

Preface

There is natural selection in the synthetic organic laboratory. Successful reagents find their way into specialized journals and tend to populate the researcher's benches. Sometimes, old species like active manganese dioxide in the oxidation of unsaturated alcohols are so well adapted to a certain reaction niche that they remain unchallenged for a long time. On other occasions, a successful new species like Dess Martin's periodinane enjoys a population explosion and very quickly inhabits a great number of laboratories. On the other hand, the literature is filled with promising new reagents that fell into oblivion because nobody was able to replicate the initial results on more challenging substrates.

Very few synthetic operations in Organic Chemistry match the importance of the oxidation of alcohols to aldehydes and ketones. The present book, which is a monograph on this operation, is not primarily aimed at specialized researchers interested in the development of new oxidants. Rather, it was written with the objective of being a practical guide for any kind of scientist, be it a chemist of whatever sort, a pharmacologist, a biochemist, or whoever is in the practical need to perform a certain alcohol oxidation in the most quick and reliable way. Therefore, a great emphasis is given to those oxidants that are employed most often in laboratories, because their ubiquity proves that they possess a greater reliability. Reagents appearing in only a few publications, regardless of promising potential, are only briefly mentioned. We prefer to err on the side of ignoring some good reagents, rather than including bad reagents that would lead researchers to lose their precious time.

This book is meant to be placed near working benches in laboratories, rather than on the shelves of libraries. That is why full experimental parts for important oxidations are provided. Although plenty of references from the literature are facilitated, this book was written with the aim of avoiding as much as possible the need to consult original research articles. Many researchers do not have scientific libraries possessing numerous chemical journals ready available, and, many times, although such library might be

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available, it is just inconvenient to leave the laboratory in order to consult some reference.

Our aim is to facilitate a little practical help for anybody preparing new organic chemicals.

Oxidation of Alcohols to Aldehydes and Ketones

A Guide to Current Common Practice

Tojo, G.; Fernandez, M.I.

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