Letters

The American Chemical Society: Fact and Fancy

The selection by the American Chemical Society (ACS) of Warren D. Niederhauser of the Rohm & Haas Company as president-elect for 1983 brings to a conclusion one of the most tempestuous elections in the 106-year history of the ACS. Although reports in the press (News and Comment, 29 Oct., p. 455; 3 Dec., p. 981) (*1*) described this election as a clash between the academic and the industrial segments of the Society, the facts show otherwise. The industrial executive had vigorous support from the academic community, while the university professor had support from many industrial colleagues. In no sense could the problems which arose during the campaign be described as an industrial-academic confrontation. The scientific community is currently under stress of various types. To generate false points of controversy within scientific ranks is certainly nonproductive. The election results are definitive. A determined Society is moving rapidly to attack the challenges which lie ahead.

The Society serves a broadly based membership, with concerns focusing on the problems of the very top corporate executives, practicing research chemists, college and university professors, teachers, patent specialists, marketing specialists, newly enrolled students, and many others. ACS programs reflect this diversity of a strongly committed membership. Society officers seek advice and help from the top leaders of the American chemical industry, from many committees and advisory bodies within the Society, from our Younger Chemists Committee, and from Student Affiliate groups. Programs to help unemployed and underemployed members are extensive. Further, such programs are under constant review to ensure that they do the best job possible with the resources available. A Committee on Economic Status monitors the economic health of the membership. A Committee on Science, involving some of the very top chemists of the world, is helping to keep ACS activities and policies in line with the important priorities of chemical science.

Our educational activities are exemplary. New efforts in education involve both the industrial and academic components of Society membership. Recently Corporation Associates, under the leadership of Hugo Stange of the FMC Corporation and Edel Wasserman of the du Pont Company, joined with the Society Committee on Science, chaired by Herbert Kaesz of the University of California at Los Angeles, to develop a program of support for America's schools. According to current plans, the high-level professional expertise, enthusiasm, and help of the industrial chemical community will be offered to schools to improve their precollege science education programs. A serious national problem is being attacked through the combined efforts of the industrial and academic members of the ACS.

The Society combines the diverse skills of many different members in rendering service to the nation and to the profession of chemistry around the world. All branches of science are touched. We have no time for industrial-academic feuds, and we regret that certain segments of the scientific press have misunderstood one of America's premier professional societies.

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References

1. *Chem. Week* **131**, 17 (27 October 1982).

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Space Astronomy

In M. Mitchell Waldrop's article about the future of space astronomy (Research News, 10 Dec., p. 1101), he gives an account of possibilities for larger optical telescopes. In this context, he states that, by reducing the shuttle orbiter's internal payload, the very large External Tank (ET), which holds the shuttle's propellants, could be taken into orbit. Surprisingly, it appears that this could be done with a net *increase* in internal payload.

For safety reasons, NASA now dumps the ET into the Indian Ocean before the shuttle achieves orbit. NASA does not want a repeat of the Skylab incident of 1979. However, to put the ET into one particular empty stretch of ocean requires some loss of shuttle payload capability. The orbiter's trajectory must be adjusted to toss the ET back to Earth. At present, the main engines are shut down before achieving orbit. After the ET is discarded, the shuttle's Orbital Manuevering System must be used to move the spacecraft into its initial elliptical orbit.

A direct ascent into the initial orbit using the main engines could literally double the shuttle's payload. First, the internal payload could be increased by about a tonne. This comes from use of an optimal ascent trajectory and from the use of residual ET propellants. Second, the ET becomes 35 tonnes of "payload." Application of this payload to astronomy, as mentioned by Waldrop, is only one of a large range of possibilities.

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Laboratory Maintenance

The problem of laboratory maintenance is a part of the general instrumentation crisis in American universities, which may be as much a matter of inappropriate policies as insufficient funds. At the 1982 annual meeting of the Geological Society of America, a group of department chairpersons and other science administrators addressed this problem and, although no miracle cures were offered, suggestions were made that are worth repeating.

All maintenance costs and the responsibility for covering them for a specific time should be clearly defined before instruments are acquired. Minimum levels of technical staffing and material support should be mandated, as should minimum user fees; and these levels should be indexed to economic parameters. Most equipment grants include a statement that obligates the institution to provide adequate care for the equipment, but because most instruments (at least initially) serve specific projects and identifiable user groups, the costs of maintenance are treated as direct costs to grants or contracts. There is, typically, no provision in the institution's indirect cost base to maintain such instruments or laboratories during extended periods of inadequate external funding. Here