

News & Comments

Plastic in Spiderwebs

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Scientists have now found a natural way to identify and monitor pollution which is by using spiderwebs. They found the plastic PET, seemingly from textiles, and particles from the abrasion of tires and polyvinyl chloride (PVC).

Whether they're caught in fly webs, mosquito nets, dust, or microplastics, spider webs capture everything that flies through the air. In an attempt to understand the air's plastic particles, researchers at the university have now for the first time examined the catch of eight-legged creatures.

The tiny microplastic floats through the air and gets stuck into the spiderweb. Microplastic is the result of commercial product development and the breakdown of larger plastics.

The level of plastic detected by the study varies based on location. And examining spiderwebs is a very easy and cost-effective way to identify and monitor air pollution in the city, therefore locating pollution dense areas.

This isn't the first time that spiderwebs are used for pollution detection. Previously, webs have shown the pollutants such as heavy metals or magnetic particles, stuck in them. But this study is the first to identify microplastic from the spiderweb.

The study researcher collected spiderwebs situated 2 m above the ground from street-side bus stops in the city of Oldenburg in Germany. The examination of the webs revealed that all of them were contaminated with microplastic, most of which were PET (polyethylene terephthalate), and tire wear particles (TWP).

Microplastic content in immediate ambient air can be determined using this simple method instead of complicated measurements. This is useful for further toxicological studies.

KEYWORDS

Py-GC/MS, microplastics, tire wear particles, spider webs, spatial distribution, temporal distribution, urban air

