

Nanotechnology makes big inroads into construction industry

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which deals with objects so tiny that thousands would fit inside the period at the end of this sentence — is having a big impact in the construction industry, according to the cover story in the current edition of *Chemical & Engineering News (C&EN)*, the American Chemical Society's weekly newsmagazine. Indeed, some experts believe that nanotechnology will revolutionize the industry, which builds, renovates, and repairs society's infrastructure.

In the article C&EN senior editor Bethany Halford describes nanotechnology's surprising and largely unrecognized contributions to some of humanity's biggest and most visible projects. Nano-sized particles of the white pigment titanium dioxide, for instance, are giving the surfaces of buildings, windows, and other objects self-cleaning surfaces that stay bright white or crystal clear for years, shrugging off airborne soot, dust and grime. When titanium dioxide absorbs ultraviolet light from the sun, it breaks down pollutants that come in contact with concrete or glass.

Hollow cylinders of carbon called carbon nanotubes, so small that they can't even be seen under a regular microscope, are boosting the strength of reinforced concrete, one of the most ubiquitous construction materials. [Nanotechnology](#) also is helping to make concrete a more sustainable, allowing the recycling of more fly ash, a waste product of coal-fired electric power plants, into fresh concrete used in new construction.

More information: "Building Small"
pubs.acs.org/cen/coverstory/89/8924cover.html

Provided by American Chemical Society

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