

Aids for the Translator of French Chemical Texts*

MURRAY L. HOWDER

Association of Research Libraries,
1527 New Hampshire Ave., N.W., Washington, D.C. 20036

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The English-speaking chemist requires translations of the prolific chemical literature published in French if he is to keep abreast of the research and development undertaken by his French counterparts in his field. This requirement is particularly hard to satisfy because so often terms and concepts in one language have no precise equivalent in the other language. The translator's professional goal is to meet the chemist's need. Dictionaries, glossaries, handbooks, and encyclopedias identified in the bibliography serve as the tools of the translator. Sources of information about these tools include scientific societies, technical libraries, translating firms, technical editors, scientific attaches, and catalogs of scientific publishing houses. Annotations provided in the bibliography of relevant publications should prove helpful to translators and librarians in acquiring the necessary tools.

Other than abstracting of French articles in *Chemical Abstracts*, French chemical literature generally goes unread in the United States and other non-French speaking countries. What exchange of information does occur is conducted by means of informal personal contacts between French chemists and their foreign counterparts.

Yet a great deal of research activity in both theoretical and especially applied chemistry is being carried on in France. Cooperative efforts between French physicists and chemists are greater than ever before. France ranks among the top countries in the area of industrial chemistry. Under the aegis of the government, an effort has been made to create a national petroleum and petrochemical industry that devotes a large part of its resources to the operation of scientific research departments. In pharmaceuticals, Rhone-Poulenc employs some 3000 persons in its research laboratories and expends 10% of its research funds in chemistry alone. Ugine Kuhlmann, initially oriented toward metallurgy, has now diversified its activity to deal with chemistry and applications to the space industries. In all, some 14 to 16 French companies are very active in chemical research.¹

After World War II, research in chemistry continued to develop in the classical areas of mineral and organic chemistry, but special attention was given to physical chemistry in its many aspects: atomic chemistry, thermal chemistry, structural chemistry, electrochemistry, photochemistry, and catalysis, with macromolecular and analytical chemistry becoming predominant. The university laboratories have increased the number of departments (chairs), and the Centre National de la Recherche Scientifique (C.N.R.S.) has established well equipped institutes and centers of research. In higher education in 1965, there were about 1700 professors of chemistry in departments of chemistry. In the C.N.R.S. there were 890 researchers, for a total of approximately 2700 professionals engaged in pure chemical research.²

In France, the Centre de Documentation of the Centre National de la Recherche Scientifique is responsible for

a library, a documentary reproduction service, a translation service, and the publication of the *Bulletin Signaletique*, formerly (1940-55) known as the *Bulletin Analytique*. This is a very comprehensive organization, covering over 6000 journals and publishing short, classified abstracts monthly with a minimum of delay. Prior to 1961 the *Bulletin Signaletique* was in three parts dealing with natural sciences, biological sciences, and humanities. Dissertations from French universities were included. Author indexes only were published annually.

In 1961 the *Bulletin Signaletique* was subdivided into 22 sections, all issued separately with monthly author indexes and annual subject and author indexes for each section. The total number of abstracts published annually is approximately 280,000.

Fascicule 7 (Chemistry I) covers general chemistry, physical chemistry, analytical chemistry, and organic chemistry, and publishes over 30,000 abstracts per annum under the following headings:

- History, General, Nomenclature
- Apparatus, Techniques
- Determination of molecular and atomic weights
- Equilibria
- Solutions
- Diffusion. Rheology. Viscosity. Adhesion. Cohesion
- Chemical kinetics. Catalysis
- Combustion. Flames
- Thermochemistry
- Chemical effects of rays and particles
- Electrochemistry
- Physical chemistry of surfaces
- Colloidal and disperse states
- Mineral chemistry: History. General. Basic research.
- Mechanism of reactions. Structure and properties. Preparative chemistry
- Macromolecules

Fascicule 8 (Chemistry II) covers applied chemistry and metallurgy, and publishes approximately 20,000 abstracts per annum, arranged as follows:

- Applied and industrial chemistry: History, General.
- Chemical engineering. Chemical, mineral and organic products. Explosives. Waters and wastes. Fuels. Oils. Greases. Lubricants. Fats. Soaps. Waxes. Resins. Plastics. Wood.

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Cellulose. Paper. Textiles. Leather. Glues. Adhesives.
 Atmospheric pollution. Hygiene and industrial safety.
 Metallurgy (ferrous and non-ferrous metals).³

Outside of France, relatively little chemical publication is in French. In Canada, most scientific work is published in English although the amount originally done in French is growing. The National Research Council runs a translation service for bilingual publication of works. Likewise, Atomic Energy of Canada, Ltd., and the Canadian State Department bring out many documents in both English and French. Hence, Canadian publications can serve as a good reference source for the translator but provide him little necessity for translating from French.

In Belgium, L'Industrie Chimique Belge dominates the work done in chemistry, with the emphasis almost entirely on industrial application. Occasional significant research articles in chemistry appear in the Proceedings of the Royal Academy of Science. The names of Belgian chemists like Chiurdoglu, de Duve, Brachet, and Prigogine are known worldwide, but, like almost all scientific work in Belgium, their work is largely published in English.

Except for work being done at the University of Dakar, very little chemical research is being carried on in the French-speaking areas of Africa. Many journals, especially East European publications, carry resumes of articles in French in addition to or instead of English or German. Likewise, Swiss publications tend to include French resumes for articles written in German or English. French-language journals on chemistry are extremely valuable to the translator as a first step in becoming acquainted with the current jargon of the particular aspect of chemistry with which the material he must translate deals.

Other aids for the translator are included in the appended bibliography of dictionaries and similar tools. The information for each item is as complete as possible, including the Library of Congress call number and the price and dealer when known, to make it easier for the librarian and translator to acquire any items he feels will be useful. The annotations are intended to describe particular characteristics of the items and to indicate ones that are considered especially good or likely to be of real help. Of special interest are numbers 10 and 15. The Fromherz book is a new publication serving as an excellent bilingual text on chemistry. The Kettridge two-volume work is an old standby that often provides the exact phrase needed.

In translating French into English, one must be especially careful of the "Faux amis" or words and phrases having a superficial resemblance, but not really meaning the same thing. Many examples come to mind:

actuellement-currently
 ignorer-to be unaware, not to know (On ignore souvent:
 Often it is not known)
 haute tension-high voltage
 inconvenient-disadvantage
 sensible-appreciable
 important-significant

In many cases the meaning of an adjective is changed by its position:

un certain temps - a certain time
 un temps certain - a definite time
 la même chose - the same thing
 la chose même - the very thing

It is important to distinguish the partitive article: du, de la, de l' (some or any) from the genitive of the definite article (of):

du beton - some concrete, but la contraction du beton:
 the contraction of the concrete
 des filtres - some filters, but le debit des filtres: the output
 of the filters

In conclusion, it might be well to recall the advice given by Dr. Johnson: "Dictionaries are like watches; the worst is better than none, and the best cannot be expected to go quite true." Nowhere is this advice more appropriate than in relying on existing dictionaries for translating French chemical texts into English. Despite the need, there is no good French-English chemical dictionary! Hopefully, some enterprising translator will compile a good dictionary in the field; he will earn a good return in royalties and gratitude for his effort.

AIDS FOR THE TRANSLATOR OF FRENCH CHEMICAL TEXTS

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