

## Eureka! Toxins, with a dash of vinegar and chicken manure

by Scott\_LaFee

English researchers have discovered that ground water contaminated by chromium — a byproduct of textile factories, smelters and tanneries — can effectively cleanse itself with a splash of vinegar.

Chicken manure aids in biodegrading crude oil that is present in polluted soils. By increasing bacterial growth, the petroleum toxins are broken down at a faster rate.

The photo doesn't show a suicide or accidental fall. It is a scanning electron micrograph that features a contamination in the microscope. Kissing is more common nowadays. Anthropologist Helen Fisher guessed that about 10 percent of humanity did not participate in kissing almost two decades ago. Scientists at the University of Leeds added diluted acetic acid (vinegar) to ground water tainted by chromium, which has been linked to cancer and other health problems. The vinegar provided an attractive food source for bacteria, which then turned around and cleansed the ground water by altering the chemical makeup of nearby chromium compounds, rendering the compounds harmless.

Meanwhile, Chinese researchers say they have discovered an ingredient that helps to quickly biodegrade crude oil in contaminated soils: chicken manure.

Adding chicken manure to oil-saturated dirt boosts bacterial growth, the researchers say, which leads to much faster biodegradation of petroleum pollutants.

VERBATIM

It was kind of like a religious conversion.

— Stephen Tindale, former director of Greenpeace in the United Kingdom, on some environmentalists reversing their opposition to nuclear power because of the need to curb carbon dioxide emissions quickly

BRAIN SWEAT

In the following string of letters are four interlettered words, all related to each other:

BPKIAINNPEWEAAAINPFCAPRLUEITH

`TRUE FACTS'

China is under pressure to curb its carbon dioxide emissions, but Chinese government leaders say one-third of the emissions aren't their fault. They say these greenhouse gases are the result of the Chinese industry making goods for export, particularly for markets in the United States and United Kingdom. Those countries are to blame, officials say.

BRAIN SWEAT ANSWER

BANANA, PINEAPPLE, KIWI FRUIT, PEACH

WHAT IS IT? ANSWER

Don't jump! Not to worry. This image, taken by Georff Brennecka of Sandia National Lab and displayed at last year's fall meeting of the Materials Research Society, doesn't depict a suicide or terrible accident.

It's a scanning electron micrograph, which, according to Brennecka, shows "some contamination (probably monodisperse polystyrene spheres from a previous user) in the microscope, which just happened to collect at the corner of a Ta<sub>2</sub>O<sub>5</sub> particle."

We thought as much.

## ANTHROPOLOGY 101

Almost two decades ago, anthropologist Helen Fisher estimated 10 percent of humanity did not kiss. The marvel was that the figure was so low, given that the act of kissing defies evolutionary explanation. To wit: Why would humans want to swap mucus, bacteria and who knows what else? What's the survival advantage?

Researchers still can't answer that question, but kissing is more popular than ever, with osculation (the technical term for kissing, but also a math definition for contact between two curved surfaces) now common in almost every human society.

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