

Keith R. Beck to receive

THE OLNEY MEDAL



Keith Russell Beck is this year's recipient of the Olney Medal for outstanding achievement in textile chemistry. The Olney Medal was established in 1944 to recognize outstanding achievement in textile, polymer, or other fields of chemistry of major importance to textile science, including the development of chemical agents or processes used in textile manufacturing or for methods used in textile evaluation.

PERSONAL DATA

A native of Morenci, Mich., U.S.A., Beck earned his BS in chemistry from Adrian College in 1965 and a PhD in chemistry from Purdue University in 1970.

He began his career as a visiting assistant professor and postdoctoral research assistant at Purdue University in 1969 and became an assistant professor of chemistry at Elmhurst College in 1970. He re-joined Purdue University as an assistant professor of textile science in 1977, becoming an associate professor in 1983. In 1986, he joined the faculty of North Carolina State University (NCSU) College of Textiles as an associate professor of textile chemistry. In 1989, he became associate department head and director of graduate programs. Beck is currently a professor and the head of the department of Textile Engineering, Chemistry, and Science.

Beck and his wife, Beverly Seiser Beck, reside in Raleigh, N.C., U.S.A. They have three children, Brady Beck, 35, of Pinehurst, N.C.; Kelli Beck, 34, of Cary, N.C.; and Kerri Hudson, 29, of Pensacola, Fla., U.S.A. Beck is a member of the Highland United Methodist Church. In his spare time, he enjoys woodworking, photography, and playing with his grandchildren.

ACHIEVEMENTS

Beck's early research at Purdue University included synthetic and analytical aspects of durable press finishes. The analytical techniques were used to characterize the composition and behavior of the crosslinking agents for cellulose. A method for stripping durable press agents from finished fabrics was developed and used to study the effects of durable press catalysts on cellulose molecular weight.

At NCSU, Beck's research has focused on dyebath monitoring, textile applications of near-infrared spectroscopy, and the use of liquid and supercritical carbon dioxide for textile cleaning. He worked on developing two different real-time dyebath monitoring systems. The direct dyebath monitoring system determines bath pH, conductivity, temperature, and individual dye concentrations,

and was used to study exhaustion of reactive, direct, basic, and acid dyes. To monitor exhaustion of water-soluble dyes, disperse dyes, and indigo, he developed a flow injection analysis (FIA) system, which he coupled with high performance liquid chromatography (HPLC) to allow real-time determination of both reactive dye exhaustion and hydrolysis.

Beck also developed a large library of near-infrared spectra used to identify fibers in less than one minute, and a supercritical fluid extraction method for determining the solvent-soluble materials on cotton fibers, yarns, and fabrics.

His current work is focused on improving the analysis of reactive dyes by HPLC.

HONORS AND AWARDS

Beck is the author of approximately 59 peer-reviewed scientific and technical papers, conference and symposia papers, and book chapters.

Beck is a member of the American Chemical Society (ACS), and a past member of the ACS Polymer Group, the Society for Applied Spectroscopy, the Illinois State Academy of Science, and the Midwest Association of Chemistry Teachers in Liberal Arts Colleges. He joined AATCC in 1977, and has been

active in both administrative and technical committees for the Association. He has served as secretary for RA105 Supercritical Fluid Test Methods, and RA103 Spectroscopic Technologies committee. Beck has served as chair for RA45 (Finish Analysis), Millson Award, and education committees, as well as the publications board. He has also been a member of the editorial board and the executive committee on research. He is currently on the board of directors for the AATCC Foundation, and on the board of directors of the Association itself. At the local level, he has served as program co-chair for the former Northern Piedmont section.

In 1962, Beck was named a Sigma Alpha Epsilon outstanding pledge. In 1965, he was named to Alpha Chi (a scholastic honorary society), and was listed in *Who's Who Among Students in American Universities and Colleges*. In 1967 he was also named to Phi Lambda Upsilon (a science honorary society). He was one of 12 outstanding teachers selected by the Women's Honorary at Elmhurst College in 1973. In 1975 he was listed among the *American Men and Women of Science* and then named faculty member of the year at Elmhurst

College in 1976. Beck was a nominee for outstanding faculty member for the NCSU College of Textiles in 1993 and 1994. In 2000 he was an NCSU College of Textiles nominee for the board of governors teaching award. In that year he was also the co-recipient of the J.W. Weaver award for paper of the year in *Textile Chemist and Colorist & American Dyestuff Reporter*.

THE OLNEY MEDAL

Established in 1944 in honor of Louis Atwell Olney, the founder and first president of AATCC, the Olney Medal recognizes outstanding achievement in textile or polymer chemistry or other fields of chemistry of major importance to textile science. The award consists of a gold medal, a scroll, and an honorarium. Presentation of the medal each year is a highlight of AATCC's International Conference & Exhibition. This year, the Association will present the Olney Medal at the conference awards banquet on Wednesday, November 1. Beck will deliver the traditional Olney Medal Address on Wednesday at 8:15 a.m. His topic will be "Knob-Twiddling to Answer Questions about Textile Wet Processing Chemicals and Processes."

