

tion of smoke or other particulate matter. However, since air temperatures are higher in the center of London than in surrounding areas, and there is less vegetation, wet fog seldom forms here, even when it is present in the suburbs. As control of smoke increases, there is also less chance of any serious reduction in visibility. Already in the heart of London we can enjoy air that is no smokier than that in many small communities up and down the country. The grime of ages has been washed from St. Paul's Cathedral and from many public buildings, with a reasonable prospect of their remaining clean for many years to come.

We still suffer from a substantial amount of pollution by sulfur dioxide, and traffic fumes are unpleasant in busy streets, but if conditions were still as they were in Chadwick's day there would have been little point in building a revolving restaurant 600 feet above the city so that patrons could admire the view.

R. E. WALLER

*Air Pollution Research Unit,
St. Bartholomew's Hospital Medical
College, Charterhouse Square, London*

Mining in Glacier Bay Monument

In Carter's review (29 Mar., p. 1449) of the Sierra Club book, *Glacier Bay*, he states that nature conservationists oppose mining of significant nickel-copper and molybdenum deposits in the Glacier Bay Monument [although these strategic metals are scarce in the U.S.] and that

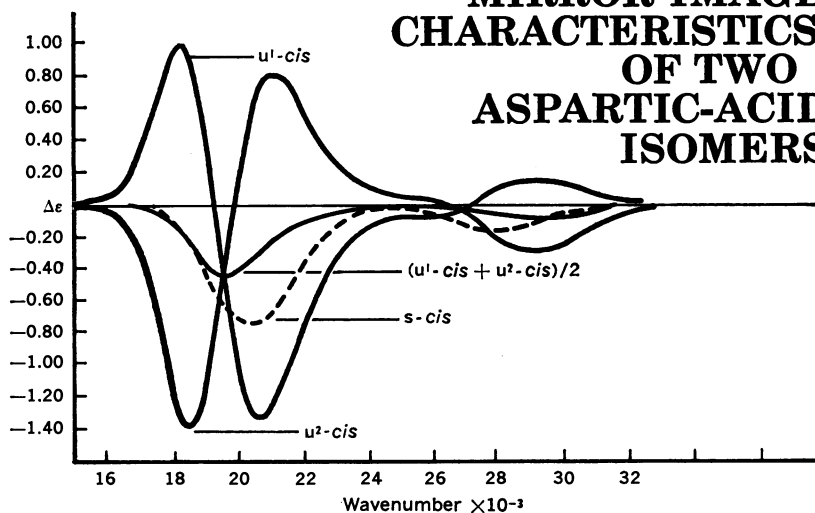
If there should be a critical shortage of metals, any prohibition imposed by Congress on mining in a Glacier Bay National Park could, of course, be lifted by Congress. In fact, such authority could be delegated to the President for use at his discretion. The fear of some that critically needed resources may be kept permanently "locked up" in wilderness preserves always has been baseless.

That fear is not baseless. The theory that presidential "unlocking" of withdrawn minerals makes them available for imminent emergency use is unsound, because many years must elapse between exploration, discovery, development, and finally, access to the metals. It is true that "economists know no way to make benefit-cost analysis adequately reflect the intangible values of wilderness and other natural environments," but equating scenery with price

CHEMICAL PROFILES

... drawn by Durrum

PROVING THE MIRROR-IMAGE CHARACTERISTICS OF TWO ASPARTIC-ACID ISOMERS



Aspartic acid, with its three donor sites, can form a variety of hard-to-identify chelate isomers. The three circular-dichroism profiles drawn here, plotted from data gathered by a Durrum-Jasco CD Recorder, are typical of the molecular detective work* that can be achieved with this versatile instrument.

The steric requirements of aspartic acid indicate that in a cobalt-diethylenetriamine complex, three isomers will predominate: one *s-cis* (symmetrical) and two *u-cis* (unsymmetrical). The latter are essentially mirror images of each other, and the Durrum-Jasco instrument provides a way to identify one from the other.

The configurational contributions to the CD traces of the two mirror-image isomers should, in theory, cancel out, leaving an "average" trace that approximates that of the *s-cis* isomer where there are no configurational contributions. As seen here, a very close correlation is achieved, proving that the two *u-cis* isomers are indeed pseudo-mirror images and providing clues as to their specific forms. The Durrum-Jasco CD Recorder is a powerful analytical tool, used throughout the world to classify and identify complex organic and biochemical compounds.

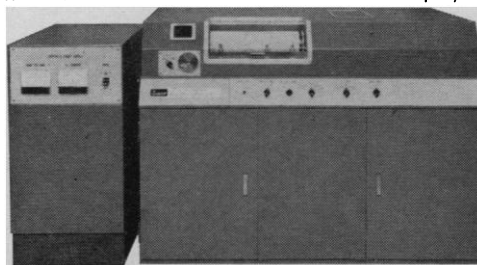
CD SPECIFICATIONS OF DURRUM-JASCO ORD/CD-5:

Wavelength Range: 185 to 700 mμ.

CD Range: full scale differential absorbance readings of ± 0.002 , 0.005, 0.010 and 0.020.

CD sensitivity: 1×10^{-5} differential absorbance. CD linearity: 1%.

CD reproducibility: 2×10^{-5} differential absorbance. Price: from \$29,600.



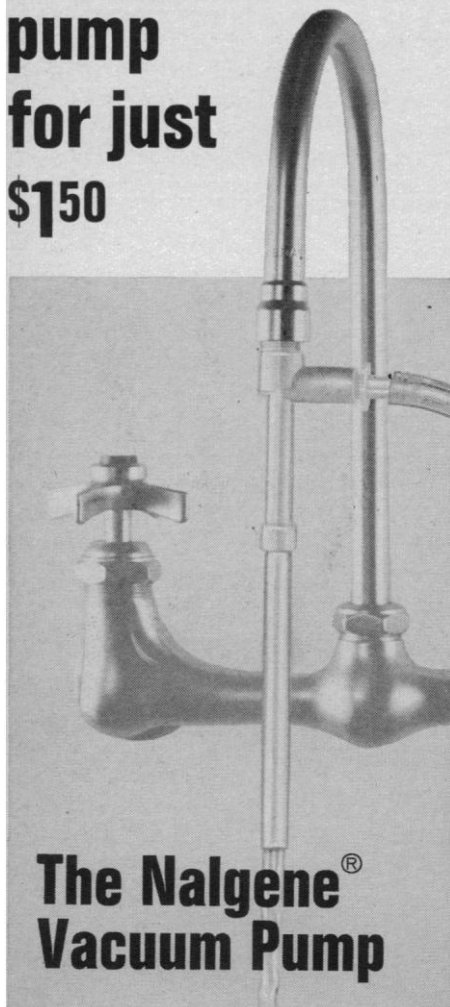
*AS REPORTED BY J. IVAN LEGG AND DEAN W. COOKE IN THE DECEMBER 20, 1967 ISSUE OF JOURNAL OF THE AMERICAN CHEMICAL SOCIETY



DURRUM

3950 Fabian Way, Palo Alto, California 94303. Call (415) 321-6302
Cable: DURRUM, Palo Alto

**Turn any
faucet into
a vacuum
pump
for just
\$150**



**The Nalgene®
Vacuum Pump**

Full vacuum wherever and whenever you need it—to speed up filtration or demonstrate freeze drying. All you need is a water faucet (even if the pressure is as low as 7.5 psi) and the Nalgene Vacuum Pump. Aspirates efficiently with minimum water consumption. Precision molded of strong, rigid, chemically-resistant polypropylene. Safe for use even with highly corrosive materials.

Another example of know-how from Nalge . . . the innovator in plastic labware. Specify Nalgene Labware from your lab supply dealer. Ask for our 1968 Catalog or write Nalgene Labware Division, Dept. 2119, Rochester, New York 14602.



NALGE
RITTER PFAUDLER CORPORATION

and profits is a deceptive fallacy which diverts attention from vital metal deposits to irrelevant "profits." The area of our 50 states is 2.27 billion acres. All of our metal mines, if combined in one place would occupy only about 700,000 acres. This low ratio of mining lands to total acreage clearly proves the high relative value of mining lands, and indicates superior values in the remaining mineralized lands—public or private. We can continue to enjoy the magnificent scenery on much of the rest of the 760 million federally owned acres, without sacrificing metals.

WILLIAM W. PORTER II
35401 Cheseboro Road,
Palmdale, California 93550

Undergraduate Math

Fleming (Letters, 24 May) wonders "if the Committee on the Undergraduate Program in Mathematics might not do well to examine the undergraduate curriculum as well as the graduate degree requirements." In fact, CUPM has been doing just that since 1960; its recent recommendations for the preparation of college teachers of mathematics represent a new activity. Copies of the CUPM newsletter No. 2 (May, 1968) which describes these recommendations for undergraduate math programs may be obtained from CUPM, P.O. Box 1024, Berkeley, California.

R. P. BOAS
Department of Mathematics,
Northwestern University,
Evanston, Illinois 60201

Campus Demonstrations

Wolfe's editorial (22 Mar., p. 1309), in defense of university presidents contains a one-sided and therefore misleading statement on the nature of campus demonstrations: "Some demonstrations have not been directed against university policies, but have dragged the university into controversy over Selective Service procedures or American participation in Vietnam." This statement requires correction insofar as it applies to demonstrations against the Selective Service, military recruiters, or the war.

The point of demonstrations on these issues, to the extent of my familiarity with them here and from reading about them elsewhere, is not to "drag the university into" irrelevant controversy, but

to call attention to the varying degrees of involvement of the university in these areas, and to raise the questions of whether academic freedom is compromised by such involvement. I believe that it is indeed legitimate to ask whether a university can preserve its intellectual and moral freedom while receiving defense research contracts (especially if the research is classified) worth millions of dollars a year, or while it tolerates the presence of a semi-autonomous ROTC program or supplies information on its students to the Selective Service system. Such questions have generally been swept under the rug before demonstrations occurred, and this refusal to face them has been an important contributory cause of the demonstrations.

LOUIS G. HOFFMAN
Department of Microbiology,
University of Iowa College of
Medicine, Iowa City 52241

In Defense of Dissent

The successful attempt by certain faculty members to keep Bill Shockley from speaking at Brooklyn Polytechnic Institute ("News in Brief," 24 May, p. 863) is a classic demonstration of the inability of many self-styled liberals to understand what free speech is all about. These unilateral liberals are willing to tolerate any dissent as long as it is not "wrong"; that is, in disagreement with or questioning the dogma currently held by themselves.

Dogma: "There are no racial differences in intelligence."

Shockley: "I dunno—let's find out."

Unilateral Liberals: "Racist! Nazi! We won't let you speak!"

Such an attitude, I submit, is less scientific or scholarly or liberal than it is dogmatically religious and is indistinguishable in kind from those of Adolph Hitler, both Joes (McCarthy and Stalin), the Birchers, and for that matter, Torquemada and the orthodox Marxists. . . . Free speech implies the toleration not only of "proper" but of "wrong" dissent—Voltaire, the Supreme Court, and the American Civil Liberties Union all seem to agree with me. And if any dogma is sacred and not to be questioned, the age of the Inquisition is on the way back. God preserve us from the man who knows that he is right!

JOHN D. CLARK
Green Pond Road, RD 2,
Newfoundland, New Jersey 07435