

Book Review

The Little Adsorption Book by Diran Basmadjian

Although adsorption is a reasonably mature separation technology it is only during the last dozen years that the literature of the subject has burgeoned with the publication of several books and monographs covering both the principles and practice. *The Little Adsorption Book* is, however, quite different from all other books on this subject. It is an easily readable introductory text and it does not attempt to provide a complete coverage of the subject, even at an elementary level. Instead the focus is on the solution of a commonly encountered practical problem; how to obtain a first estimate of the size of an adsorber bed for a specified duty, from basic equilibrium data. Since the great majority of adsorption processes depend on equilibrium selectivity and the main features of the dynamic behavior of an adsorption column are determined by equilibrium effects, rather than by sorption kinetics, this is not an unreasonable goal.

Following a qualitative discussion of adsorption column dynamics for single component isothermal systems the reader is led, in succession, through the elementary equilibrium theory for binary isothermal Langmuir systems, single component adiabatic systems and linear and non-linear multicomponent systems. The text concludes with a short discussion of adsorption equilibrium fundamentals (Henry constants, saturation capacities etc.) and kinetic effects.

The presentation is largely qualitative or semi-quantitative. There are several useful operating

diagrams and generalized charts that can be used to provide initial estimates of adsorbent bed size and dynamic performance. The text contains no differential equations and only a knowledge of elementary algebra is needed to follow the discussion fully. This makes the book eminently readable, even for students with little or no prior knowledge of the subject. The student who has mastered this text will not be an expert on adsorption technology. However, he will certainly have a good basic understanding of how an adsorption process works, he will be able to provide initial column size estimates for specified operating condition and, perhaps most importantly, he will have a sound foundation from which to approach the study of the subject at a more advanced level.

This book is a "must" for both novices and seasoned practitioners in this field.

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