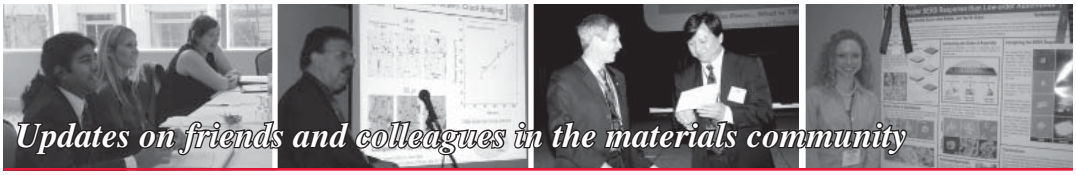


In Memory of Y. Austin Chang, TMS Fellow, Former President

Y. Austin Chang, 2000 TMS president and a 1991 TMS Fellow, passed away on August 2 at the age of 78. The author of more than 500 publications, Chang is widely regarded as a leading scholar in the field of solid-state solution thermodynamics and its applications to the analysis of phase equilibria and defect energetics in solids. Based on the groundbreaking codes that he developed, Chang founded CompuTherm LLC, a successful, Wisconsin-based company that produces user-friendly computer software and databases for thermodynamic calculations.

Chang held the post of Wisconsin Distinguished Professor Emeritus at the University of Wisconsin-Madison (UW-Madison) at the time of his death. He began his academic career at the University of Wisconsin-Milwaukee in 1967, serving as department chair from 1971–1977 and as graduate school associate dean for research from 1978–1980. In 1980, he joined the UW-Madison Department of Metallurgical and Mineral Engineering as professor. While serving as department chair from 1982–1991, he led the department's transition from a concentration in cast iron metallurgy to the broad-based materials science and engineering (MSE) programs that UW-Madison offers today.

In addition to his seminal contributions to the knowledge base of materials science and engineering, Chang was highly influential as an inspiring and devoted educator, mentoring hundreds of students and younger scientists during the course of his career. Said C. Robert Kao, professor of National Taiwan University, who had Chang as his thesis advisor, "He did not just teach his students how to do good science; he taught us to be decent human beings. He did not simply advise us in academic affairs; he nurtured his students and looked after them even after their graduation. This is how I remember him."

Chang joined TMS in 1962. In addition to serving as a TMS Board member and 2000 president, Chang chaired the Physical Chemistry Committee and the Alloy Phase Committee, while also contributing as a member to numerous other TMS committees and activities. His work and service to MSE has been recognized by an array of professional awards and honors. Counted among his TMS-affiliated awards are the TMS Leadership Award (2011), AIME Honorary Member Award (2010), Acta Materialia Gold Medal (2009), John Bardeen Award (2000), Champion H. Mathewson Medal (1996), EPD Distinguished Lecturer Award (1993), Educator Award (1990), and the William Hume-Rothery Award (1989).

Chang was born in Goon village, Honan province, China. In 1950, he came to the United States, receiving his B.S. in chemical engineering from the University of California, Berkeley and his M.S. in chemical engineering from the University of Washington. He returned to Berkeley to earn his Ph.D. in metallurgy.

TMS extends its deepest condolences to Chang's wife, Jean, his three sons and their families, and his many friends and colleagues.

TMS Members Elected to SME College of Fellows

The Society of Manufacturing Engineers (SME) announced that TMS members Dianne Chong and Pradeep Rohatgi will be inducted into its College of Fellows as members of the Class of 2011.

Chong is the vice president of Materials Assembly, Factory & Support Technology for Boeing Research & Technology. She currently serves on the National Academy of Sciences' Board on Global Science and Technology and is a commissioner to the Accreditation Board for Engineering and Technology. She received her B.S., MS., and Ph.D. from the University of Illinois at Urbana-Champaign, and holds an executive master's degree in manufacturing management from Washington University.

Rohatgi is a Wisconsin and UWM Distinguished Professor and director of the Composite and Advanced Materials Manufacture Centers at the University of Wisconsin-Milwaukee (UWM). He received his B.S. degree from Banaras University, India, and his M.S. and Ph.D. from the Massachusetts Institute of Technology. Prior to coming to the United States, he served as the founder, director, and chief executive officer of two national laboratories in India.

The SME College of Fellows was created to honor its members who have made outstanding contributions to the social, technological, and educational aspects of the manufacturing profession.

Renew Your Membership Today!

Watch your mail (both print and e-mail) for your TMS membership renewal notice. There will be no increase in dues for 2012, but membership benefits will be as robust as ever, including:

- Print subscription to *JOM*; electronic subscriptions to the *Journal of Electronic Materials* and *Metallurgical and Materials Transactions A and B.*
- Member pricing on publications and select conference registrations.
- The opportunity to share knowledge, network, and develop programming as a member of a TMS technical committee.

Please don't hesitate to contact the TMS membership staff at members@tms.org if you have any questions. We look forward to working with you as a TMS member in 2012!

Meet a Member: Nychka Joins Art and Science in Jewelry Making

By Lynne Robinson

Much more than metal goes into John Nychka's jewelry creations. A sterling silver pendant embracing a freshwater pearl represents the love of his two daughters—a Mother's Day gift that he made for his wife, Alexandra Veljkovic. A beaded necklace with carved maple end clasps that he and Alexandra made together serves as a reminder of his graduate school days when "we didn't have that much money for expensive jewelry." And a silver tie pin took shape in gratitude for his maternal grandfather who paid the registration to his first silversmithing class when he was still in high school.

It was that silversmithing class that also pointed Nychka to his life's work in materials science and engineering. "That class really made me question why the properties of silver were changing when it was hammered or annealed," he recalled. Nychka had been drawn to the visual fine arts as a teenager, having taken a number of advanced classes in such art forms as drawing, sculpture, printmaking, and glass casting. But, when the time came to select a college major, his experience in jewelry making nudged him into metallurgical engineering. "The creative side of the jewelry making was great—and still is for me," he said. "But, the metallurgy was *way* more fascinating."

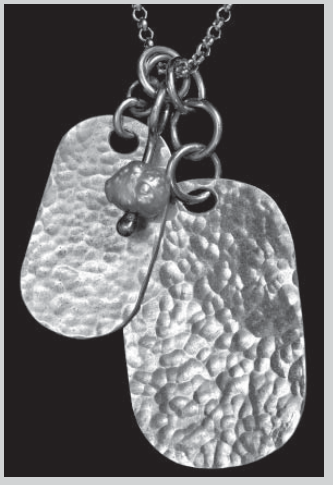
Now an associate professor, Chemical and Materials Engineering at the University of Alberta, Nychka appreciates the synergies created between his hobby and his work. "When I am working on a project I cannot stop thinking about the processing and material properties in the context of materials science," he said. "Having a connection between the theory and the application in my hands is so fulfilling, and helps me to appreciate that I can push limits, or try to determine what I did wrong."

For sterling silver projects, Nychka explores various metal-forming approaches, as well as methods such as planishing (hammering), cutting, stamping, and wire drawing to produce changes in shape and texture. While he appreciates the materials science aspect of silversmithing, Nychka said, "I also like being able to design and then create artwork that is functional as jewelry."

Some of Nychka's pieces have resulted from experimentation in glass casting and flamework—a technique that involves mixing different glasses and forming various shapes to make glass beads. "Glasswork is so different than other media," said Nychka. "You are basically making sculptures out of liquid, and then letting them harden. The lack of control when mixing different colors of glass is very enjoyable and it's like opening Christmas presents when you collect your finished beads from the annealing oven."

Nychka also enjoys beading jewelry, partly because "it is easy to make a pattern quickly" and also because his daughters, Naya, age 5, and Neve, age 3, have joined the family hobby by making necklaces, bracelets, and earrings with beading kits. Like his daughters, Nychka's interest in jewelry making can be traced back to cherished family memories. In his case, it was watching and helping his paternal grandfather—an electrician by trade—make jewelry in his shop. Noting that his grandfather's interests ran toward lapidary work, Nychka said that a goal is to incorporate more stone setting into his own pieces, using the stones and minerals that have been passed down to him from his late grandfather's collection.

Over time, Nychka has acquired tools and resources that enable him to work on projects in his garage, while still taking occasional classes to refresh his techniques, have access to different equipment, or learn something entirely new. The best way to develop skills, he notes, is to tackle a difficult project that pushes them to the next level or into new directions. "Each style of jewelry making has its own set of challenges," he said. "For me, finding the time seems to be the biggest challenge at present."



This planished sterling silver pendant represents Nychka's daughters.

John Nychka does silver soldering on one of his jewelry pieces. Separate pieces are joined by soldering with ternary eutectic alloys, while multiple joints on a single workpiece can be accomplished by using a series of solders with different melting points.

Each month, *JOM* profiles a TMS member and his or her activities both in and out of the realm of materials science and engineering. To suggest a candidate for this feature, contact Maureen Byko, *JOM* editor, at *mbyko@tms.org*.