The Portable Chemist's Consultant

Challenging the limits of what can be called a book, *The Portable Chemist's Consultant* by Yoshihiro Ishihara, Ana Montero and Phil S. Baran is a unique entity for the organic chemist's virtual bookshelf. Its comprehensive content provides answers to the reader in the timeframe of a single tap or click. The interactive surface with embedded links and videos of Phil Baran lecturing his heterocyclic chemistry course at the Scripps Research Institute set this work apart from a conventional book. Furthermore, this "living document" promises to evolve, as the authors offer free updates in the form of new chapters and additional content, drawing on feedback or criticism from its target audience, who are medicinal/process chemists, academic researchers and (of course) students.

The book is divided into two distinct chapters. The first describes the reactivity and synthesis of selected heteroaromatic systems, while the second is devoted to troubleshooting problems frequently encountered by synthetic chemists, designed to act as a virtual consultant. Although the range of heterocycles described is currently limited to pyridines, pyrroles and indoles, including an additional short section on azaindoles made available in a recent update, the depth of information provided on each topic is significant and of high pedagogical value. The content is presented logically, briefly summarizing the general properties of the heterocycle before diving into methods for its functionalization. In contrast to typical print media, the book's electronic interface allows one to freely jump ahead to the desired section with the tap of a finger, taking full advantage of the links bookmarked within the document. In addition, all references within the main body of text can be "clicked", taking the reader directly to the desired reference with a link to the DOI, allowing online access to the original document provided that the user has the appropriate journal rights. Towards the end of each heterocycle substitution section are several case studies, illustrating how the methodologies just described can be applied in a number of synthetic problems, employing a complete and thorough retrosynthetic analysis. The usefulness of the presented methodologies is evaluated by means of a "report card" in tabular format, wherein a single page grades them according to scope and practicality, listing the associated pros and cons and giving a link to the relevant *Organic Syntheses* or OPRD procedure if available.

The authors make use of the iPad's functionality in the form of "starburst" schemes near the end of each section, which depict a central structure (e.g. the pyridine nucleus) surrounded by a circular array displaying numerous methods for its synthesis or substitution. This includes internal links to where the method is described in the main text.

The remainder of the book is geared toward troubleshooting commonly encountered problems in synthetic chemistry, and is further subdivided into "speed consulting" and a transformation guide. The speed consulting component is written in a question/answer format, such as "how do I perform a regioselective arylation of pyrazoles?" The answer is provided as a scheme alongside a reference to the original literature. Most of the examples are quite recent (mainly from 2008 or later), and have the advantage that they tend to stray from conventional sets of reaction conditions that a typical skilled chemist would be likely to have already tried. Finding the answer with a specific question in mind isn't always trivial, since although the built-in search function in iBooks allows for simple text searches, it does not support Boolean logic searches, which requires the reader to consider this lack of sophistication when inputting search terms. Nevertheless, this section contains a wealth of practical information, making it a worthwhile read, even if it doesn't necessarily remove the need to hire a well-paid external consultant every now and then.

While the title *The Portable Chemist's Consultant* suggests a very broad target readership, the book is most aptly suited to synthetic organic chemists with a strong interest in heterocyclic chemistry. Although the book certainly cannot provide solutions to each and every synthetic challenge, it is indeed a useful tool for the practising organic chemist, potentially allowing one to avoid a Scifinder or Reaxys search, which can sometimes require sifting through a large set of returned data. Currently, the book is only available for the iPad, which despite being an excellent platform for an interactive book of this nature, limits accessibility for readers who would prefer to have a PC tablet or web-based version. Finally, considering the free updates, *The Portable Chemist's Consultant* offers exceptional value for the price, and this well-presented and intuitively operated resource has no comparable equivalent in the literature.

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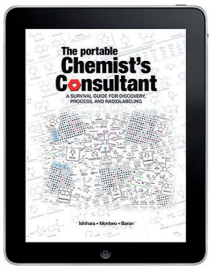

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