New!

A Magnificent Compendium of Current Knowledge of Ferrous Metallography!

DE FERRI METALLOGRAPHIA

A Metallographic Atlas of Iron, Steels, and Cast Iron

Three Volumes

Sponsored by the High Authority of the European Coal and Steel Community

This magnificent 3-volume work offers a beautifully illustrated, single source of reference on virtually everything known today about the structure of iron and steel. A cooperative project of the Steel Technical Research Commission of the European Coal and Steel Community, this tri-lingual work is printed in English, French, and German. The vast research facilities of Europe’s leading institutes were made available to the authors in their effort to compile the sum of man’s knowledge in this increasingly important segment of science.

Volume I offers a broad study of structures of irons, steels and cast irons, plus a comprehensive review of principles, apparatus, and methods in metallography. Volume II examines the structure of an exhaustive series of types of steel, from pure iron and low-alloy steels to special steels. Volume III illustrates the evolution of structures in the as-cast state and after plastic deformation and various anneals. The work’s unequalled standing as an atlas of metallography is fulfilled by more than 2,400 excellent illustrations...drawings, photographs, and microphotographs.

Sold only as a Complete Set

W. B. SAUNDERS COMPANY
West Washington Square, Philadelphia 19105
This is my order for DE FERRI METALLOGRAPHIA—3 VOLUMES

☐ Ship and bill each volume as published.
☐ Check enclosed for complete set ($116.00). Send postpaid.

Ship to: Name...................................................
Address............................................................ ZIP
Bill to: Name........................................................ ZIP

Address..........................................................

3 JUNE 1966
MP Tandem Test Facility at High Voltage Engineering Corporation.
could get polio?” he answered, “It’s possible.”

Upon examination of chiropractic textbooks in current use we find that chiropractic claims that such illnesses and diseases as allergies, diabetes, heart trouble, tonsillitis, and cancer can be cured by adjusting or manipulating the spinal column. It is not surprising that the three-judge court, in a unanimous ruling, stated, “There has been no showing here that the state has done more than necessary to protect the health of its citizens.” The court’s opinion also noted, “If the education obtained in chiropractic schools does not meet the standards of the United States Office of Education it may well be that the legislature of Louisiana felt that in the public interest a diploma from an approved medical school should be required of a chiropractor before he is allowed to treat all the human ailments chiropractors contend can be cured by manipulation of the spine.” Chiropractic must demonstrate the validity of its claims before it can deserve the endorsement of the scientific world.

J. Sabatier

134 North 19 Street,
Baton Rouge, Louisiana 70806

Algebra and Illusion

The disillusionment evident in E. N. Gilbert’s “Information theory after 18 years” (15 April, p. 320) is very different from the usual tone of the articles on this subject. For the past 18 years we have been hearing of the great scientific accomplishments that were going to come out of information theory. Yet at this late date the author of this sympathetic but realistic review is unable to cite a single, tangible, scientific achievement that has resulted from information theory (“The results are still almost exclusively on paper”).

This is a shocking fact. Information theory is a theme that has been successfully exploited in hundreds of grant applications and thousands of papers (“... a page count in the journals devoted to information theory shows that the field is still growing”). Yet these elaborations of the original idea (which was a good one) have been almost entirely sterile and useless. What went wrong? How can we avoid these same mistakes in the future?

The same threat of scientific sterility has arisen in many different areas.

Information theory was the forerunner of a whole series of mathematically oriented new “sciences.” This new math started with “game theory” and continues on through the latest fad, “simulation.” In all these there is a very high proportion of pseudoscientific nonsense. This is privately acknowledged by the competent people in these areas. Many scientists, however, are not aware of this situation because statements in an algebraic language look very much alike, whether they make any scientific sense or not.

What can working scientists learn from the fact that, in 18 years, the widely heralded information theory has failed to produce a single, solid, scientific accomplishment? This much at least: There is no magic in mathematical languages. The claims that are made for “computer simulation” and the rest of the new math should be taken with a grain of salt.

Irwin D. J. Bross

Roswell Park Memorial Institute,
Buffalo, New York 14203

“Amerind”

June Helm’s use of the term “Amerind” in her book review (1 April, p. 58) reminded me of an incident I learned of while reading through the Frederic Ward Putnam papers. Putnam, curator of the Peabody Museum of American Archaeology and Ethnology at Harvard University, served as vice president representing the United States at the 13th International Congress of Americanists held in New York City in 1902. At a dinner meeting in the St. Denis Hotel on 25 October, the menu was printed on birch bark with the items designated in anthropological terms. The appetizer was listed as “Amerind Siouxp.” During the after-dinner speeches Putnam remarked, “Amerind’ seems to have been placed where it belongs—in the soup.”

On the back of his menu there appears a note appended, probably, by his daughter Alice Putnam, which reads, “End of Amerind as a name for Indians.” In spite of Putnam’s dislike for the term and his effort to eliminate its use, “Amerind” has persisted in the literature and has found its way into the larger dictionaries.

Ralph W. Dexter

Department of Biological Sciences,
Kent State University, Kent, Ohio
"Low-level counting"

You can now buy the instruments that experts developed for their own demanding research.

An assemblage of experts doing research in low-level counting techniques needed (but could not find) instruments that met their exacting requirements. So, as you just might surmise, they solved their problems over the years by developing several rather distinctive low-level counters—not to develop instrumentation for the sake of developing instrumentation (or even for the sake of selling it), but only as functional, reliable means to ends. And then, inevitably, as they used this equipment in their own research programs, they de-bugged it. Result: user-designed, user-perfected, user-seasoned, low-level counters which can do what no existing instruments can do. Now as other workers see these counters working in our laboratories, we get, with increasing frequency, requests for duplicate copies. Accordingly, we are now making these counters available (not reluctantly, it should be noted) to others with similarly exacting requirements. For the specifics, read on.

Precise measurement of low-energy beta emitters.

The Beta-Logic Gas Counting System was specifically designed for carbon-14 age-dating, natural tritium and low-level tracer analysis. The system utilizes proportional internal gas counting. A three-channel pulse charge analyzer provides data on the energy distribution of counts and allows simultaneous measurement and correction for contaminant activities such as $^3$H and Rn in C$^{14}$ samples. A two-channel printer records the number of counts for each of the preset time periods, which repeat automatically. Four independent scalers accumulate during each run. The energy analyses are accomplished through the use of computer-type logic circuitry.

This is an ideal system for serious work requiring maximum counting efficiency and low-background levels for utmost sensitivity. For complete data: request bulletin GC-10.

Tritium air and gamma area monitors.

Johnston Laboratories has perfected two instruments for tritium air and gamma area monitoring: the Model 755B Triton, and the more sensitive model 855 Triton. The Model 755B Triton accurately monitors airborne beta-emitting radioisotopes such as $^3$H, C$^{14}$, and Kr$^{85}$ or, alternatively, ambient low-level gamma radiation. The design of this instrument eliminates the errors usually associated with tritium air monitors and provides a new high level of accuracy and reliability. Its exceptional stability and sensitivity also permit analytical applications when incorporated into the closed atmospheric circuits of controlled environmental experiments. The 755B Triton may also be used as a low-level gamma monitor with much higher sensitivity than most gamma survey meters. For much more information: request bulletin 755B.

The Model 855 Triton, more sensitive than its progenitor above, is ideal where the measurement of extremely small amounts of gaseous radioactive contamination is a necessity. This instrument is particularly suited for monitoring the maximum permissible concentration of tritium in air (5mc/M$^3$) since the sensitivity is 10 mc/M$^3$ full scale. It can also serve to measure other beta emitters and is a very sensitive gamma area monitor too (.05 mr/hr. full scale). Ask for bulletin 855 for complete data.

JOHNSTON LABORATORIES, INC., 3617 Woodland Avenue, Baltimore, Maryland 21215
The future can only make the Pho/Gamma® Scintillation Camera even more valuable for clinical use.

Too bad we can’t say the same for rectilinear scanners (even ours).

Since 1962, Pho/Gamma has put its speed to use in cutting through ever-increasing clinical work loads. Example: scintiphotos of radioisotope distribution in the liver, brain, or kidneys take from 2 to 8 minutes. And even now, Pho/Gamma is opening new areas of diagnostic investigation. Examples: dynamic studies such as cerebral and cardiac blood flow, new modes of data manipulation and analysis, and positron tomography with the soon-to-be-available positron attachment.

To learn what Pho/Gamma is doing now and will do in the future, consult your Nuclear-Chicago sales engineer or write to us.

NUCLEAR-CHICAGO CORPORATION

The average modern telephone office uses 50,000 or more relays, and an average telephone call involves 1000 relay operations and 7000 electrical contacts. Furthermore, a telephone relay is typically expected to operate with not more than one failure in 5 million operations—the equivalent of 40 years of service life.

The jobs assigned to relays range from simple switch closures to the computer-like functions of counting, machine memory, and number and code translation. These call for a variety of relay types, many of them tailored for use in electronic switching systems, data systems, and submarine cable amplifiers.

Therefore, Bell Telephone Laboratories maintains a continuing program of designing and developing reliable and economical relays to meet the ever-expanding needs of modern communications.