# A Suggestion for Optimal Fine Dust Removal Model Using Acoustic Levitation

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This study proposes a new method to remove fine dust, which is increasing rapidly these days, without filtering. Currently, much-used filters can be torn, and they have to be replaced periodically. And they also require continuous management of users. To overcome this problem, this study proposed a device model of fine dust removal system that utilizes acoustic levitation phenomenon to fix particles by ultrasonic waves. By producing several models and selecting the most efficient model, this study measured the efficiency of the model through experiments. In addition, this study has devised a method to remove fine dust collected inside the apparatus by using water droplets and also proved the efficiency of this method experimentally.

**Awards Won:**