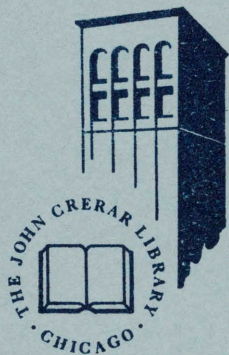
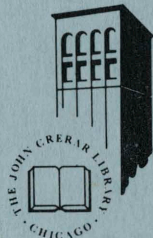


for Economy  
in Research



*A Symbol of Service to Industry*

CHEMISTRY . BIOLOGICALS . METALLURGY . GEOLOGY . ELECTRONICS . MEDICINE  
 IONS . ELECTRONICS . MEDICINE . PHARMACOLOGY . AGRICULTURE . ATOMIC ENER  
 GONOMES . PHYSICS . RAILROADS . MAGNETIC BEARINGS . CHEMISTRY . POWER  
 PROTONS . BALNEOLOGY . BIOCHEMISTRY . RADIO . ENZYMES . VALENCE . FARMER  
 ENZYMES . POWER . AGRICULTURE . NUCLEAR PHYSICS . ELECTROLYSIS . CERAMIC  
 CHLOROPHYLL . BIOPHYSICS . ACTIN . GLASS TECHNOLOGY . OXIDE CHEMISTRY . ST  
 OREBORATE . POWDERED METALS . PARASITES . CANCER . MINERAL PRODUCTS .  
 RESEARCH TECHNIQUES . PETROLEUM . RAPID CALCULATORS . BALLOONS . STRUCT  
 PHYSIOLOGY . STEEL . MAGNETIC RECORDING . PHYSICAL CHEMISTRY . CHLOROPHY  
 ROCKET FUELS . CARBIOLOGY . GEAR RATIOS . ELECTRONICS . REFRIGERATION .  
 AIR CONDITIONING . CATALYTICS . GALVANIZING . BLAST FURNACES . WELD BRIL  
 MEDICINE . OXIDATION . METAL FOILS . BACTERIA . IRON ORE RESERVES . SUB  
 BUFFERS . ELECTROPLATING . ALLOYS . INSULATORS . STEAM TURBINES . PAPER  
 STEREOCHEMISTRY . JET PROP  
 AERONAUTICS . HEAT PUMP  
 ALUMINUM . TRACTOR HIT  
 DETERGENTS . DENTIFRIC  
 GAS TURBINES . VIBRAL PL  
 SALT SPRAY TEST . CHEMIS  
 PRE-CAST TILE . SHAKER CONVE  
 VITAMIN DEFICIENCY . TITANIUM . EXPLOSIVES . SYNTHETIC CEMENT . ROCK WOOL  
 NIGHT VISION . LEAD BONDING . HEARING AIDS . ROCK CUTTING BITS . MEDIC  
 LOSER'S SULFATE . CALIBRATION . IMMUNOLOGY . TEXTILE CHEMISTRY . SYNTH  
 METALLOGRAPHY . FERMENTATION . CHROMATOGRAPHY . ORGANIC COATINGS . CORR  
 ELECTRONICS . COLORIMETRIC ANALYSIS . INSECTICIDES . MILLING MACHINES .  
 RADIO ACTIVE TRACERS . REFRIGERATION . AERONAUTICS . GEOPHYSICS . SPECT  
 FOOD PROCESSING . RADIO . METEOROLOGY . MOTOR FUELS . CORTICONE . HEAT  
 FOUNDRY PRACTICE . CHROMIUM STEEL . OCTATRONS . AERODYNAMICS . ELECTRIC  
 SPONGE RUBBER . ELECTRIC CONDUCTORS . CELLULOSE . BEARING METALS . WIND  
 CASE HARDENING . BERYLLIUM . CHEMOTHERAPY . ELECTROLYTIC REDUCTION . AL  
 RARE EARTHS . CONTAINER INDUSTRY . PHOTOGRAPHY . PAPER BOARD . EXTRACTI  
 STAINLESS STEEL . ELASTICITY . GERIATRICS . THRUST BEARINGS . GAS ENGIN



# for Economy in Research

RESEARCH INFORMATION SERVICE  
 THE JOHN CRERAR LIBRARY • CHICAGO

“ . . . whenever helpful information and data recorded in the literature are overlooked, it is virtually certain that needless experimental work will be done in the laboratory. It is a rule with few exceptions that the cost of laboratory experimentation is many times greater than that involved in having a literature expert locate the record of previous experimentation.”

—J. W. Perry, Massachusetts Institute of Technology, in  
*Chemical and Engineering News*, December 25, 1950.

## FOREWORD

The John Crerar Library, a privately endowed free public library, was incorporated October 12, 1894, by the acting trustees under the last will and testament of John Crerar.

Since its founding it has grown to be recognized as the world's largest free public library devoted exclusively to science, technology, and medicine.

Its resources now include nearly three quarters of a million volumes, and current subscriptions to thousands of technical and scientific publications of a periodical nature. The purpose of this brochure is to describe the collections, special services and facilities that are available to individuals and companies, with special reference to the Library's program of services to industrial research.

## RESEARCH INFORMATION SERVICE

The purposes for which Research Information Service was founded are:

- . . . TO AVOID DUPLICATION IN RESEARCH
- . . . TO STIMULATE NEW LINES OF INVESTIGATION
- . . . TO RELEASE RESEARCH PERSONNEL FOR LABORATORY WORK AND DEVELOPMENT OF NEW PRODUCTS
- . . . TO ASSIST INVESTIGATORS WHO ARE PREPARING MATERIAL FOR PUBLICATION

RESEARCH INFORMATION SERVICE (RIS) was established January 1, 1947, to make a special library research service available to industry and business. It is intended for those companies, associations, government agencies or individuals to whom it would be advantageous to have their literature research done by skilled personnel in the Library, and who are prepared to reimburse the Library for the cost of such services.

Since its establishment RIS has completed more than 300 library research projects. One of its first projects involved preparation of abstracts of approximately 7500 articles for the Atomic Energy Commission, for publication in NUCLEAR SCIENCE ABSTRACTS, covering: biology and medicine; chemistry, engineering; mineralogy, metallurgy, and ceramics; and physics. Other organizations for which library research assignments have been completed include the following:

Abbott Laboratories, North Chicago, Ill.  
American Can Company, Maywood, Ill.

Armour Research Foundation of Illinois Institute of Technology, Chicago  
Commonwealth Edison Company, Chicago  
F. E. Compton and Company, Chicago  
Continental Can Company, Inc., Chicago  
Cook Chemical Company, Kansas City, Mo.  
Dawson & Ooms, Chicago  
Edgerton, Germeshausen & Grier, Inc., Boston, Mass.  
J. L. Ferguson Company, Joliet, Ill.  
General Mills, Inc., Minneapolis, Minn.  
International Harvester Company, Chicago  
International Minerals & Chemical Corporation, Chicago  
Lederer, Livingston, Kahn & Adsit, Chicago  
Mann, Brown and Hansmann, Chicago  
The Master Electric Company, Dayton, Ohio  
Medical College of Virginia—Baruch Center of Physical Medicine and Rehabilitation, Richmond, Va.  
Milwaukee Gas Specialty Company, Milwaukee, Wis.  
Operadio Manufacturing Company, St. Charles, Ill.  
Pacific and Atlantic Shippers Assoc., Chicago  
Pepsodent Division of Lever Brothers Company, Chicago  
Public Service Company of Northern Illinois, Chicago  
Pullman-Standard Car Manufacturing Company, Hammond, Ind.  
Reynolds Metals Company, Louisville, Ky.  
The Sherwin-Williams Company, Chicago  
Swift & Company, Chicago  
The Upjohn Company, Kalamazoo, Mich.  
Victor Adding Machine Company, Chicago  
Wesix, San Francisco, Calif.

## FOR WHOM IS THE SERVICE INTENDED?

Research Information Service provides:

1. Complete library service for any company, large or small, which does not have a professionally staffed company library, and
2. Special project research for companies or other organizations, or individuals, whose library needs are partially met within their own establishments.

In either case the work is done by library personnel having subject knowledge essential to the problem being investigated and training in the techniques of library research.

Companies having occasional or even frequent need for information on problems and research projects, may not require library services on a scale which makes profitable the maintenance of a company library. RIS can meet such requirements for technical information from the simplest data to comprehensive reports on the current state of knowledge on materials, processes or products. Technical literature contains data relevant to practically every research problem in which a company may be interested, whether it be development of new products, improvement of existing products, or reduction of costs through new or substitute materials or other means.

RIS can also be valuable to the company maintaining its own special library since it can supply information in fields peripheral to the main interest of the company, and which may appear in less frequently used but important books and periodicals in many languages. Even the largest company library cannot profitably collect all of the technical publications pertinent to its research and development program. And further, the company may find that

it is a matter of good business to conserve the time of research personnel for work in the laboratory by having some of its library research done at The John Crerar Library.

## FORM AND CONTENT OF REPORTS

An **EXPLORATORY SEARCH** is a search of the literature on a broad subject basis for the purpose of gathering new ideas rather than of solving a simple one-element problem. The material collected is reviewed by the client, and the final report, if one is required, is based on the specific articles or subject interest defined by the client. The report normally takes the form of a "Bibliography with Informative Abstracts" or a "Technical Report," described below.

An **AUTHOR-TITLE BIBLIOGRAPHY** contains books, journal articles and technical reports which deal with the client's problem. Such a list may include:

- a. Material published during designated years or unlimited with respect to time;
- b. Only English language material or all important foreign languages as well;
- c. Just one element of a problem or coverage of broad subject interest; or
- d. A selection of the more important articles to give the client a general picture of the subject.

The bibliography may be arranged alphabetically by author, chronologically by date, or by subject, depending on the preference of the client. Such a bibliography may serve as a guide for a reading program.

An ANNOTATED BIBLIOGRAPHY may serve a client's need much better. This can follow any of the patterns suggested above but with each entry accompanied by a content note sufficiently descriptive to assist the client in selecting the items most pertinent to his immediate interest. The annotations can also be helpful in selecting items to be photostated or microfilmed.

A BIBLIOGRAPHY WITH INFORMATIVE ABSTRACTS goes one step further in that it includes experimental and test procedures, together with results and data. With this kind of a report the client may need to refer to only those original articles which bear most closely on his problem.

A TECHNICAL REPORT involves a critical review of the literature and preparation of a report of the conclusions and data bearing on the client's problem. References are given to each publication so that the original discussion can be examined if necessary.

PERIODIC REPORTS ON CURRENT LITERATURE can follow the pattern of any one of the previous types but differ from them in that only current material is covered. Such reports can serve to suggest new product development and to keep management, the research staff and technical sales personnel informed of new developments in fields of special company interest.

PRIOR ART SEARCHES (Related to Patents) involve searches to locate, in published literature, anticipatory art relating to problems of invention, anticipation and infringement. Such a search may clarify the standing of a patent already issued, or establish the appropriateness of applying for a patent.

A DATA SEARCH is a review of publications to ascertain specific items of information such as physical, chemical, or mechanical properties of chemical compounds, alloys, or other materials.

TRANSLATIONS (or extensive abstracts or summaries) of foreign language publications may be prepared as part of a literature search, or as an independent project. The important European languages are represented in the qualifications of the RIS staff.

#### METHODS OF REIMBURSEMENT

Clients reimburse the Library on a nonprofit basis for the direct labor costs plus an overhead percentage to cover such items as administration, space, supplies and telephone. Reimbursement is either direct, for special services rendered, or on a monthly basis for continuing service projects.

Direct reimbursement is made on the basis of invoices rendered for special projects. Such library research projects are normally charged for at the rate of \$~~5.00~~<sup>6.00</sup> per hour for professional services, and proportionately lower rates for clerical assistance. Monthly rates for continuing library research contracts are determined on the basis of the client's service requirements.

Translations are charged for on the basis of price per 100 words, varying for different language groups. More specific information will be supplied on request.

#### THE STAFF OF RESEARCH INFORMATION SERVICE

Research Information Service has a staff of subject specialists carefully selected for their scientific training, industrial research experience, and facility in foreign languages. Fields included are chemistry, physics, mathematics, and biology and specialization in their industrial application, for example, pharmaceutical chemistry, electronics, metallurgy, and the various fields of engineering.

For the larger, continuing projects, special personnel are employed when the qualifications of the present staff are not adequate for the project.

*All work done by any staff member is held in strict confidence; and no reference is made publicly to work done, except with permission of the client.*

#### **SPECIAL EQUIPMENT**

As a part of the services of *RIS*, desks, typewriters, dictaphones, and microfilm and microcard readers are available without charge to clients who wish to use these facilities. Both wax cylinder and plastic belt types of dictaphone records are available at nominal cost, or clients may bring their own supplies.

#### **INITIATING SERVICE PROJECTS**

The Special Assistant in charge of the *RIS* office will be glad to explain in detail how the service can aid individuals and companies in their library research, and to arrange for conferences with appropriate members of the technical staff.

It is usually desirable for the library project to begin with a conference between a company representative and a consultant on the *RIS* staff. Experience has shown, however, that it is quite feasible to initiate projects through correspondence; and letters have been received from numerous clients from New England to California, attesting to the satisfactory character of *RIS* reports.

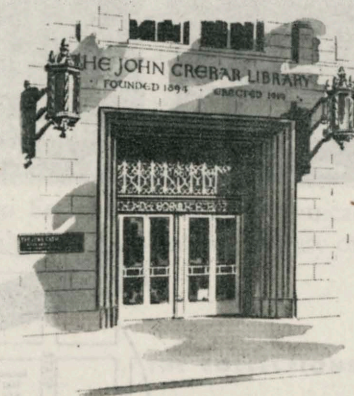
Inquiries may be addressed to:

#### **RESEARCH INFORMATION SERVICE**

The John Crerar Library  
86 East Randolph Street  
Chicago 1, Illinois

or Telephone ANdover 3-6660

or visit *RIS* offices on the 15th floor



*The scientific library  
is a vital link in  
the progress of research*



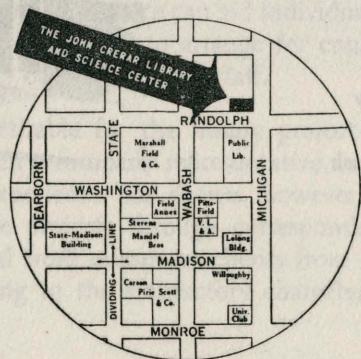
## THE LIBRARY BEHIND RIS

### THE BUILDING

The JOHN CRERAR LIBRARY building occupies the Northwest corner of Randolph Street and Michigan Avenue. It is immediately across the street from the Randolph Street Station of the Illinois Central Railroad, and is readily accessible from the State Street subway, the elevated, the Wabash Avenue and State Street surface lines, and most of the bus lines operating on Michigan Avenue.

The Library occupies the upper eleven floors. The large arched windows at the top of the building open off of the Technology Department reading room, and the large windows just below light the reading rooms of the Medical Department. The administrative offices are on the eleventh floor.

Several scientific societies have offices at 86 East Randolph in the Library building and at 84 East Randolph (also owned by the Library). These are the Chicago Medical Society, the Institute of Medicine of Chicago, the Chicago Section American Chemical Society, the Chicago Chemists Club, and the Western Society of Engineers.



### THE COLLECTIONS

#### SCIENCE AND TECHNOLOGY

The John Crerar Library has traditionally been a library of science and technology. Its nearly three-quarters of a million volumes include approximately 40,000 volumes on chemistry, 15,000 to 20,000 each on physics, geology, and communications. Engineering is represented by some 55,000 volumes and agriculture by



30,000. The collections on other allied subjects, while smaller, are equally strong for their respective fields. Current and historical files of scientific journals both foreign and domestic, are unique for their range and completeness.

The Library has been designated by the Chicago Chemical Library Foundation as the logical center for development of a comprehensive collection of chemical literature. Since 1947, the Foundation has made substantial annual grants to Crerar for this purpose, enabling the Library to have one of the leading chemical library collections of the World.

### MEDICINE

The John Crerar Library maintains one of the most respected collections in medicine and the related biological sciences in the United States. All general aspects of the art and science are well represented in its collections of more than 130,000 books and journals, both current and historical. In addition special attention is given to current medical research in such problems as cancer, heart disease, and poliomyelitis.

Similar to the grants for chemical literature, numerous grants have been received from eight medical societies to help complete the Library's collections necessary to current medical research.

### PUBLIC REFERENCE DEPARTMENTS

Paralleling the collections, public reference service is given in the Technology Department and Medical Department, on the 14th and 12th floors, respectively, at 86 East Randolph Street. Expert reference librarians, thoroughly familiar with the collections and catalogs, assist readers to make effective use of the Library and give limited reference assistance. Readers may make free use of the col-

lections in the Library through the service desks maintained by the Technology and Medical Departments. Volumes are not lent for home use.

Library Hours: Monday 9:30 a.m.—9:00 p.m.  
Tuesday—Saturday 9:30 a.m.—5:30 p.m.

Telephone: AN dover 3-6660

### PHOTODUPLICATION SERVICE

The Library maintains equipment for both photostating and microfilming technical publications, subject to the limitations of copyright. Orders, or requests for additional information, may be addressed to:

### PHOTODUPLICATION SERVICE

The John Crerar Library  
86 East Randolph Street  
Chicago 1, Illinois

# THE JOHN CRERAR LIBRARY

## Officers

Britton I. Budd.....President  
 Edward L. Ryerson.....First Vice-President  
 George R. Jones.....Second Vice-President  
 J. F. Dammann.....Secretary  
 Paul C. Butcher.....Treasurer

Herman H. Henkle, Librarian  
 J. Christian Bay, Librarian Emeritus  
 Kenneth H. Fagerhaugh, Assistant Librarian

## Board of Directors

Chauncey B. Borland, Managing Owner, Borland Properties  
 Britton I. Budd, Vice Chairman, Public Service Company of Northern Illinois  
 S. DeWitt Clough, Chairman, Abbott Laboratories  
 J. F. Dammann, Wilson & McIlvaine (attorneys)  
 Henry T. Heald, President, Illinois Institute of Technology  
 Andrew C. Ivy, Vice President, Chicago Professional Colleges, University of Illinois  
 George R. Jones, Vice President (Ret.), Public Service Company of Northern Illinois  
 William V. Kahler, President, Illinois Bell Telephone Company  
 E. W. Kettering, Chief Engineer, Electro-Motive Division, General Motors Corporation  
 Eric Oldberg, Professor & Head of Department of Neurology and Neurological Surgery, College of Medicine, University of Illinois  
 Edward L. Ryerson, Chairman, Inland Steel Company  
 Solomon B. Smith, Vice President, The Northern Trust Company  
 Rawleigh Warner, Chairman, The Pure Oil Company  
 James H. Dillard, Comptroller of Chicago, *ex-officio*  
 Martin H. Kennelly, Mayor of Chicago, *ex-officio*

PHYSICS . IONS . CHEMISTRY . BIOLOGICALS . METALLURGY . GEOLOGY . ELECTRICITY . VITAMINS . IONS . ELECTRONICS . MEDICINE . PHARMACOLOGY . AGRICULTURE . TRANSPORTATION . HORMONES . PHYSICS . RAILROADS . MAGNETIC BEARINGS . MUSIC RECORDING . PROTONS . BALNEOLOGY . BIOCHEMISTRY . RADIO . ENZYMES . COALS . METALLURGY . ENZYMES . POWER . AGRICULTURE . NUCLEAR PHYSICS . ELECTRICITY . RHEOLOGY . CHLOROPHYLL . BIOPHYSICS . ACTH . GLASS TECHNOLOGY . FOOD PROCESSING . DEODORANTS . POWDERED METALS . PARASITES . CANCER . DRUGS . DEODORANTS . RESEARCH TECHNIQUES . PETROLEUM . RAPID CALCULATORS . WORMS . HELMINTH WORMS . PHYSIOLOGY . STEEL . MAGNETIC RECORDING . PHYSICIAN . CLAY PRODUCTS . ROCKET FUELS . CARDIOLOGY . GEAR RATIOS . ELECTRONICS . PACKAGING . AIR CONDITIONING . CATALYTICS . GALVANIZING . BLAST FURNACES . CHEMISTRY . MEDICINE . OXIDATION . METAL FOILS . BACTERIA . TECHNOLOGY . BUFFERS . ELECTROPLATING . ALLOYS . INSULATORS . STEAM TURBINES . BIOPHYSICS . STEREOCHEMISTRY . METAL-GLASS BONDED . ESSEL ENGINES . TELEVISION . PAINT SOLVENTS . FIBROUS MATERIALS . SPRAY GUNS . PRINTING . PRICE ART . OXYGEN . CONVEYORS . PHARMACOLOGY . TITANIUM . EXPLOSIVES . PETROLEUM PRODUCTS . NIGHT VISION . LENS GRINDING . HEARING AIDS . ARTIFICIAL RUBBER . METALLOGRAPHY . FERMENTATION . CHROMATOGRAPHY . PHOTOSYNTHESIS . ELECTRONICS . COLORIMETRIC ANALYSIS . INFRARED SPECTROSCOPY . PERIODIC TABLE . RADIOACTIVE TRACERS . REFRIGERATION . AIR PUMPS . CRACKING PROCESSES . FOOD PROCESSING . RADIO . METEOROLOGY . RECTIFIERS . HEAVY WATER . FOUNDRY PRACTICE . CHROMIUM STEEL . BETA RAY SHIELD WIPEES . DIES . SPONGE RUBBER . ELECTRIC CONDUCTORS . CELLULOSE . REACTORS . CASE HARDENING . BERYLLIUM . CHEMOTHERAPY . ZINC . RARE EARTHS . CONTAINER INDUSTRY . PHOTOGRAPHY . NUTRITION . NYLON . STAINLESS STEEL . ELASTICITY . GERIATRICS

