

Stripping away lead-based paint in a flash

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A new paint stripper that combines the principles of a vacuum cleaner and a pulsed lamp shows promise as a much-needed new technology for removing dangerous lead-based paint from older housing, scientists in Massachusetts are reporting.

Michael J. Grapperhaus and Raymond B. Schaefer explain that existing lead abatement methods have drawbacks. Blasting and sanding, for instance, generate large amounts of toxic lead dust and may damage architectural surfaces, while chemical stripping may produce hazardous waste.

In the Dec. 15 issue of ACS' *Environmental Science & Technology*, they describe results of early tests on a paint stripper that uses high-intensity flashes of light — a million times more intense than sunlight — to burn off layers of lead-based paint. The flashes do not damage the underlying surface. Remains of the paint are immediately vacuumed and routed into a filtering system.

Analysis of air samples during the experiments showed no dangerous levels of lead. "These tests show that broadband incoherent light pulses can be effective in removal of lead paint from architectural materials," the researchers report. With the concept for the new stripper proven on small samples of paint, they plan to move on to more extensive studies of the technology.

Source: American Chemical Society

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