



## The Nanotube Site

Most scientists have probably heard of carbon nanotubes (CNTs), but it is not easy to get an overview of the field. Starting research on CNTs one has to deal with a flood of information. A visit to the Nanotube Site might guide you.

A first look at the site encourages you, as you learn that Robert F. Curl, Harold W. Kroto, and Richard E. Smalley won the Nobel Prize for their work on the  $C_{60}$  "buckyball" in 1996. The link to Smalley's web pages leads you to several nice images, a visit to the Center for Nanoscale Science and Technology, his Nobel Lecture (in case you missed to read it in *Angewandte*<sup>[1]</sup>). You can also learn how to mount a CNT on a scanning probe microscope tip.

The layout of the Nanotube Site can not really be called artistic, but on the other hand, this web site is quickly loaded. It is maintained by David Tom-

anek who would appreciate any assistance. In fact, several links are dead.

A closer look at the site will lead you to the "Physical Properties of Carbon Nanotubes" pages compiled by Tom Adams. These pages give you a good overview about CNTs and a set of interesting references. A useful selection of books is also given. Beautiful image galleries of optimized geometries and detailed information about some CNT structures are found below.

What is currently being done in the field and who works on it? The site is unfortunately less useful here: "Other Nanotube Link Sites" gives many links to other web sites. The information is however not structured according to subjects. One has no alternative than to navigate through around 50 web sites. There are three further sections: "Dedicated Nanotube Sites", "Nanotube Related Sites", and "Links Relevant to Nanotube Research". Again, the information is not presented in a structured way. Secondly, the links do not present an overview of all the important groups in the world, but is rather focused on US groups. The web site could be improved largely by dividing the field into several subjects and presenting some basic information and the important research groups for each subject. Also a comparative overview over the diversity of synthetic methods and properties of the resulting CNTs would surely help to make the subject more transparent and easier to enter.

The Nanotube Site also tells you about future and past conferences and work-

shops. The section "Sources of Nanotubes and Nanotube-Based Products" has been extremely useful for us: Here you can find a list of companies which sell nanotube materials in both bulk and small quantities.

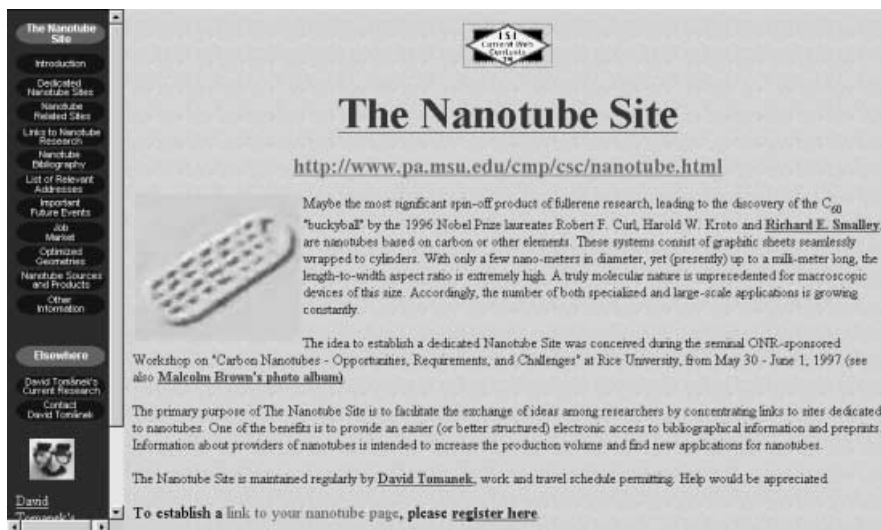
Carbon nanotubes are currently an extremely popular subject. The risk that CNTs will end up like other famous and trendy scientific subjects is high if the enthusiasm (some would say hype) of some researchers is not moderated. It would be helpful for both industries and universities if the Nanotube Site could be a messenger for realism concerning CNTs. An honest and detailed overview of potential applications with their requirements and whether or not they match the properties of CNTs would be a tremendous step in that direction. One or two real commercial applications would do more benefit to the field than a hundred potential ones.

Suggest a web site or submit a review:  
angewandte@wiley-vch.de

To conclude, the Nanotube Site reflects the situation in the real nanotube world precisely: fascinating on the first view, with a lot of information, which is however not optimally structured, and a lack of discussion on industrial applications. It is well worth visiting.

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- [1] R. E. Smalley, *Angew. Chem.* **1997**, *109*, 1666–1673; *Angew. Chem. Int. Ed. Engl.* **1997**, *36*, 1594–1601.



For further information visit:  
<http://www.pa.msu.edu/cmp/csc/nanotube.html>  
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