

elements. From time-resolved fluorescence studies,<sup>3c</sup>  $K$  was estimated to be  $(1290 \pm 230) \text{ M}^{-1}$  for interaction between **1** and **2**. This value is comparable to that obtained with **10a** and **11** and is consistent with the steady-state data (Figure 2). Blocking the cytosine amino group (i.e., using **9** with **1**) reduces  $K$  to  $(410 \pm 70) \text{ M}^{-1}$  but does not alter the photochemical behavior; the derived rate constant for electron transfer is  $(3.7 \pm 0.8) \times 10^8 \text{ s}^{-1}$ . Since "blocking" reduces the observed binding constant for cytosine-guanine base-pairing between **10b** and **11** ( $K = (180 \pm 30) \text{ M}^{-1}$ ), these data are further consistent with the model presented in Figure 1. Thus, the present study introduces a base-paired system capable of effecting specific, but noncovalent, long-range electron-transfer processes.

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**Supplementary Material Available:** Synthetic details for the preparation of compounds **1**, **2**, and **4-11** and <sup>1</sup>H-NMR experimental data for binding studies with **10** and **11** (8 pages). Ordering information is given on any current masthead page.

## Additions and Corrections

**Dicyclopenta[ef,kl]heptalene (Azupyrene) Chemistry. Electrophilic Monosubstitution. Theory and Experiment** [*J. Am. Chem. Soc.* **1985**, *107*, 1896-1899]. ARTHUR G. ANDERSON, JR.,\* ERNEST R. DAVIDSON, EDWARD D. DAUGS, L. GLENN KAO, RICHARD L. LINDQUIST, and KRISTINE A. QUENEMOEN

Page 1898, right column under the subsection Azupyrene (**1**): The reference of the paper by Jutz was omitted. The reference is the following: Jutz, C. J.; Schweiger, E. *Synthesis* **1974**, 193.

Page 1899, right column, line 13: <sup>1</sup>H NMR absorption at  $\delta$  9.80 should read (s, 2, H-3, H-5).

## Book Reviews\*

**Chemical Aspects of Enzyme Biotechnology: Fundamentals.** Edited by Thomas O. Baldwin, Frank M. Raushel, and A. Ian Scott (Texas A&M University). Plenum Press: New York and London. 1990. ix + 359 pp. \$85.00. ISBN 0-306-43815-1.

This book contains the proceedings of the 8th Industry-University Cooperative Chemistry Program symposium held at Texas A&M University, March 19-22, 1990. It consists of 25 chapters, in typescript form, organized under the following headings: Enzyme Mechanisms; Protein Folding; Design and Redesign of Enzymes and Proteins; New Drugs Based on Enzyme Mechanisms; Organic Synthesis with Enzymes; and Vitamin B12. An appendix contains a list of the 15 posters presented at the meeting. There is a brief subject index.

**Structure-Activity and Selectivity Relationships in Heterogeneous Catalysis.** Edited by R. K. Grasselli (Mobil Central Research Laboratory) and A. W. Sleight (Oregon State University). Elsevier: Amsterdam, Oxford, New York, Tokyo. 1991. x + 364 pp. \$180.00. ISBN 0-444-88942-6.

This book contains the proceedings of the ACS symposium on the title subject held in Boston, MA, April 22-27, 1990. This work represents Volume 67 in the series *Studies in Surface Science and Catalysis*. It consists of a preface and 32 chapters in typescript form organized under the following headings: Oxidation; Hydrogenation; Zeolite Catalysis; and Surface Science and Modeling. There is an author index and a list of the previous volumes in the series.

**Cell Separation Science and Technology. ACS Symposium Series 464.** Edited by Dhinakar S. Kompala (University of Colorado) and Paul Todd (National Institute of Standards and Technology). American Chemical Society: Washington, DC. 1991. ix + 301 pp. \$69.95. ISBN 0-8412-2090-5.

This book was developed from a symposium sponsored by the Divisions of Industrial and Engineering Chemistry, Inc., and Biochemical Technology at the 199th National Meeting of the ACS in Boston, MA, April 22-27, 1990. It consists of 17 chapters organized, after an introductory chapter, under the following headings: Flow Sorting and Optical Methods; Sedimentation and Flow; Affinity Adsorption and Extraction Methods; and Electrophoretic and Magnetic Methods. There are indexes of authors, their affiliations, and subjects.

**Enzymes in Carbohydrate Synthesis. ACS Symposium Series 466.** Edited by Mark D. Bednarski and Ethan S. Simon (University of California, Berkeley, and Rohm and Haas, respectively). American Chemical Society: Washington, DC. 1991. xi + 131 pp. \$34.95. ISBN 0-8412-2097-2.

This book was developed from a symposium sponsored by the Division of Carbohydrate Chemistry at the 199th National Meeting of the ACS at Boston, MA, April 22-27, 1990. It consists of a preface, nine chapters, an appendix classifying the enzymes referred to in the volume, and author, affiliation, and subject indexes.

**Polymeric Drugs and Drug Delivery Systems. ACS Symposium Series 469.** Edited by Richard L. Dunn (Atrix Laboratories) and Raphael M. Ottenbrite (Virginia Commonwealth University). American Chemical Society: Washington, DC. 1991. xii + 313 pp. \$74.95. ISBN 0-8412-2105-7.

This book was developed from a symposium sponsored by the Division of Polymer Chemistry, Inc. at the 200th National Meeting of the ACS in Washington, DC, August 26-31, 1990. It consists of a preface by the editors and 25 chapters organized under the following headings: Drug Delivery Systems; Polymeric Drugs and Drug Conjugates; Polymeric Drug Delivery; and Liposomal Drug Delivery. There are indexes of authors, their affiliations, and subjects.

\*Unsigned book reviews are by the Book Review Editor.