

## WHAT IS A LITERATURE CHEMIST?

I am often asked: "What is a literature chemist? What does he do?" I am asked these two questions generally by chemists whose assignments are in the laboratory, production, sales, and management. Although I consider these as fair questions and answer them as fully as the inquirer wants and, I hope, to his satisfaction, I feel strongly that the need for the questions to be asked reflects an inadequacy in the education of scientists; it also reflects our failure, as literature chemists, to project our involvement with the whole of chemistry.

When we ask another chemist what kind of chemist he is and what he does, we are usually satisfied with a relatively short description, such as, analytical chemist working with i.r., organic chemist working on pharmaceuticals, etc. The variables and combination of variables, discipline of science *vs.* area of science *vs.* mission of science, are almost infinite, and these may be further modified by basic or applied research, development work, etc.

Chemists are literature chemists to the degree that they can satisfy their needs successfully for new knowledge, for continuing their professional development, and for relating their experimental data and conclusions with the chemical literature. Whereas chemists are literature chemists part time, literature chemists are chemists who devote most or all of their time to some aspect of the chemical literature and to the design of information systems.

Whereas a laboratory chemist is most intimately concerned with the results and conclusions from his own experimental work, the literature chemist derives his results and conclusions from the experimental work that others have reported. The laboratory chemist tends to become a specialist in an area or several areas of chemistry; the literature chemist tends to be a generalist in an area or several areas of chemistry, and a specialist in an area or several areas of chemical documentation.

All chemists must have some skill in reading foreign languages, in writing, in nomenclature, and in using the

chemical literature. The literature chemist, on the other hand, must have superior skills in each of these. In educational background, the literature chemist is identical with the laboratory chemist, whether he is a B.S., M.S., or Ph.D., and, in this regard, he is primarily an organic chemist, a polymer chemist, a physical chemist, a physical organic chemist, or possibly just a chemist, depending upon the extent of his education and the direction of his graduate work. Because of special talents and motivation, a chemist may discover or be assigned to problems in chemical documentation and eventually become a literature chemist.

But, just as chemists, whether they be analytical, organic, physical, etc., are not alike, so literature chemists are not alike. They are different in terms of involvement with chemistry, creativity, ability to communicate, ability to handle abstract *vs.* concrete knowledge, ability to marshal facts into a body of knowledge, ability to work with and through people, etc.

These differences among literature chemists pretty much determine what each does, or what each can do. It is an oversimplification to say a literature chemist translates, prepares literature reports, indexes and abstracts documents, handles technical reference questions, edits technical literature, handles patent cases, or performs some other function. What a literature chemist does is generally a mix of these. Most importantly, his objective in doing what he does is to relate a body of literature or documents to the information needs of a community of scientists.

A literature scientist who relates and interacts with the information needs of a community is intimately concerned with and involved in the design of new information systems and concepts and, most certainly, in the application of semantics for the optimum control of information. He is actively engaged in evolving a new science with a new body of knowledge. He rises to the opportunities afforded by the need to relate and interact with those who need information. He is secure in his scientific destiny.

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