Additions and Corrections

Evaluation of Potential Ferromagnetic Coupling Units: The Bis(TMM) Approach to High-Spin Organic Molecules [*J. Am. Chem. Soc.* **1993**, *115*, 1744–1753]. S. JOSHUA JACOBS, DAVID A. SHULTZ, RAKESH JAIN, JULIE NOVAK, AND DENNIS A. DOUGHERTY*

Page 1745, column 2, lines 10–11: The correct citation to the biradical trimethylenemethane (TMM) should be 6a,b, citing the pioneering work of Dowd, not 3a,b. We regret this typographical error.

Computer Software Reviews

Chem Key Search: Organic-Chemical Reference Database. JAI Software Publishing: 55 Old Post Road #2, P.O. Box 1678, Greenwich, CT 06836-1678. $475.00 for the first year, $125.00 per year thereafter for updates on an as needed basis for single user CPU. Site licences for six or more users are available as well.

This package is a database of over 30 000 references to the organic chemical literature with an emphasis on synthetic methodology. The references were collected by Professor Albert Padwa of Emory University and cover the literature from 1960 to the present. The database is not meant to be exhaustive, but instead reflects the broad interests of an expert researcher in the area. It covers not only synthetic methodology but stereochemistry, physical organic chemistry, photochemistry, organometallic chemistry, asymmetric synthesis, and a host of other related topics. Of particular note is excellent coverage of books and review articles.

The database is available for both IBM-compatible (MS-DOS) and Apple Macintosh computers. A hard disk is required. The PC version includes its own search engine based on ASKSAM technology, and no other software is needed. Approximately 6 MB of hard disk space is required. An AT or 286 level PC is recommended. The Macintosh version needs about 12 MB of disk space and is recommended for Macintosh SE or higher computers. The Macintosh version requires the user to have Filemaker Pro software. A stand-alone version with its own search engine will be available shortly. Updates to both versions will increase the required hard disk space by about 10% per year. The Macintosh version was tested on a Macintosh IIci using Filemaker Pro v.2.0. The database was also tested with Filemaker Pro v.1, which gave similar results.

The database consists of four data fields: reference number, journal citation, title of paper, and keywords. An abstract field is also present and is just starting to be implemented. Authors names are included in the keyword field. Entering a search request is simple. After issuing the "Find" command in Filemaker Pro, a word or name is entered into the desired field. For example, entering [cuprate] into the keyword field produced 252 hits, requiring only 1 s to search the entire database. Scrolling through the retrieved references is easy and fast, and they may be printed or saved to disk. The time required to search the database is related to the number of references retrieved. Searching for [reduction] took 3.5 s to retrieve 1352 records. Part of a word can also be used, as long as it includes the first letter. Searching for [cyclo] retrieved 4412 references in 9 s. A more restricted search on [cycloaddition] retrieved 1719 references in 4 s. Narrowing a search is accomplished by entering two or more search terms separated by spaces. Searching [azide cycloaddition] produced 40 references in 5 s. Searching [azide review] produced 26 references in 18 s. The length of this search is a result of the extensive number of "review" hits in the database (7011). To do the most complete search, the title field should also be used. Relying on the title field alone is not recommended, since some records have the entire reference (including the title) in the keyword field (e.g., reference #21744). Titles are sometimes paraphrased as this often adds important information to the search. Search terms may be entered into more than one field at a time. For example, one might recall that a certain author published a paper in 1990. Entering the author's name in the keyword field and the year in the journal citation field will often produce the desired reference.

The database takes only a few minutes to learn to use. This is highly advantageous, since other databases (e.g., online databases, graphics oriented databases), while very powerful, are also harder to use. Some chemists are reluctant to invest the time needed to master these resources. In contrast, Chem Key Search has found wide use in this reviewer's laboratory, specifically because of the ease of use and the rapid access to key papers and reviews. As long as the user is aware that this database does not cover the entire literature exhaustively, it is an excellent way to quickly find leading references on almost any subject that an organic chemist would be interested in.

The selection of material is excellent and was obviously chosen with the interests of researchers in mind. The keywords used for each article are well chosen and reflect the way an organic chemist would classify a particular reaction or topic. Combinations of terms such as a type of a reaction with a functional group (e.g. "protection" with "amine"), an author with a type of reaction (e.g. "Whitesell" with "ene"), or a topic with the term "review" are extremely useful for retrieving key references. The "review" keyword also covers primary literature citations where the author has provided a good overview of an area in the introduction of the paper. That is, they are not technically reviews. For example, searching "radical clock review" retrieves not only a "real" review by Curran but a well-referenced paper in *J. Org. Chem.* by Beak. This is not the kind of information that is easily obtained from other chemical databases.

Although Chem Key Search does not cover the breadth of literature that online databases do, the coverage is still excellent. One cannot expect to find every reference on a topic, but the database will return useful leading references on almost anything within seconds on a personal computer, at any time, with no connect charges.

The user can also add references to the database, which would be a useful way to archive references related to your area of research.

The thoughtful digestion of the literature by a research chemist makes this a very useful "real world" database and distinguishes it from other resources. It is extensive, fast, and easy to use, and it is accessible at any time on a personal computer for only the original cost of the database. This resource should be of practical use to any organic chemist and is well worth the initial cost.

William H. Pearson, *University of Michigan*