

<<物理有机化学>>

图书基本信息

书名：<<物理有机化学>>

13位ISBN编号：9787506234016

10位ISBN编号：7506234017

出版时间：1997-9

出版时间：世界图书出版公司

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页数：877

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内容概要

The end of the twentieth century marks approximately one century of effort in attempting to understand the basis of chemical reactivity and the detailed pathways of reactions of organic compounds. The result can be viewed with some satisfaction in that broad principles have been established and the mechanisms of almost all reactions can now be said to be understood in modest detail. The subject has advanced in the eight years since the first edition was published. In particular, the availability of yet more powerful computers has permitted reaction pathways of processes such as Diels-Alder reactions to be mapped by computation with increasing accuracy and the properties of transition states and inaccessible molecules to be studied. Even a limited number of solvent molecules may be included in the computations which, whatever the precision, has greatly enhanced understanding and increased confidence in results inferred from experimental measurements. Single electron transfer routes have revealed unexpected aspects of what were considered well-understood reactions such as nitration. Linear Free Energy Relationships, increasing in sophistication, continue to contribute powerfully to reactivity theory and the experimental measurement of electronic transmission. The theory and practise of chiral induction has come under increasing scrutiny following the economic importance of asymmetric synthesis while the involvement of metals in organic chemistry has reached the point which makes organometallic chemistry a subject of a size and complexity to warrant separate treatment and too great to be included within a book of this size.

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