dents' views on bibliometrics, on citation analysis, on measures of esteem and on peer review. Where appropriate, the analysis separately discusses the views from different individual disciplines. The concluding chapter considers, in the light of the academics' responses, what role there might be for quantitative techniques in assessment of research at department level.

The report will be of interest to all concerned with research. Its conclusions are relevant to the U.K. and to many other countries. The findings set clear boundaries on how far quantitative evaluation can be pursued in the context of annual or periodic assessments of academic departments.

Quantitative assessment of departmental research: a survey of academics' views; SEPSU Policy Study No. 5; A4, 76 pp. Paperback, is available from the Publication Sales Dept., The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, U.K., price £19.50 (£22.00 overseas) including postage and packing. For further information, contact Dr. Peter Collins on +44 (0)71 839-5561 ext. 289.

Gold medal awards in the U.K.

PROFESSOR Alan Townshend, Dean of the School of Chemistry at the University of Hull, and an editor of *Analytica Chimica Acta*, has been awarded the SAC Gold Medal of the Analytical Division of the Royal Society of Chemistry. The biennial award, which is named after the Society of Analytical Chemistry, was presented by the President of the Analytical Division, Prof. J.D.R. Thomas, on 1st March 1991.

Professor Duncan Thorburn Burns, Professor of Analytical Chemistry of The Queen's University, Belfast, has been awarded the 3rd AnalaR Gold Medal by BDH Ltd. for his distinguished contributions to analytical chemistry. It was presented at the Royal Society, London, on 18th February 1991.

ANALYTICA restructured

ANALYTICA Munich (to be held from 5 to 8 May 1992) will be presented with a completely new structure. The trade fair's exhibit range, which has been extended to include Halls 1 to 22, has been grouped into four product sectors: analysis, diagnostics, analysis/diagnosis and laboratory equipment. This means that the individual exhibition halls and each exhibitor have also been allocated to these four product sectors in terms of location.

The result for trade visitors is a more surveyable organization system. They can now go from the outside via one of three trade fair center entrances straight to the sector that interests them the most. Shuttle bus services within and around the trade fair center provide even faster access One bus service stops at the four exhibition sectors and the conference building, while the other stops at the trade fair center entrances, the subway (U-bahn) station and the parking areas.

None of the contents of the successful concept of ANALYTICA will be changed. However, the remarkable growth rate of this "International Trade Fair for Biochemistry and Instrumental Analysis with International Conference on Biochemical Analysis", as it is officially titled, has made this restructuring of the exhibition area necessary.

For further information, contact Messe Munich International, Postbox 12 10 09, 8000 Munich 12, Germany; Tel: +49 (0)89 51070; Telex: 5 212 086 ameg d; Fax: +49 (0)89 5107506.

SDi's second global report on analytical instrument industry

STRATEGIC Directions International, Inc., the Los Angeles-based international consulting firm, has recently published its second Global report, *The SDi Global Market Assessment: The Analytical-Instrument Industry, 1990–1995*. In this report, SDi concludes that the analytical instrument industry, with 1990 sales over

US $7 billion, is expected to have a growth rate of over nine percent, reaching $11 billion by 1995.

The report provides detailed, easy-to-use data on over 70 instruments. Among the instruments that are showing the fastest growth rates are SFE, ICP/MS, and LC/MS at annual rates that range from 25–60%.

In this study, the industry is divided into seven main sections. Chromatography accounts for the largest share, over 35%, or $2.6 billion; however, the fastest growing market is bioinstrumentation, with a growth rate of over 13% per annum. The slowest growth is expected in the surface science area, with a 6% growth rate. After chromatography, the next largest categories are molecular spectroscopy at $1.5 billion and atomic spectroscopy at $900 million.

Because this industry commands a worldwide market, the report divides the geographic regions into four main sections: U.S.A. and Canada, Western Europe, Pacific Rim, and Other. The U.S.A. and Canada region is expected to retain the major share, 37%, through 1995, at which time it will account for $4.3 billion in sales. However, the fastest growing sector will be the Pacific Rim, with a growth rate nearing 10%. Due to the increasing demand for analytical instruments in the Pacific Rim, manufacturers in Western Europe, Japan, and the United States are beginning to increase their sales efforts in this region. Currently, the Pacific Rim region consumes $1.5 billion worth of instruments.

For the first time ever, SDi has created a performance index of the analytical instrument industry. Using 1988 as a base year, sales for 1990 were up by 14%, and 1991 is expected to be up by 21%. SDi's analysis shows that profitability has declined since 1988. Also, the index breaks out industry sales by chromatography, spectroscopy, and broad-line market segments. The chromatography sector, as a whole, has greater profitability than spectroscopy-oriented firms.

This study is available at US $2,195. For more information, please contact: David J. Milligan, MAP Program Manager, Strategic Directions International, Inc., 6242 Westchester Parkway, Suite 100, Los Angeles, CA 90045, U.S.A. Tel.: 213 641-4982. Fax: 213 641-8851.

Frost & Sullivan's study on analytical instruments

THE analytical instrument industry is also the subject of a new study by Frost & Sullivan. They report that the explosive growth of the U.S. analytical instrument (AI) industry was evident in 1990 from the size of the companion exhibit "modern analytical instrumentation and laboratory apparatus" to the Pittsburgh Conference As noted in the 258-page study entitled *The U.S. Market for Analytical Instrumentation* (A2307), the 860 exhibitors "stretched the facilities of the nation's largest exhibit center (NYC-Javits Center". According to Frost & Sullivan, other, more precise indicators analyzed in the study also point to a flourishing industry. U.S. analytical instrument shipments overall, valued in constant dollars, grew annually from $1.27 billion in 1979 to an estimated $2.48 billion in 1990. Frost & Sullivan forecasts this annual total will reach $3.25 billion in 1994.

In terms of exports and imports, the indicators also point up. The study reports the U.S. trade balance for analytical and scientific instruments was a favorable $359.7 million in 1987: exports $718.7 million, imports $359 million. By 1990, the balance was even more favorable: exports an estimated $1,331.2 million, imports an estimated $638.8 million, for a balance of $692.4 million.

New product technology continues to be the key driver of AI revenue growth and business health in this high-growth U.S. manufacturing sector. But here, looking at patents issued in the field of professional and scientific instruments, the Frost & Sullivan study finds a possible "harbinger of long-term problems". Between 1978 and 1988, U.S. patents granted to U.S. inventors in the field grew by 24%. U.S. patents granted to Japanese inventors increased by 140% In 1978, U.S. inventors accounted for 61.3% of the patents granted in the field. Japanese inventors were second with a 15.3% share. By 1988, the U.S. share had dropped to 52.2%, while the Japanese share was up to 25.1%. Apart from this, most of the study's findings support a buoyant AI outlook for the 1990s. Shipments of chromatographic instruments,