Implementation of Hydrophobic Surface by Simulating Microstructure of Bird Feathers

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A representative example of biomimetic technology is the technique of producing a surface that imitates the superhydrophobicity of a lotus leaf. The technique of making such a hydrophobic surface is divided into a chemical method and a physical method, and a chemical method is currently being actively studied. Therefore, this study focused on the physical structure of the hydrophobic surface. In this study, we investigated whether the microstructural differences of the bird feathers affect the hydrophobicity and the physical structure of the bird feathers. Imitating hydrophobic surface of micrometer unit which effectively shows hydrophobicity. If the manufactured hydrophobic surface is applied to metal parts and external exhibits, it will contribute to the lengthening of the life by increasing the durability and preventing the rust through the waterproof function in the rain. In addition, it is expected that research in the field of birds, such as studies on the reinterpretation of the structural and physical aspects of bird feathers, will be the focus of attention.