
REVIEW

**Reichardt, C., *Solvents and Solvent Effects in Organic Chemistry*,
Weinheim: Wiley–VCH, 2003, 630 p.**

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Received July 12, 2004

Our reader is familiar with the name of Prof. Reichardt, a prominent specialist in the chemistry of solutions and solvatochromism. In the recently issued 3rd edition of his monograph whose volume had been increased to 630 pages the author has summarized a great body of information.

After a short description of solute–medium interactions (ch. 2) and various solvent classification systems (ch. 3), solvent effects on chemical equilibria (ch. 4), chemical kinetics (ch. 5), and various spectral characteristics of solutes (ch. 6) are described. The new edition is extended by the results of recent studies on solvent effects on clathrate formation equilibria (host–guest systems), as well as on reaction kinetics in two-phase systems and supercritical conditions. The material concerning the classification of solvents, based on their physical characteristics, solvophobic interactions, and solubilization, is considerably extended. It will be recalled that Prof. Reichardt has been an author of papers in this field.

In view of the fact that more and more increasing number of empirical scales of effective solvent effect, that are still, to our regret, not infrequently called polarity scales, of particular interest is chapter 7 of

the monograph, that not only describes most of the existing scales based on various measurement techniques, but also compares them and examines in terms of the possible interchangeability. In the same chapter, approaches to generalization of the effects of liquid media on spectral, kinetic, and other behavioral characteristics of solutes on the basis of the linear Gibbs energy principle via use of multiparameter linear equations are described. Since the apparent effects of the medium mostly result from a combination of several solvation effects, this approach has found ever-widening application over the past two decades.

The monographs contains data on the properties and purification of solvents, recommendations on their choice and use for a variety of chemical operations, as well as a much extended toxicological information. Detailed subject and author indices much facilitate working with the book.

The reviewed monograph will undoubtedly serve as a handbook for all research chemists dealing with the chemistry of solutions, but, in view of its encyclopaedic character, may prove very useful for organic and physical chemists, and post- and undergraduate students.