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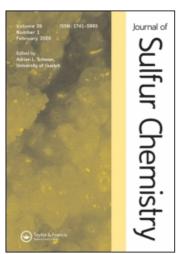
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BOOK REVIEW

Extended Linear Chain Compounds, Vols. 1 and 2, Joel S. Miller ed., Plenum Press, London, New York 1982, xv + 481 pages and xvi + 517 pages, Vol. 1 \$52.50, Vol. 2 \$55.00.

During the last decade there has been a growing interest in "organic metals" from a theoretical as well as from an applied point of view. Sulfur and selenium compounds have had a central position in these studies, since the first example in the shape of the highly conducting TTF-TCNQ complex was found in the early seventies. Most of the papers published in this field have been purely theoretical studies published by solid state physicists, but many papers dealing with new synthetic methods in sulfur and selenium chemistry have also appeared.

The two volumes of "Extended linear chain compounds" (a third volume is planned) contain 21 reviews of theoretical and practical studies of a widespread series of conductors in organic as well as in inorganic chemistry.

The reviewers are all active contributors to the areas they have reviewed; this ensures cohesive and authoritative treatment of the subject matter.

These volumes thus provide an excellent and up-to-date source of information and reference.

The following subjects are covered in the two volumes.

Vol. 1

- 1. The solution properties of one-dimensional metal chain complexes, Allan L. Balch.
- 2. Mass spectrometry of low-dimensional materials, F. E. Saalfeld, J. J. De Corpo, and J. R. Wyatt.
- 3. The synthesis, structure, electrical conduction properties, and theory of divalent, tetravalent, and one-dimensional partially oxidized tetracyanoplatinate complexes, Jack M. Williams, Arthur J. Schultz, Allan E. Underhill, and Kim Carneiro.
- 4. Linear chain bis(oxalato) platinate salts, Allan E. Underhill, David M. Watkins, Jack M. Williams, and Kim Carneiro.
- 5. A comprehensive review of linear chain iridium complexes, Arthur H. Reis, Jr.
- 6. Highly conductive halogenated low-dimensional materials, *Tobin J. Marks and Davida W. Kalina*.
- 7. Structural aspects of iodine-containing low-dimensional materials, Philip Coppens.
- 8. Linear chain platinum haloamines, *Heimo J. Keller*.
- 9. Optical properties of linear chain haloamine platinum complexes, Dan S. Martin, Jr.

Vol. 2

- 1. An added dimension, two-dimensional analogs of one-dimensional materials, *Martin B. Dines and Matt Marrocco*.
- 2. The electronic structure of semiconducting polymers, C. B. Duke.

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- 3. Band structures of one-dimensional inorganic, organic, and polymeric conductors, *Myung-Hwan Whangbo*.
- 4. Quasi-one-dimensional conductors: The Peierls instability, pressure and fluctuation effects, D. Jerome and H. J. Schulz.
- 5. Optical properties of one-dimensional systems, D. B. Tanner.
- 6. Superstructures and phase transitions in one-dimensional inorganic and organic materials, *Hayao Kobayashi and Akiko Kobayashi*.
- 7. X-Ray, neutron, and electron scattering studies of one-dimensional inorganic and organic conductors, Seiichi Kagoshima.
- 8. Photoconductive properties of organic assemblies and a comparison with dark conductors, Jerome H. Perlstein and Paul M. Borsenberger.
- 9. Cation-radical salts of tetrathiotetracene and tetraselenotetracene: Synthetic aspects and physical properties, I. F. Schegolev and E. B. Yagubskii.
- 10. Structural aspects of one-dimensional conductors based on tetrathiafulvalene and tetrathiatetracene, *Rimma P. Shibaeva*.
- 11. Metal complexes of tetrathiafulvalene and related compounds, Allen R. Siedle.

Reviews of special interest for the sulfur chemist are in Volume 1, review 1 and 6 and in Volume 2, reviews 4, 9, 10, and 11. As most studies on one-dimensional sulfur containing compounds have been carried out on derivatives of the 1, 3-dithiole system, it is therefore interesting to see that two of the reviews in this series deal with the 1, 2-dithiole system. These are reviews 9 and 10 which deal with tetrathiatetracene and the analogous tetraselenatetracene.

The two volumes can be recommended to all researchers interested in one-dimensional conductors including solid-state physicists as well as chemists in organic, inorganic, and physical and chemistry.

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