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JLCR

Editorial

Isotope effects: recent developments in chemistry and biochemistry

The 50th Anniversary marks a significant time span that allows for review, and often celebration. This is indeed the case for the *Journal of Labelled Compounds and Radiopharmaceuticals*, fully justifying a Special Issue. Thus, JLCR has witnessed and participated in the development of the field in diverse ways, enriching the subject of Chemistry in its entirety, while forming an integral part of Biology, Biochemistry and Medicine, and of course, Nuclear Physics.

It is not the purpose of this Special Issue to describe the historical development of this diversity of subject matter. The reader might refer to the texts that appeared in the 1940s, 1950s, and 1960s by Martin Kamen,[1] Lars Melander,[2] and J. F. Duncan and G. B. Cook,[3] respectively. During the 1970s, 1980s, and 1990s there appeared two series, Isotopes in Organic Chemistry,[4] and Isotopes in the Physical and Biomedical Sciences,[5] the former edited by E. Buncel, C. C. Lee and W. H. Saunders and the latter by E. Buncel and J. R. Jones. These collections provide useful reviews on selected topics.

Focusing on the contents of this Issue, while some of the chapters overlap in content between several subdisciplines, an approximate subdivision would place five chapters into kinetic isotope effects-reaction mechanisms in organic chemistry including one chapter on polymer chemistry[6–10]; another five chapters into the realm of bioorganic mechanisms[11–15]; three chapters in the area of organometallic chemistry-reaction mechanisms[16–18]; and two chapters concerned with the application of mass spectrometry in reaction mechanisms and bioanalytical methodology.[19,20]

It is my sincere hope, and that of the editors of JLCR, that readers will find these articles enjoyable to read as well as useful in their professional careers. In this aspect, I must add that in the planning of this issue, to which my colleague and JLCR Editor-in-Chief, John Jones, contributed greatly, the topics and reviewers chosen for this Special Issue were intended to be different from regular contributions to the journal, reporting by and large original studies relating to drug discovery research, and also to serve in a complementary manner by keeping abreast of fundamental developments. This visionary approach by John has served the journal well.

We can look with confidence and renewed vigour as we begin the next 50 year period, that JLCR will meet the challenges that isotopic applications bring to Chemistry.

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