

# New prototype purifies air and removes pollution

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Raúl Suárez Parra

In order to reduce the presence of pollutants in the atmosphere, Raul Suarez Parra, researcher at the Institute for Renewable Energy (IER) of the National University of Mexico (UNAM), created a prototype air washer that absorbs volatile organic compounds such as grease generated while cooking.

"In any venue we can find pesticide residues, detergents, deodorants and many other contaminants that eventually affect health; however, with the implementation of the air washer part of all these substances it is trapped in the reactor decreasing their distribution," relates Parra.

The prototype consists of a column with several perforated disks and an exhaust fan that guides the smoke generated in the kitchen to interact with a microporous material (zeolites), which accelerate the adsorption of pollutants.

For example, the prototype can be implemented at a local chicken rotisserie where large amount of smoke is generated from burning fat, instead it can be trapped by the discs of the reactor. Although the prototype does not retain one hundred percent of the compounds gradually they accumulate and partially clean the air.

Parra Suarez relates that the idea came from the eighties in order to remove lead from the atmosphere and purify the air. The project also helps meet the requirements demanded by the general law of [environmental protection](#), for which businesses must reduce the emission of pollutants.

The innovation is protected by patent registration before the Mexican Institute of Industrial Property (IMPI) and soon will have the granting of the corresponding property title.

The researcher reports that the design can also be used to clean up some of the pollution from vehicles and large businesses, and already has a prototype that will be placed in the kitchen of the Institute for *Renewable Energy*.

The intention is to commercialize the prototype at an affordable price.

Provided by Investigación y Desarrollo

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