's lab, and I remember his perpetually jovial and happy personality, cracking jokes while we were working late in the lab, or while struggling through a difficult research problem.

In 1999, Victor began his independent career as an assistant professor at Iowa State University in the Department of Chemistry. It was no surprise to those of us who knew him that his first paper—a beautiful communication describing dopamine and glucosamine detection in mesoporous silica nanoparticle structures—would appear in *JACS*.⁸ He then published another esthetically pleasing and creative *JACS* communication on a different topic, polymerization of conjugated alkynes inside mesoporous silica and alumina that were functionalized with a tethered-copper catalyst.⁹ This was quite an innovation because his approach did not result in pore clogging, thus opening up the way for building interesting conjugated polymer/mesoporous hybrid structures. In yet another early and innovative work, Victor published a full *JACS* paper in 2003, cited over 300 times, that outlines the synthesis of a stimulus-responsive solid for drug delivery that used CdS nanoparticle caps as the actuating agent.¹⁰ The use of nanostructured solids

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for the delivery of diverse agents—from drugs, to membrane-permeable proteins, to genes, to insulin, and cAMP—became a lasting and important area of research for Victor.

Since his early work at Iowa State, Victor branched out in a number of different areas, all linked by his creativity and desire to make functional materials. He seemed to be focusing a great deal of his efforts toward the design and synthesis of catalytically active materials. He endeavored to have an impact in both fundamental and applied catalysis, studying the basis for cooperative catalysis, the esterification of fatty acids, and computational studies of nitroaldol reactions in confined environments. He was the Director of the U.S. Department of Energy (DOE) Ames Laboratory's Chemical and Biological Sciences program, and his pioneering technology led to the founding of a company, Catilin, to bring his biodiesel catalysis research to commercialization.

As would be expected for a career as bright as his, Victor received many awards, notably the NSF Career Award, numerous outstanding research awards from Iowa State and the Federal Laboratory Consortium, and, in March of this year, he was named the second John Corbett Professor of Chemistry, a post that was to begin in June. He supervised and mentored 12 postdoctoral associates, 29 graduate students, and eight undergraduates, as well as interns taken on through the Ames Lab's Science Undergraduate Laboratory Internship program, sponsored by the DOE. His vision and dreams for research lives on in each and every one of them. One of his present graduate students, Robert Roggers, writes that with regard to research with Victor, "it was the creativity of the chemistry in pursuit of application [that] had me hooked from the beginning." Victor is responsible for contributing to the development of the scientific and professional minds of countless students.

In 2009, Victor published a *News and Views* article in *Nature Materials* entitled "Veni, Vidi, Vici, and Then ... Vanished."¹¹ Sadly for us, Victor, that is exactly what you did, but your impact is permanent, both on science

and on the people with whom you interacted. Victor leaves behind his two sons, Derek and Ryan, and his wife, Show-Ling Lee.

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