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CHEMISTRY

2014

CONTENTS

CHEMISTRY

APPLICATION OF DYES: THE MANUAL FOR HIGHER SCHOOLS, 3rd ED.

B. N. Melnikov, T. L. Scheglova, G. I. Vinogradova

ISBN 978-5-9963-0232-1

331 pp.

145 x 215 mm, hardcover

2010

The manual is devoted to the theoretical and practical issues of the dyes application in the textile, chemical, pulp-and-paper, tannery and fur, lacquer industry, and also in other spheres of the person vital functions. A reader would find the data on dyes and the objects of their application. In the present, the third, edition of this manual all changes in assortment of dyes made and technologies of their application are covered. The approach to a material statement is essentially changed.

The manual is intended for students and the teachers specializing in area of organic dyes technology and intermediate products, and also for the technical officers which field of activity is connected with dyes use.

BASIC CATALYSIS

B. V. Romanovsky

ISBN: 978-5-9963-0520-9

172 pp., hardcover

145 x 215 mm

2014

Series: The Textbook for Higher School

This textbook written by the professor of the Department of Physical Chemistry, Faculty of Chemistry of the Lomonosov Moscow State University is divided into two parts. The first part describes the current understanding of catalysis fundamental physical and chemical principles common to all types of catalyst systems, the second part is devoted to the classification of catalysts and catalytic processes approaches , as well as the main characteristics used in the assessment of the catalyst systems' effectiveness. The main attention is given to three main types of catalytic processes' features, such as homogeneous, enzymatic and heterogeneous catalysis.

The book is intended for students of chemical and other natural sciences departments at universities and colleges.

BASICS OF ORGANIC CHEMISTRY

M. A. Jurovskaja, A. V. Kurkin

ISBN 978-5-9963-0204-8

236 pp., hardcover

165 x 235 mm

2010

This manual provides the short course of organic chemistry which includes knowledge structure, reception methods, properties and application of the basic classes of organic compounds. The mechanisms of major organic reactions (nucleophillic replacements, elimination, etc.) are considered in detail. The book contains necessary information on modern most informative physical and chemical methods of organic compounds research (mass spectrometry, nuclear magnetic resonance spectroscopy, infrared spectroscopy, etc.).

Marina A. Jurovskaja Doctor of Chemistry, Professor of the Lomonosov Moscow State University. The author of 4 books.

Alexander V. Kurkin Ph.D. in Chemistry, Professor of the Lomonosov Moscow State University.

BASIC PHYSICAL CHEMISTRY: TEXTBOOK, 4th ED.

V. I. Gorshkov, I. A. Kuznetsov

ISBN 978-5-9963-0546-9

407 pp., hardcover

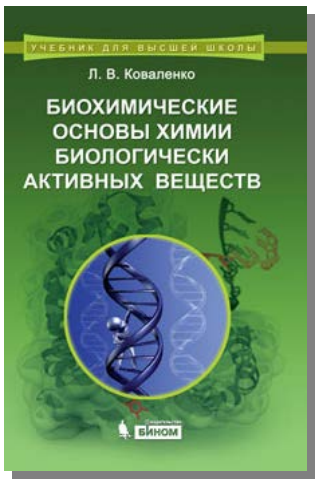
145 x 215 mm

2011

The textbook includes bases of chemical thermodynamics, chemical balance, physical chemistry of electrolits and nonelectrolyte solutions, boundary potentials and electromotive forces, chemical kinetics and catalysis.

It gives the short description of chromatography, extraction, rectification, uses ionselective electrodes methods. Basic positions of thermodynamics of nonequilibrium processes are considered.

The textbook is intended for students of biological specialties.



BIOLOGICALLY ACTIVE SUBSTANCES CHEMISTRY: BIOCHEMICAL BASES

L. V. Kovalenko

ISBN 978-5-9963-0097-6

229 pp., hardcover

145 x 215 mm

2010

The manual deals with the basic biopolymers and their components, principles of major catabolic and anabolic transformations and the ways of their regulation; mechanisms of interaction of some biologically active compounds with biochemical targets, various models of xenobiotic metabolism and role active oxygen in live systems.

The book is intended for graduate and post-graduate students, teachers and scientists.

Leonid V. Kovalenko Doctor of Chemistry, Professor of the D. Mendeleev University of Chemical Technology. His scientific interests are in the field of synthesis biogene carbonaceous acids and hetero-cyclic connections phosphoric analogues.

Alexander G. Muravyev Ph.D. in Chemistry, the leading developer of portable chemical complete laboratories, test complete sets and mini-express laboratories. The author of more than 100 publications in domestic and foreign editions, including 12 books, 15 inventions and patents.

Alexander A. Rodin Ph.D. in Chemistry.

FUNDAMENTALS OF MODERN ORGANIC SYNTHESIS

W. A. Smit, A. D. Dilman

ISBN 978-5-94774-941-0

750 pp., hardcover

170 x 240 mm

2009

This book provides the analysis of advanced methods in the synthesis of complex organic molecules. The focus is placed on the carbon-carbon bond forming methodologies for construction of acyclic and carbocyclic three-, four-, five-, and six-membered compounds. Various reaction types including heterolytic, radical, and concerted transformations and a series of transition metal mediated reactions such as cross-couplings and olefin metathesis are covered.

The power of synthetic methodology is demonstrated on numerous synthesis of complex natural products examples. The key role of total synthesis of natural products in drug discovery is highlighted. The book contains extensive bibliography on all topics considered, mainly on original publications of the last decade.

The book is intended for students and researches interested in modern organic synthesis.

FUNDAMENTALS OF PHYSICAL CHEMISTRY: A TRAINING MANUAL: IN 2 VOLUMES

V. V. Eremin [et al.]

ISBN 978-5-9963-0377-9, 978-5-9963-0535-3 (V. 1),
978-5-9963-0536-0 (V. 2)
320 pp. (V. 1), 263 pp. (V. II), hardcover
165 x 235 mm
2013

(Textbook for Higher School)

The manual is written by the professors of the Lomonosov State University Chemical Department. It describes the modern theoretical foundations of chemical thermodynamics and chemical kinetics and their practical applications. The book consists of two parts: the first part describes the theory and the second part includes problems, questions, exercises, tables of physical and chemical data, basic formulae, mathematical minimum. The reader would find answers or keys to all tasks.

The book is intended for students and teachers from specialized chemical schools, technical colleges and universities.

LABORATORY PRACTICAL WORK ON THE GENERAL CHEMICAL TECHNOLOGY: MANUAL , 3rd ED.

V. A. Averyanov [etc.]; V. S. Beskov (ed.)

ISBN 978-5-9963-1377-8
279 pp., hardcover
145 x 215 mm
2014

The manual describes 30 laboratory works entering into a course “General Chemical Technology”. The presented works are distinguished by the problems put in them and the used laboratory technics. Descriptions of works on computer modeling are added by specially created programs which are in an easy approach on a publishing house site.

The manual is intended for students.

MANUAL ON ORGANIC CHEMISTRY: MANUAL

V. F. Traven, A. E. Shchekotikhin

ISBN 978-5-9963-0359-5

592 pp., hardcover

165 x 235 mm

2014

The book includes methods of more than 300 organic compounds syntheses of all substances classes. A reader would find references from which the corresponding organic compound method was taken, as well as the sources with information about other methods of its synthesis. The authors provide data on utilization of solvents and by-products. Special attention is given to the newest techniques of organic compounds synthesis, including those developed according to the principles of "green" chemistry.

This manual has been drafted together with the textbook (V. F. Traven "Organic Chemistry", the 2nd ed.) and the book of problems (V. F. Traven, A. Yu. Sukhorukov, N. A. Kondratova "Tasks in Organic Chemistry").

The book is intended for students, graduate students and teachers of chemical faculties of universities and chemical and technological higher education institutions.

ORGANIC CHEMISTRY. PROBLEMS IN GENERAL CHEMISTRY COURSE WITH SOLUTIONS: MANUAL (IN 2 VOL.)

M.V. Livantsov [and others], ed. Academician N. S. Zefirov

ISBN 978-5-94774-759-1, 978-5-94774-757-7 (vol. 1), 978-5-94774-758-4 (vol. 2)

255 pp. (vol. 1), 714 pp. (vol. 2)

165 x 235 mm, hardcover

2012

(Higher Shool Textbook)

This manual compiled on the basis of many years experience of teaching organic chemistry at the Lomonosov State University Chemistry Department, includes about 1200 problems and questions relating almost all topics of the contemporaryorganic chemistry university course. Particular attention is paid to the development of organic compounds structure analysis' skills and to the practice of assessing the impact of structural factors on compounds reactivity, as well as the involvement of stereochemical concepts while considering organic reactions mechanisms. The manual consists of 17 chapters. The first part contains problems and questions. The second part provides detailed solutions.

The book is intended for students of chemical universities, graduate students and teachers.

ORGANIC CHEMISTRY: A TEXTBOOK FOR HIGHER SCHOOLS: IN 3 VOLUMES, 2ND ED.

V. F. Traven

ISBN 978-5-9963-0357-1
978-5-9963-0406-6 (V. I), 978-5-9963-0407-3 (V. II),
978-5-9963-0412-7 (V. III)
368 pp. (V. I), 517 pp. (V. II), 388 pp. (V. III)
165 x 235 mm
2013
(Textbook for Higher School)

This second edition of the well-known textbook is structured in accordance with the extent of the students' subject mastering: for the initial study the reader would find the fundamental information; the students specializing in the field of organic chemistry will find the chapters titled "In-depth study." The textbook is supplemented by the book of problems (V. F. Traven, A. Yu. Sukhorukov, N. A. Kondratova "Problems in Organic Chemistry") and manual (V. F. Traven, A. E. Shchekotikhin "Manual on Organic Chemistry").

The book is intended for students, graduate students and teachers of chemical and chemical-technological universities.

ORGANIC CHEMISTRY: TERMS AND THE BASIC REACTIONS

I. V. Borovlev

ISBN 978-5-94774-755-3
359 pp.
165 x 235 mm, hardcover
2010

The manual on organic chemistry contains the located in alphabetic order terms, concepts and the designations used for the description of molecules and processes with their participation. Special attention is given to stereochemical aspects of molecules structure, connection of a structure with reactionary ability, mechanisms of chemical reactions, including nominal.

The manual is intended for students of chemical specialities and for self-education.

Ivan V. Borovlev Doctor of Chemistry, Professor of the Stavropol State University. Area of scientific interests: chemistry of heterocyclic connections, theoretical organic chemistry. The author of more than 150 scientific and methodical works.

PRACTICAL WORK IN ORGANIC CHEMISTRY

V. I. Terenin [etc.]; N. S. Zefirova (ed.)

ISBN 978-5-94774-942-7

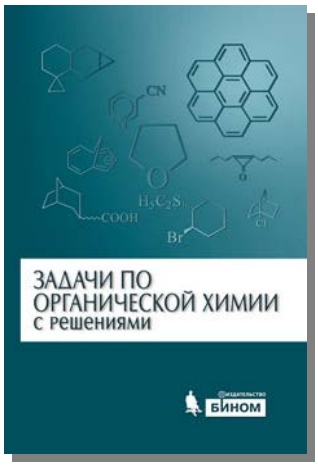
568 pp., hardcover

165 x 235 mm

2010

The manual presents the general course of organic chemistry in which a long-term operational experience of students' (the Chemical Faculty of the Lomonosov Moscow State University) practical work in organic chemistry is systematized. The book describes methods of organic connections of various classes synthesis. General rules and work methods in the organic laboratory are reviewed, general instructions on interpretation of nuclear magnetic resonance 1H and 13C spectrums synthesized compounds are given.

The book is intended for graduate and post-graduate students, teachers of chemical higher schools and scientists.



PROBLEMS IN ORGANIC CHEMISTRY, 4th ED.

A. L. Kurts et al.

ISBN 978-5-9963-1321-1

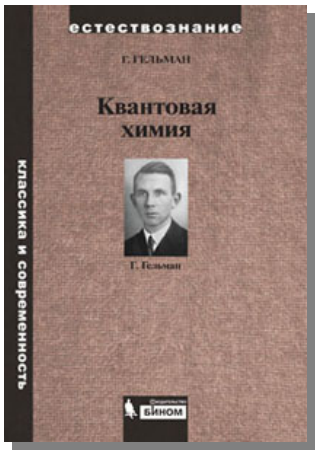
350 pp., hardcover

145 x 215 mm

2013

The manual contains problems in organic chemistry which were offered to the third year students from the Lomonosov State University Chemical Department. All problems are supplied by detailed solutions, and where it is necessary, comments. Sections correspond to the structure of the basic organic chemistry course. Problems considerably differ on complexity. Key chemical transformations, conditions and reagents are taken into account in solutions. This method helps students to develop independent approach to construction of rather difficult organic molecules skeletons.

The book is intended for students of higher schools studying organic chemistry, post-graduate students and teachers.



QUANTUM CHEMISTRY, 2nd ED.

G. Gelman

ISBN 978-5-94774-768-3

533 pp., hardcover

165 x 235 mm

2012

This scientific publication, has been written by the German author during his work in the USSR. For the first time this fundamental work was published in Russian in 1937. This edition was supplemented by biographical essay written by the author's son, as well as some comments that take into account the current state of science.

The book is intended for researchers, university students and post graduate students.

QUANTUM CHEMISTRY.
MOLECULES, MOLECULAR SYSTEMS AND SOLIDS, 3rd ED., REV.

V. G. Tsirelson

ISBN 978-5-9963-1668-7

496 + 24 pp., hardcover

170 x 240 mm

2014

The book presents theoretical contemporary quantum chemical computations background of the wide range of chemical compounds structure and properties, from molecules to solids, including the nano-size systems. It considers contemporary views on chemical bonds and molecular interactions. The methods used for interpretation of the computation results are given in detail. Well-illustrated material, which is essential for researchers and chemical engineers working in the science-intensive fields of industry, is presented in easy accessible form.

This book is written by Professor Vladimir G. Tsirelson, widely-recognized expert in the field who has been named as a recipient of the 2002 Alexander von Humboldt Research Award in the field of theoretical chemistry.

The book is intended for undergraduate and graduate students, researchers and lecturers of classic, pedagogical and technical universities. It will be also useful for experts in chemistry, physics, biology and materials science.

THE GAS-CHROMATOGRAPHIC ANALYSIS OF NATURAL GAS: PRACTICAL GUIDANCE

J. S. Drugov, A. A. Rodin

ISBN 978-5-94774-763-8

174 pp.

165 x 235 mm, hardcover

2009

The practical guidance is devoted to the gas-chromatographic analysis of natural combustible gas, liquefied gas, associated oil gases, gas condensate, and also petroleum refining gases and gaseous monomers for petrochemical synthesis. A reader would find variants of gas-chromatographic analysis of natural gas components on adapter, microadapter and capillary columns WCOT with siloxane stationary phases, as well as PLOT with zeolites, silica gel, aluminium oxide, etc. Modules application with universal and selective detectors for identification and quantitative analysis of sulphur are described. The guidance presents techniques of routine laboratory analyses in processes of clearing, transportation, storage and oil refining and gas.

The guidance is intended for workers of the gas industry, graduate and post-graduate students of oil and petrochemical specialties of technological higher schools.

THE MODIFIED ELECTRODES FOR VOLTAMPEROMETRY IN CHEMISTRY, BIOLOGY AND MEDICINE

G. K. Budnikov, G. A. Evtjugin, V. N. Majstrenko

ISBN 978-5-9963-0199-7

416 pp.

145 x 215 mm, hardcover

2010

The scientific edition describes theoretical bases of creation and functioning mechanisms of voltamperometry chemical sensor controls and biosensor controls on the basis of modified electrodes in the solving of problems of chemistry, biology and medicine and the environment objects control. Special attention is given to new directions in designing and application of the modified electrodes — to the using of nanoparticles and ionic liquids, the biomaterials, electrospending polymers, self-managing, multitouch systems, to detecting of substances in a stream.

The book is intended for the experts working in the field of analytical chemistry and analytical instrument making, and also for teachers, graduate and post-graduate students of chemical, biological and medical specialities.

Herman K. Budnikov Doctor of Chemistry, Professor of the Kazan State University, the member-correspondent of the Russian Academy of Natural Sciences, Academician of the International Academy of Sciences of the Higher School. Scientific interests: the electroanalytical chemistry, chemically modified electrodes, biosensor controls, history of analytical chemistry and methodology of its teaching. The author of more than 900 scientific publications and 20 books.

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Many of our editors worked previously in the MIR Publishers which proved to be famous for high quality of its translated scientific editions since the Soviet era. Therefore it is no wonder that the BKL Publishers is always perfectly presented at the international book fairs in Moscow, Frankfurt, Beijing, Jerusalem, Madrid, London, Bologna, Turin etc.

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