

### The application of atmospheric pressure plasma on the surface cleaning

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Generally, low pressure plasma are used widely in dry etching, thin film deposition and surface treatment. But, it is very expensive to operate because low pressure plasma requires the use of vacuum system. However, the surface cleaning by the atmospheric pressure plasma without vacuum system shows the same effect on the using the low pressure plasma. Therefore, atmospheric pressure plasma not only decreases the processing cost but also increase the advantage of industrial processes.

In this study, the atmospheric pressure plasma was studied for the removal of organic impurity such as photo-resist. We tried to fine the adequate condition to remove the photo-resist with the various plasma conditions such as gas composition, gap distance, rf power and treatment time. The surface of the etched photo-resist was characterized by the atomic force microscopy (AFM) and X-ray photoelectron spectroscopy(XPS).