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# Chemical & Engineering News

## Latest News

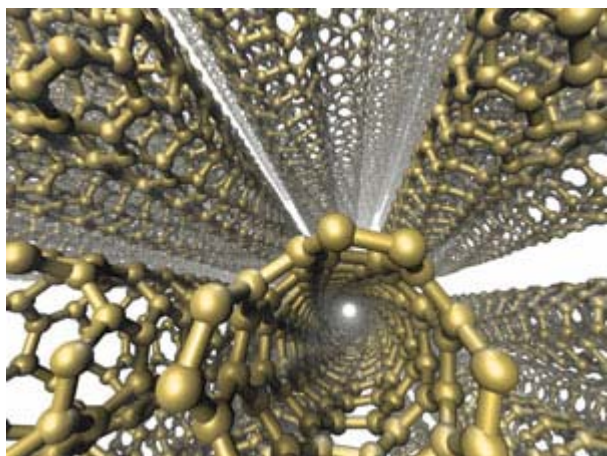
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### Regulation

## Nanotubes Deemed Different From Carbon EPA clarifies to industry that material must be treated as new substance

[Britt E. Erickson](#)

**SENSING CONFUSION** in the nanotech industry, the [Environmental Protection Agency](#) has clarified its position on carbon nanotubes, saying they are chemically distinct from graphite and other forms of carbon. The move serves as a reminder that carbon nanotubes are considered new substances under the Toxic Substances Control Act (TSCA).



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*Manufacturers of carbon nanotubes need to submit toxicity data on their products as part of a premanufacture notice.*

EPA first established its position on carbon nanotubes in 2007 but decided to issue a clarification now because "current pre-notice inquiries to the agency and questions in public forums still indicate a lack of clarity on this issue," the agency wrote in a *Federal Register* notice on Oct. 31. Under TSCA, manufacturers and importers of carbon nanotubes are required to notify EPA at least 90 days before they import or use carbon nanotubes for commercial purposes. That notification could trigger the agency to restrict the use of the product or ask for more toxicity data.

EPA's notice is an indication that manufacturers are not complying with the law, says Richard A. Denison, a senior scientist with the nonprofit group [Environmental Defense Fund](#). "I am dismayed by EPA's lax approach to enforcement," Denison says.

Nonetheless, critics who would like more government oversight of the nanotech industry say EPA's latest move is a step in the right direction. But they add that several issues still need to be resolved.

For example, EPA does not address nanoscale materials other than carbon nanotubes, says Andrew D. Maynard, chief science adviser of the Washington, D.C.-based nonprofit [Project on Emerging Nanotechnologies](#) and a member of C&EN's advisory board

Numerous studies have suggested that the nanoscale forms of some materials, such as titanium dioxide or silver, are more toxic than their bulk counterparts.

EPA's position on carbon nanotubes, however, is in line with that of the European Union. In June, EU representatives voted in favor of removing an exemption for carbon and graphite under [REACH](#), the EU's chemicals management program, to close a loophole that allowed nanosized forms of carbon to be sold without testing ([C&EN, June 23, page 9](#)). That exemption was officially removed on Oct. 8.

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