

Preparation of anti-fogging coating solution using silane coupling agent

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Fogging occurs on the surface of various substrates such as glass windows and glasses due to the temperature difference. This phenomenon causes many problems. Therefore, in order to solve this phenomenon, a hydrophilic coating is performed to prevent fogging on the surface of the object.

In this study, a sol-gel method was used to prepare an anti-fogging coating solution. A hydrophilic coating solution was prepared by hydrolysis and condensation of colloidal silica using water and a catalyst. However, this coating solution is not properly coated on the hydrophobic substrate. Therefore, the surface of the substrate was modified to be hydrophilic by plasma treatment, and then coating was performed. In addition, ethylene diamine was added to improve durability.