and in 1991, he was promoted to professor.

Tanaka has published nearly 200 scholarly papers and book chapters. He has served as editor of the *Journal of Chromatography A* and the *Journal of Separation Science* for 10 years and also serves or has served as an editorial board member of those and other journals.

Tanaka will present the award address before the Division of Analytical Chemistry during the fall national meeting in Washington, D.C.—MITCH JACOBY

ACS AWARD IN THE CHEMISTRY OF MATERIALS

Sponsored by E. I. du Pont de Nemours & Co.

Geometry is at the heart of chemistry, and in the work of **Omar M. Yaghi,** this year's winner, the marriage of chemical form and function is blatant and welcome. In his metal organic framework (MOF) crystals and related networklike structures, which Yaghi, 43, collectively refers to as reticular chemistry, geometry becomes beautifully real.

What's more, chances are good that it will become useful, technology-generating geometry, too. BASF, the largest chemical company in the world, has begun selling several of Yaghi's structures. Trademarked as Basolite, the new line of microporous crystals is touted by the company as having "the world record in surface area"—on the order of a football field per gram.

COURTESY OF OMAR YAGHI

Yaghi

Think of catalysis, carbon capture and sequestration to combat greenhouse gas emission, hydrogen storage for vehicles, and gas separation systems, and you get an idea of how Yaghi, a professor in the department of chemistry and biochemistry at the University of California, Los Angeles, envisions the future for this growing class of structures whose members already number in the thousands.

By mixing and matching metal oxide nodes with a wide variety of organic struts, Yaghi and his colleagues have made an enormous variety of MOFs. Using these and other molecular building blocks, Yaghi also has been making MOPs, COFs, and even ZIFs—that is, metal-organic polyhedra, covalent organic frameworks, and zeolite imidazolate frameworks, respectively. "The synthetic space is unbelievable," Yaghi says. And over the years, Yaghi has developed synthetic principles and procedures that have inspired others to join the MOF movement.

"The recent work of Omar Yaghi has vitalized and clearly dominates the field, indeed to a large extent has served to define it," collaborator Michael O'Keeffe of Arizona State University notes, referring to MOF R&D.

"He has certainly opened up this area of metal organic frameworks by demonstrating you can use organic molecules as Tinkertoys," adds professor of chemistry Michael D. Ward, director of New York University's Molecular Design Institute. "This enables you to develop a versatile class of compounds with an incredible diversity of functions," notes Ward, whose own work centers on designing molecular building blocks that assemble into solids by way of hydrogen-bonding.

Among MOFs' most tantalizing abilities is storing lots of carbon dioxide, methane, hydrogen, and other gas molecules without having to apply high pressures or cool down the gases. "I tell students it's like bees congregating on a honeycomb," Yaghi says.

Yaghi, one of 13 brothers and sisters, moved to America from Jordan when he was 15 years old to pursue an education. When he was applying for graduate school, he was captivated by a spherical metal oxide structure made by Walter G. Klemperer of the University of Illinois, Urbana-Champaign, which he saw in UI's graduate school catalog. Under Klemperer's tutelage, Yaghi earned a Ph.D. in 1990. After a two-year postdoctoral stint at Harvard University in Richard Holm's inorganic chemistry laboratory, Yaghi was a chemistry faculty member at Arizona State and then the University of Michigan, each time for seven years, before landing in 2005 at his present venue at UCLA. Among his previous awards is ACS's Solid-State Chemistry Award (1988).

Yaghi will present the award address before the Division of Inorganic Chemistry.—IVAN AMATO

PMSE SELECTS 2009 FELLOWS

The ACS Division of Polymeric Materials: Science & Engineering (PMSE) has named its 2009 fellows. They are **Christopher K. Ober, Craig J. Hawker, Garth Wilkes, Lon J. Mathias,** and **Alex Jen.** They will be inducted as the ninth class of PMSE fellows during the spring ACS national meeting in Salt Lake City.

Ober

Hawker

Wilkes

Mathias

Jen

Ober is interim dean of engineering and Francis Bard Professor of Materials Science & Engineering at Cornell University. His interests lie in polymers, lithographic materials for microelectronics and biotechnology, and new environmentally and biologically friendly materials.

Hawker is director of the Materials Research Laboratory at the University of California, Santa Barbara. He is studying the interface between organic and polymer chemistry with an emphasis on the design, synthesis, and application of well-defined macromolecular structures in biotechnology, microelectronics, and surface science.

Wilkes is University Distinguished Emeritus Professor of Chemical Engineering at Virginia Polytechnic Institute & State University, where he studies the structure-property behavior of polymeric materials.

Mathias is a professor of polymer science and engineering at the University of Southern Mississippi. His re-