



2005 IOTA SIGMA PI HONORARY MEMBER AWARD

Dr. Linda Brazdil, Prairie Crossing Charter School

Dr. Linda C. Brazdil is the **2005 recipient of the Iota Sigma Pi Honorary Member Award**. This is the highest honor that Iota Sigma Pi bestows on outstanding women chemists.

Dr. Brazdil is currently the Director of Prairie Crossing Charter School in Grayslake, Illinois. She is excited to have the opportunity to work with an innovative community of learners to create an atmosphere that fosters growth and the desire for learning in everyone. She is particularly pleased to have a position that allows her to combine two things about which she is passionate, science and education. In this position she is responsible for oversight of all aspects of school operation including adherence to its mission, curriculum development, professional development for teachers, charter renewal process, budget, human resources, and facilities management. Projects she oversees include successfully shepherding the renewal of the school's

charter through the Illinois State Board of Education; overseeing the construction of the first "green" classroom building in Illinois that will obtain LEED (Leadership in Environment and Energy Design) certification, likely at the silver level; obtaining a BP Leader Award for development of a program for seventh graders to study the effects of chloride on the local watershed; obtaining a Project Learning Tree grant for fourth and fifth graders to work with a landscape architect to design landscaping around the new building that incorporates native plants, and obtaining a Greening Schools Grant from the Illinois EPA to buy cisterns that will be used to help eliminate water runoff from the site and use rain water to maintain the landscaping.

Before coming to PCCS, Dr. Brazdil was the Coordinator of the Bridges to Science Literacy program at the Illinois Mathematics and Science Academy (IMSA). In this position, she worked with teams of educators throughout Illinois to provide professional development using the publications developed by AAAS's Project 2061 (*Science for All Americans*, *Benchmarks for Science Literacy*, and *Atlas of Science Literacy*). She helped these teams enhance students' understanding of important scientific concepts by building coherent science curricula, enhancing their instructional practice, and selecting science education materials. She also served as a consultant to Project 2061 to conduct professional development and to analyze test items for their alignment to standards. Linda previously was the Coordinator of the Smithsonian Network supporting teachers throughout the state of Illinois in their innovative efforts in math and science education and in assessing the impact of these programs on student learning.

Before moving to Illinois in 1999 Dr. Brazdil was an Associate Professor of Chemistry at John Carroll University, a science education consultant, a Senior Project Leader in the Exploratory Catalysis and Processes Group of BP, and a high school chemistry teacher. While at BP, Linda was responsible for the conception, execution, and reporting of research projects in areas of oxidation catalysis and catalysis of organic reactions by acids and bases. These projects included highly proprietary investigations whose primary objectives were identification of selective catalysts for given oxidation or ammoxidation reactions and development of technology to produce environmentally safer solvents for use in coatings. Her work entailed preparation, characterization, and testing of catalyst formulations as well as development of new process schemes, interaction with engineers in initial scale up of catalysts and

processes, and assisting in the economic analysis of various processes. Her more fundamental research involved determination of the mechanisms of catalytic reactions and catalyst regeneration as well as identification of the phases responsible for catalyst activity. Her work focused on kinetic studies of both model compounds and catalytic systems of interest, coupled with the use of multiple analytical techniques including *in-situ* Raman, x-ray diffraction, XPS, electron microscopy, and EXAFS for solid state and surface characterization of catalysts.

Dr. Brazdil received a B.S. in chemistry from Notre Dame College of Ohio and a M.S. and Ph.D. degrees in physical chemistry from Case Western Reserve University. She holds 33 U.S. patents and numerous foreign patents in the area of oxidation and ammoxidation catalysis. Additionally, she has 14 scientific publications. She received two NSF research grants, an Eisenhower Grant through the Ohio Board of Regents in 1995 to oversee the Project Discovery Workshop for middle school math and science teachers held at John Carroll University, and an Exxon Education Fund research grant. Recently, she authored a proposal which led to Prairie Crossing Charter School receiving a BP Leader Award for seventh grade students to study the effects of elevated chloride levels on species in a nearby watershed. She has held offices in numerous professional societies and was Head of the Science Collaborative for the Cleveland Education Fund.

Dr. Brazdil received the 1991 Cleveland Technical Societies Council Technical Achievement Award, an award presented to a researcher under the age of 37 for his or her accomplishments and potential. She was inducted into the BP America Inventors Hall of Fame in 1990, was listed in *Exemplars: Women in Science, Engineering, and Mathematics*, was recognized as one of Notre Dame College of Ohio's 70th Anniversary Outstanding Alumnae (1992), was named the Outstanding Chemistry Alumna of Notre Dame College of Ohio in 1994, and received the Joan P. Lambros Service Award from the Fluorine Chapter of Iota Sigma Pi in 1998.