

Penn's Shu Yang Named a "Top Young Innovator"

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PHILADELPHIA -- Shu Yang of the University of Pennsylvania has been named to the 2004 list of the world 100 Top Young Innovators by Technology Review, a publication of the Massachusetts Institute of Technology. The "TR100," chosen by the editors of Technology Review and an elite panel of judges, consists of people younger than 35 whose innovative work in technology has a profound impact on today world.



Yang, an assistant professor in Penn Department of [Materials Science and Engineering](#), is an emerging leader in the field of nanoscale polymer science. Her laboratory studies how to program or "tune" synthetic polymers to function with unique electrical, optical and bio-sensing abilities. Yang believes this technology could be used to underlie future generations of computers and communication networks.

Taking cues from biology, for example, Yang has recently made advances in the creation of complex optical arrays that mimic how biological molecules guide and concentrate light. The ability to autofocus and direct light signals offers a more compact, robust and efficient system for optical communications than the conventional motorized systems

In another area of interest, Yang studies how the surface properties of material can be tuned to respond to becoming wet, to become capable of changing their etness responsesbased on changes in electricity, solvent, heat and light. The ability to dynamically tune surface properties would provide opportunities in many applications, ranging from photonics to biotechnology.

"Shu Yang was our first new hire of the 21st century and, in that short time, she has become a tremendous asset to the department," said Peter K. Davies, professor and chair of Penn Department of Materials Science and Engineering in the School of Engineering and Applied Science. "Shu is certainly deserving of the TR100. She is an innovator who tempers her outstanding scientific creativity with matchless capability and energy."

Yang will be honored Sept. 29-30 at Technology Review Emerging Technologies Conference at MIT. More information on ETC2004 is available at www.tretc.com.

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