



Session V: Aesthetic Colorants

Development of Reactive Tertiary Colors for Right First Time Production



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Dr. Chen holds an M.Sc. in Chemical Engineering from Tatung University, Taiwan. He joined Everlight Industrial Chemical Corporation as Process Engineer and R&D Researcher in 1992. Everlight recognized his potential and fully sponsored his further education and training in the Department of Textiles at University of Manchester in 1996. He was initiated into colour chemistry in Manchester and completed his Ph.D. in 1996. He returned to Everlight in 2000 as a Senior R&D Researcher, rose through the ranks and became Head of R&D Centre in 2013, a position he continues to hold today.

During his 26 year professional career, Dr. Chen has built up a vast amount of knowledge and experience in colour chemistry. In 2009 the Taiwanese Government bestowed on him the prestigious “National Invention and Creation Award” consisting of a silver medal.

Abstract

Fashion critical sensitive shades such as beiges, olives, khakis and grays continue to pose a challenge to the textile industry. These shades are very difficult to match exactly and the reproducibility is seldom perfect. It is very difficult to reach the Right First Time (RFT) production with a normal primary trichromatic combination. Oftentimes, shading or re-coloring is needed to satisfy customer requirements. The concept of 'Tertiary Colors' has been developed to avoid re-work and enable robust production together with good fastness properties. Tertiary colors are expected to achieve 90-95% RFT, increase productivity by 30% and decrease costs by 20% on account of reduced water and energy consumption. Reduction in the carbon footprint by 38% is an added advantage.

This presentation will give an insight into the technique of tertiary colors.