

Pesky pollutants that persist, courtesy of nature

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In the late 1970s, the United States banned the production of an assortment of synthetic pesticides, insulators, coolants and flame retardants due to their toxicity and the fact that they stick around for a long time. But according to an article in *Chemical & Engineering News* (C&EN), the weekly newsmagazine of the American Chemical Society, nature makes compounds similar to these toxic human-made substances - and that could be a concern.

In the 1930s, a class of [synthetic compounds](#) known as polychlorinated biphenyls (PCBs) was widely used for its diverse applications in commercial products. But evidence that the substances could cause harm mounted, which resulted in the U.S. ban on their production in 1979. In parallel, scientists were discovering that certain bacteria, fungi, plants and aquatic organisms naturally made compounds similar to PCBs and other phased out chemicals, including the pesticide DDT and PBDEs. Now, as C&EN Contributing Editor Deirdre Lockwood reports, researchers are using a variety of techniques to determine whether organic pollutants they find in the environment are natural or synthetic in origin, which organisms are making them and for what purposes.

Additionally, because these natural organic pollutants resemble known toxic substances, concern is growing that they could be harmful. Some evidence suggests that they are likely making their way through the food chain. Scientists have found trace amounts in humans of hydroxylated PBDEs that are possibly natural in origin. Naturally produced [organic pollutants](#) have been detected in pets and pet foods, a finding that is

likely related to a seafood-based diet. Now researchers are setting out to learn about the potential toxicity of these natural pollutants.

More information: [cen.acs.org/content/cen/article...isms-synthesize.html](https://cen.acs.org/content/cen/article/...isms-synthesize.html)

Provided by American Chemical Society

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