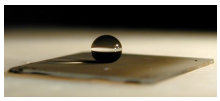
12 November 2008 By: Dan Talpalariu, Science Editor



The new omniphobic nanomaterial
MIT

Nanomaterials Safety Regulations Needed

Impact on human health lags behind implementation in regular use

Nanomaterials are that kind of material made of parts less than one tenth of a micrometer (less than a thousandth of a human hair) in at least one dimension, sporting particular features and characteristics. In the related section of this article, you can check out some of the latest uses of such materials. To put it briefly, they are recently used in a large spectrum of fields, from **paper** to strong materials, from cosmetics to **light** alteration, to better food, **self-healing** or **omniphobic** surfaces.

But a recent report laid down by science, medicine, legislation and business specialists from the Royal Commission and funded by the British government, indicated that there is an acute lack of safety measures and regulations related to the usage of this type of material. As they make their way more and more into our lives, as an integrating part of the items that we use, more tests performed by safety-related institutions are in order. The report was especially focused on the potentially negative effects of buckyballs (the nickname of buckministerfullerenes), carbon nanotubes and nanosilver. Buckyballs, for instance, which are slated to be used in medicine for enhanced drug administration purposes, have been found to hold a potential for building up fat, while carbon nanotubes were associated with the possibility of developing lung cancer. "Having analyzed the potential health and environmental impacts which flow from the properties of nanomaterials, we concluded that there is a plausible case for concern about some (but not all) classes of nanomaterials," reads the report, cited by **Reuters**. The report did not effectively stress on the negative impact of nanotechnology, but only on the fact that current regulations are not able to address them properly, since they lack the required terminology and categorization, leading to a "degree of ignorance and uncertainty in this area". "We are also concerned that more sophisticated later generation nanoproducts will raise issues which cannot be dealt with by treating them as chemicals or mixtures of chemicals," explained John Lawton, the ecologist who led the report.