

Toward eliminating 'sick-building syndrome' with low-cost air purifiers

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If you're inside, chances are you're breathing in low levels of indoor air pollution, a mix of volatile organic compounds and other gaseous substances that can accumulate in buildings and potentially make you sick. An article in *Chemical & Engineering News (C&EN)*, the weekly newsmagazine of the American Chemical Society, describes the latest in air-cleaning technology, including one approach based on a filter for the International Space Station.

Mitch Jacoby, a senior correspondent with *C&EN*, writes that in recent years, scientists have been gaining a better understanding of the health problems associated with [indoor air pollution](#) collectively known as "sick-building syndrome." In a study from 2012, one team discovered that low levels of carbon dioxide or [volatile organic compounds](#) affected people's mental acuity and decision-making. Other symptoms, such as difficulty breathing and eye irritation, have also been associated with poor indoor air quality. Cracking open a window can help pollutants escape but is not always an option in offices—or in space. And devices to rid indoor air of unwanted gases or particles have traditionally relied on expensive metals such as platinum and palladium.

But help could soon be on the way. Scientists are working to replace these precious metals with low-cost alternatives. One company is building on its novel metal mesh design for purifying the International Space Station cabin air for more earthly applications. Recent studies that tested out new air-cleaning devices have so far yielded promising results.

More information: "Indoor-Air Cleanup" -
cen.acs.org/articles/92/i44/Cleaner-Air-Indoors-Precious.html

Provided by American Chemical Society

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