

Comment prepared by Alfred P. Wolf for Panel on  
Theory of Hot Atom Chemistry, IAEA, Vienna, May 13-17, 1974

Applied Hot-Atom Chemistry, Labeling of Compounds, Isotope Production.

The direct application of research in Hot-Atom Chemistry to the field of Nuclear Medicine in the development and preparation of radiopharmaceuticals has no parallel in any other area of chemistry. In attesting to this fact one need only consider the number of young scientists who did their research in hot-atom chemistry who are now employed in nuclear medicine related endeavors and who still use hot atom chemistry techniques and knowledge in the daily execution of their work. The emphasis on hot-atom chemistry in the literature of these other disciplines is another indication. Another perspective of this strong influence can be seen in the fact that groups in these other disciplines (nuclear medicine and radiopharmaceutical research and application) deliberately seek out people trained in hot atom chemistry in order to effect the use of that discipline in these new areas. Thus young scientists are being sought for their skill as hot-atom chemists rather than as chemists generally qualified for a particular job.

The title of this comment is indeed broad and would require a long monograph to do it justice. It is my purpose to focus attention on some of the more general aspects and problems that the hot-atom chemist can concern himself with.

There is now a fair amount of information in the literature that will allow the chemist to see the broad perspective of the interdisciplinary aspects of radiopharmaceutical research and production. The most recent compendium that can be used as a starting point is Volumes I and II of the Proceedings of a Symposium entitled "Radiopharmaceuticals and Labelled Compounds", held by the IAEA and WHO in Copenhagen 26-30 March 1973. It

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