Dyeing and functional finishing by using biobased materials

Hidekazu Yasunaga, Assoc. Prof., Kyoto Institute of Technology

Abstract

What are biobased materials? What properties do biobased materials have? Why use biobased materials? There may be a lot of answers and diverse ideas. Well, these questions require time-consuming research and careful consideration. And then, I am studying dyeing and functional processing (finishing for fibre materials) by using BioBased Materials (BBMs). The reasons for this, or the advantages of using BBMs for such studies, are based on their several characteristics. They are the safety and sustainability of BBMs, as well as the properties that synthetic materials lack.

Oxidation dyes are used most for hair dyeing in the world. However, the invention of a novel hair dyeing technique being milder and safer for a human body is desired, because oxidation dyes cause sometimes sensitisation symptoms and severe dermatitis for some people. I have been studying safer hair dyeing techniques by the use of BBMs.

On the other hand, I am studying the dyeing of fibre materials to give them unique features and the finishing to give them human-friendly and -oriented characteristics by using BBMs. For example, dyed textiles that darken when washed, treatments to reduce problems when wearing masks, textile treatments to reduce the incidence of metal allergy symptoms, etc.

I will present examples of my studies in this issue.

YASUNAGA, Hidekazu
Kyoto Institute of Technology
Faculty of Fibre Science and Engineering