

News Release

For Immediate Release

AATCC Honors Howard C. Malpass with the Olney Medal

RESEARCH TRIANGLE PARK, N.C., USA, March 7, 2019—Howard C. Malpass is this year's recipient of the AATCC Olney Medal Award. Malpass is being recognized for his work on the implementation of pre-reduced indigo and its beneficial impacts in the dyeing, manufacturing, and retail industries.

Early in his career, Malpass worked at Milliken & Co. first as a supervisor, and eventually dyeing superintendent. In 1979, he became the technical superintendent for Cone Mills commission dyeing and finishing. In 1989, he joined BASF (later DyStar) as a technical advisor. He was assigned responsibility for indigo technical service among other products.

Historically, indigo dyeing was a vatting process, involving chemical reduction of blue pigment by water, sodium hydroxide, and sodium hydrosulfite. Filling huge vats with blue pigment powder and chemicals created dusty, toxic air in the dyeing plant. But in the early 1990s, BASF-Germany introduced the product Indigo Solution, commonly known as pre-reduced indigo, or PRI. PRI is reduced at the dye manufacturing plant by hydrogen gas. It is soluble and ready-to-use, eliminating vatting hydrosulfite and its resultant COD waste treatment and salt burdens; however, hydrosulfite is still required to maintain reduction in the dyeing process which is openly exposed to air.

Malpass realized PRI was a better product. It fit right into his desire for denim mill sustainability, but he had to convince his customers. From his own research and experience of his customers and colleagues, he learned that indigo dyeing should not be resigned to with some amount of mystery, but rather respected as a quantitative process.

To convince his customers about PRI's benefits, with the help of DyStar he put together dye metering equipment in his garage. This equipment enabled controlled long-term trials to collect data to prove the benefits of pre-reduced indigo. With each new project, Malpass improved his equipment to better demonstrate to his customers that their denim products could be produced with cost savings and better control. Nearly 100% of the denim indigo used in the USA was converted to PRI. With Malpass's help, this approach was applied by his colleagues in Mexico to convert nearly all the denim mills in Latin America.

In 2014, Malpass retired, and is currently consulting part-time for Denim Dyeing Technical Service LLC. He collaborated with Ralph Tharpe of American Cotton Growers Denim Mill and Dean Ethridge of Texas Tech University to win a prestigious Walmart USA Manufacturing Grant to develop a yarn indigo foam dyeing process. From Malpass's initial work with a single yarn running through a plastic tube, a pilot machine was designed and built in cooperation with Gaston Systems Machinery Co. and is now running at Texas Tech University with funding through Indigo Mill Designs LLC.

This process removes all hydrosulfite from indigo dyeing by operating totally enclosed with a foam medium. The process can duplicate, without yarn pre-scouring, traditional pure indigo shades. With the benefit of PRI in this process, indigo-dyed denim fabric with a traditional look was created, it is believed for the first time, using no reducing agents. Better than usual wet fastness was achieved even without rinsing. The result is a zero-discharge process. The first production application will begin in January 2019. Malpass's contributions helped introduce a more cost-efficient, sustainable, and salubrious indigo dye process for suppliers, manufacturers, and retailers.

Malpass received a BS in Textile Chemistry at North Carolina State University (NCSU) in 1967 and served as a lieutenant in the US Navy before returning to NCSU to complete a Masters in Textile Technology in 1973. He has been a member of AATCC since 1979.

The Olney Award

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. This year, the conference will be held at the Sheraton Fort Worth, in Fort Worth, Texas, USA, from April 9-11, 2019. The Association will present the Olney Medal during the Awards Luncheon on April 11. Malpass will present the Olney Address "Putting Invention into Practice: Conversion of the North American Denim Dyer to a New Form of Indigo" on April 11 at 8:15 a.m.

For a complete list of our esteemed past award recipients, visit www.aatcc.org/abt/awards/

About AATCC: [AATCC](http://www.aatcc.org) is the world's leading not-for-profit association serving textile professionals since 1921. AATCC, headquartered in Research Triangle Park, NC, USA, provides test method development, quality control materials, and professional networking for members in about 60 countries throughout the world.

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A photo of Howard C. Malpass can be found [here](#).

For a complete list of our esteemed past award recipients, visit <https://www.aatcc.org/abt/awards/olney/olney-medal-recipients>

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