

## *Book review*

### **J.J. Li: Name reactions – A collection of detailed reaction mechanisms**

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Organic chemistry is a science that requires an unusual kind of glossary, namely, a graphical glossary that explains the nature of the stepwise chemical transformations associated with so-called name reactions. What beginning student has not agonized over an exam question referring to a name reaction that she or he cannot for her or his life remember? This book provides succor to those similarly oppressed – who cannot recall, for example, the features that distinguish the Perkin reaction from the Perkow reaction.

The 315 reactions are organized in alphabetical order by name, making the book something of a gazetteer of the organic mechanistic landscape. This is a distinct philosophy compared to, say, Smith M.B., March J. (2001) *Advanced organic chemistry*, 5th edn., which is the authoritative standard on organic reaction mechanisms in general, but is organized from a fundamental reactivity standpoint, i.e., names are associated with reactions for completeness, not as an organizational principle. In addition, the mechanistic details in *Advanced organic chemistry* tend to be represented generically; Li, by contrast, provides step-by-step detail for

each reaction, with large, carefully drawn molecular structures that attend carefully to any issues of stereochemistry that may apply. For each reaction, the original reference is provided along with one or more citations to the literature of the last decade. The presentation is minimalist, with no textual discussion, so readers interested in more details must go to the cited literature in order to find them.

From a theoretical perspective, I had hoped that Li might have highlighted mechanisms that were not yet well understood (i.e., where theory might be employed to further elucidate the situation), but the book offers nothing in this regard. It is, instead, a reference for those who are confronted sufficiently often by name reactions that they need this kind of glossary. I found only one significant error (the Schmittel cyclization is said to be another name for the Myers–Saito cyclization, but the two give different products from a common substrate) in the course of a fairly careful perusal. A full list of abbreviations and acronyms is provided, and this is a welcome component.