According to the editors, despite some early advances in the field, the science of polymer blend and composite interfaces truly began in 1989, and has since exploded, assisted largely by major advances in instrumentation and experimental methods. That interfacial science and research is largely a young science is reflected in the fact that few references in the treatises are older than 1992, with the majority being fewer than 5 years old.

The treatises cover a broad range of topics relevant to the study of interfaces, and most are written in such a way as to be understood by those with a background in polymers but who are not already experts in the analysis of polymer phases or interfaces. The first chapter in the book is an introduction which briefly reviews definitions, instrumental methods of analysis of surfaces and interfaces, and the thermodynamics and kinetics of phase separation. Some chapters are theoretical, and discuss using self-consistent field theories to study the phase behavior of multicomponent systems or modeling fracture in polymer blends. Several chapters describe the use and value of specific instrumental methods of analysis of interfaces with methods ranging from laser scanning confocal microscopy to scanning force microscopy, a brief review of interface characterization using solid-state NMR, and methods of characterization and depth profile analysis of multilayer systems. Yet other chapters deal with such diverse topics as studying the segregation process and growth of wetting layers, studying different aspects of compatibilization, and studying the phase structures and fracture surfaces of a variety of different compatibilized blends. The range of subjects discussed in the book resulting from this symposium should ensure it will have value for anyone interested in the field of multicomponent polymers.

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Advances in Catalytic Processes, Vol. 2: Asymmetric Catalysis. Edited by Michael P. Doyle (University of Arizona). JAI Press: New York. 1997. 287 pp. ISBN 0-7623-0068-X.

Catalysis and asymmetric synthesis using transition metals dominates much of the current research focus in the area of organic synthesis. This volume, edited by Doyle, highlights some of the recent advances in the field through a series of nine reviews covering a broad range of topics. In several chapters the authors focus primarily on work from their laboratories (e.g., RajanBabu, Nishiyama, and Hayashi) while in other cases a more general review of the field is presented (e.g., Bolm, Burgess, Müller, Tolman, Stanley, and Roos).

The contents of the volume can be roughly divided into two main themes. The primary focus of most chapters is on the design of new ligands and their utility in inducing asymmetry in a variety of reactions. The other contributions examine the utility of various ligands on a specific asymmetric transformation. Some of the chapters incorporate both themes. The volume is remarkably free from typographical errors.

RajanBabu and co-workers present a detailed description of their recent studies in ligand design and tuning (using a sugar as a scaffold) as it relates to the hydrocyanation and hydrogenation reactions. The principles they outline can be generally applied when trying to improve enantioselectivity. Bolm provides a short but informative review of the recent advances in catalyzed Baeyer−Villiger reactions including acid-catalyzed, metal-catalyzed, and enzyme-catalyzed processes. Hayashi describes some of the useful reactions of MOP−palladium complexes and also the thinking that went into the design of this very useful ligand. Asymmetric hydrosilylation, reduction, and hydroboration are all covered. Similarly Nishiyama presents his group's work on the pybox ligand as it applies to the cyclopropanation and hydrosilation of ketones. He also describes how this ligand has been used in other asymmetric processes including enantioselective Meerwein−Pondorf−Verley, Diels−Alder, and Mukaiyama aldol reactions. Keyes and Tolman discuss the synthesis and reactivity of C_3-symmetric ligands in a chapter with a primary emphasis on the preparation and coordination properties of this emerging class of ligands.

The area of metal transfer reactions is described in reviews by Müller on nitrene transfer and Roos and Raab on carbene transfer. There is some overlap between the chapters and also with the Nishiyama chapter, which has a significant component dedicated to carbene transfer. However, this does not detract from the value of the individual contributions. Stanley reports on the recent improvements in the asymmetric rhodium-catalyzed hydroformylation reaction with an emphasis on the work of Nozaki and (the late) Takaya along with his own work on bimetallic rhodium complexes.

Finally Burgess's very brief chapter of approximately 10 pages provides an overview of the emerging use of combinatorial approaches to find new transition metal complexes and improve upon existing transition metal complexes which are useful in organic synthesis. To date most work has focused on building libraries of ligands to rapidly screen their binding properties to metals. One can easily imagine this field will undergo significant growth in the coming years, but a review of this type might help catalyze further applications.

While the upcoming publication of *Comprehensive Asymmetric Catalysis* will undoubtedly be the ultimate reference source for the next few years, the volume assembled by Doyle should be on the bookshelves of scientists in academia and industry interested in asymmetric synthesis.

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