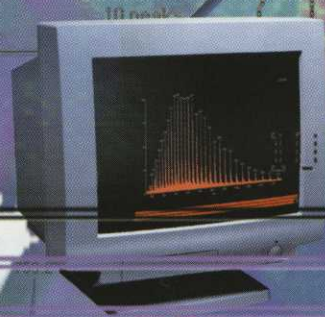


# ANALYTICAL CHEMISTRY

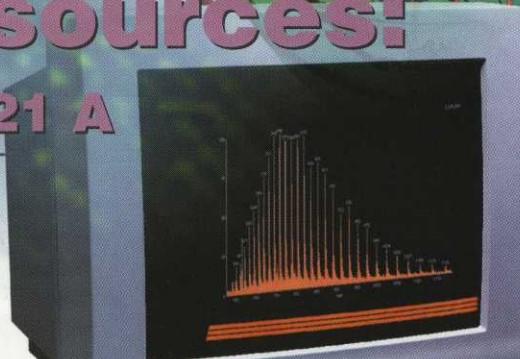
Includes News & Features and AC Research DECEMBER 1, 1996



151 VEAEEARI  
 201 GDDDSAD  
 251 KLSEVFKG  
 301 NFITETG  
 351 TLTIEQV  
 401 FLDLIQEG  
 451 RIPVHMIE  
 501 AKEPISME  
 551 AREAKV  
 601 SRSEV



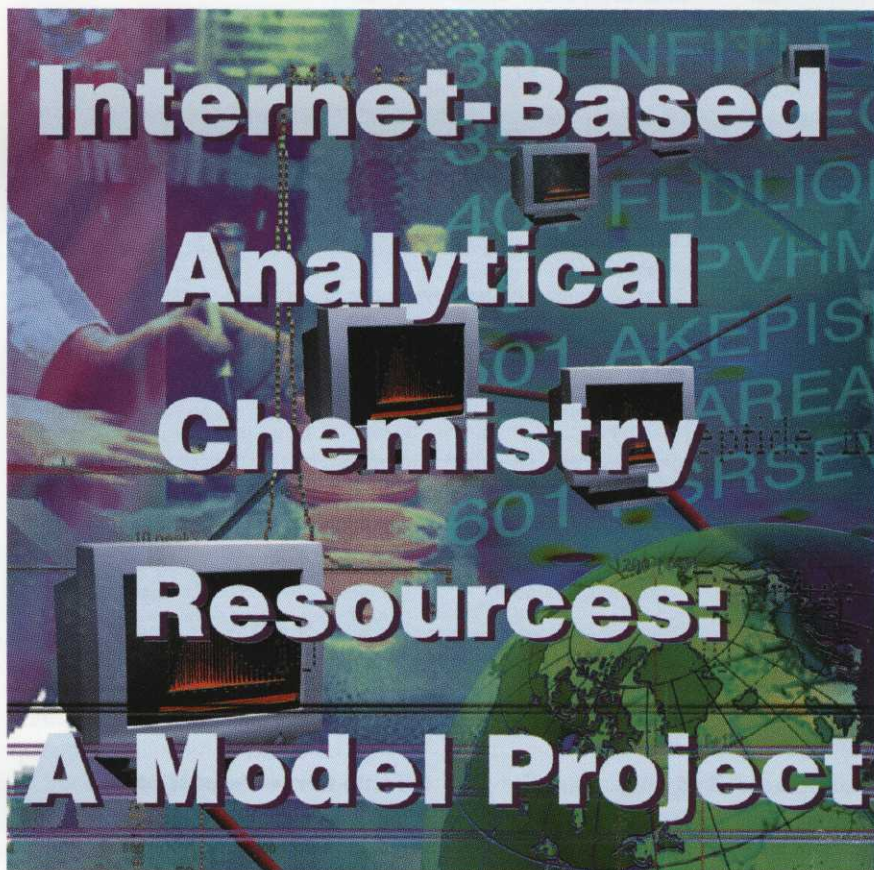
## Internet-Based Analytical Chemistry Resources: A Model Project 721 A



**M**an has always sought to organize knowledge in his attempts to comprehend the complex world. We have seen many times during history how technological improvements prompted radical changes in the way information has been disseminated. One of the most dramatic examples was Gutenberg's invention some 500 hundred years ago that allowed the mass production of printed books. Today, with the popularity of the Internet, we may be seeing the beginning of a revolution equally influential. New tools have become available that promise to completely change the way information is disseminated. The Internet is already being used for a large number of projects involving, for example, global public libraries and teaching in a variety of fields (1).

The storage and dissemination of scientific information are also being radically reorganized. Within five years of their introduction, World Wide Web browsers have become the most commonly used software on personal computers. Organizations of all types are rushing to create the most attractive Web sites possible in order to stay competitive with other groups in the same field. Cryptic incantations such as "http://www.acs.org" or "http://nationaldebt.com", once the sole property of computer geeks and wizards, have become prominently displayed on television programs and in magazine advertisements.

Web technology was in fact invented for the exchange of scientific information. It has not, however, replaced more conventional sources of information such as journal articles and books any more than television has replaced radio. (Count how many radios you own compared with the



*Web technology can be used to manipulate analytical data and facilitate the exchange of scientific information*

number of televisions.) Computer screens are difficult to watch for long periods, and the physical requirements of using a computer make it incompatible with the way most people read long articles.

Web browsing has, however, become the first method of choice for many scientists and students when they want to find information on a subject. Currently, the quality of the information on the Internet is somewhat lower than that obtainable from conventional print resources, but the immediacy of discovering new information seems to outweigh issues of editorial and artistic nicety. Even so, the success of a global scientific "library" depends on the

development of high-quality databases for the relevant scientific data, as well as on the development of means for convenient interconnection of these databases.

For all practical purposes, some types of scientific information exist only as Internet-based resources. Bioanalytical databases containing DNA and protein sequences and three-dimensional protein structures have become invaluable to molecular biology researchers and are normally accessed through Web interfaces (2-7). These databases are based on information from one of the largest analytical chemistry projects in history: the determination of the complete sequence of

**David Fenyö**  
**Wenzhu Zhang**  
**Brian T. Chait**  
*Rockefeller University*  
**Ronald C. Beavis**  
*New York University Medical Center*

