# Bookmarks on emerging areas of practice

New engineering areas emerge when scientific knowledge "coalesces" into the design and development of new products or services. Throughout this process, professional regulatory bodies, governments and researchers play various roles: they conduct and promote new science and engineering, formulate policy and safeguard the public interest. How can we keep abreast of new science and technology developments? The following websites can get you started:

**NRC: National Research Council Canada www.nrc-cnrc.gc.ca**

NRC research focuses on emerging sectors ranging from bioinformatics, genomics and proteomics to fuel cells, photonics, and nanotechnology. On the left bar, click "Areas of Research." Choose an area such as "nanotechnology." This link leads, for example, to plans for the establishment of a National Institute for Nanotechnology in Edmonton. You can also find details on research currently underway and its impact on industry.

**PREST: Policy Research in Engineering, Science and Technology les.man.ac.uk/PREST/**

If your focus is on policy and regulatory work, try this University of Manchester-based institute website. PREST undertakes science and technology policy and strategy research. It provides "impartial and authoritative analysis and information to decision makers concerned with the economic, political and social implications of science and technology." On the left bar, click "Publications" for listings of significant books and journals. There are also links to Discussion Papers and Reports you can download, such as the November 2002 paper *Identifying emerging generic technologies at the national level.*

**National Nanotechnology Initiative www.nano.gov/**

Nanotechnology seems poised to pervade almost any industry from electronics to medicine to energy to aerospace. The National Nanotechnology Initiative (NNI) is a major U.S. government program supporting research and development in the area of nanoscience and nanoengineering. The NNI site contains the texts of various reports on the initiative and its implementation plan. Current solicitations for proposals are also available. Click on the "NSET Reports" links at bottom left for full text reports, such as the *Nanostructure Science and Technology: Worldwide Study on Status and Trends.* Links to NNI participating departments and agencies are provided along with links to other sites of related interest.

**Foresight Institute www.foresight.org/NanoRev/index.html**

For more background and context on the nanotechnology revolution, try Foresight. This is a nonprofit educational organization co-founded and chaired by one of the pioneers in the field of nanotechnology, Eric Drexler. Foresight promotes understanding of molecular nanotechnology, addresses and communicates nanotechnology-related issues and informs the public and decision makers. Click "Publications" for current and back issues of the quarterly *Foresight Update* newsletter. Also available are white papers, background papers, briefings and some books, including Drexler's seminal 1986 work, *Engines of Creation*. "News" leads to a wide variety of headlines plus a link to Foresight's new nanodot.org website featuring "news and discussion of coming technologies."

**CCPE: Canadian Council of Professional Engineers http://www.ccpe.ca/**

The Canadian Council of Professional Engineers (CCPE) has worked to develop national policies and national position statements on emerging technologies. On the blue navigation bar, click "Guidelines and Policies," then "National Policies." You will see a link to the CCPE's national policy on emerging technologies. Also, under "Guidelines and Policies," click "National Position Statements." At centre screen, look at CCPE's position statement on biotechnology as an emerging technology. See page 32 in this issue, for more on CCPE's work in emerging disciplines.

**Ontario Centres of Excellence http://www.ontariocanada.com/ontcan/en/rts/rts_ont-ctrs-excellence.jsp**

The Ontario Centres of Excellence (OCE) site offers a unique look at innovative or emerging areas of science as they unfold from research to successful industrial and commercial applications of new technology. There are currently four Centres: the Centre for Research in Earth and Space Technology (CRESTech), Communications and Information Technology Ontario (CITO), Materials and Manufacturing Ontario (MMO), and Photonics Research Ontario (PRO). At the middle screen, click on one of the four centres for individual program details, current research, success stories, newsletters and more. At bottom, www.oce-ontario.org provides further details on OCE as a whole.

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