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VERFAHRENSTECHNIK
2015

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AMERICAN MINERALOGIST

An International Journal of Earth and Planetary Materials

Edited by Keith Putirka, Ian Swainson

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American Mineralogist: An International Journal of Earth and Planetary Materials (Am Min), is the flagship journal of the Mineralogical Society of America (MSA), continuously published since 1916. Am Min is home to some of the most important advances in the Earth Sciences. Our mission is a continuance of this heritage: to provide readers with reports on original scientific research, both fundamental and applied, with far reaching implications and far ranging appeal. Topics of interest cover all aspects of planetary evolution, and biological and atmospheric processes mediated by solid-state phenomena. These include, but are not limited to, mineralogy and crystallography, high- and low-temperature geochemistry, petrology, geofluids, bio-geochemistry, bio-mineralogy, synthetic materials of relevance to the Earth and planetary sciences, and breakthroughs in analytical methods of any of the aforementioned.

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Dear Reader,

We are happy to present the forthcoming titles 2015 in De Gruyter's program Chemistry, Chemical Engineering and Materials Sciences.

This year, we especially like to highlight a new topical cluster on "Process Technology". Closing the gap between industrial application and academic theory, these titles exemplify our general vision of timely scientific publishing. Further actual and interdisciplinary topics in our program are "Nanotechnology", "Environmental Chemistry" and "Physical Chemistry", reaching out to adjacent scientific fields.

At this point, we also like to alert you to our catalogues on "Mathematics, Physics, Engineering" as well as "Medicine and Life Sciences".

We wish you a great time reading our books and journals and invite you to share ideas for further projects with us.

Your Team Science and Technology

Liebe Leser,

wir freuen uns, Ihnen die Neuerscheinungen 2015 im Programm Chemie, Verfahrenstechnik und Materialwissenschaften des De Gruyter Verlags vorzustellen.

Dieses Jahr möchten wir Sie besonders aufmerksam machen auf das neue Themen-Cluster „Verfahrenstechnik". Diese Titel spannen einen Bogen zwischen industrieller Anwendung und akademischer Theorie und veranschaulichen dahingehend unsere Vision zeitgemäßen wissenschaftlichen Publizierens. Weitere aktuelle und interdisziplinäre Themen im Programm sind „Nanotechnologie", „Umweltchemie" und „Physikalische Chemie".

Wir möchten Sie an dieser Stelle auch auf unsere Kataloge „Mathematik, Physik, Technik" und „Medizin und Life Sciences" hinweisen.

Wir wünschen Ihnen viel Spaß beim Lesen unserer Bücher und Zeitschriften und laden Sie herzlich ein Ihre Projektideen mit uns zu teilen.

Ihr Team Science and Technology

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INDUSTRIELLE CHEMIE
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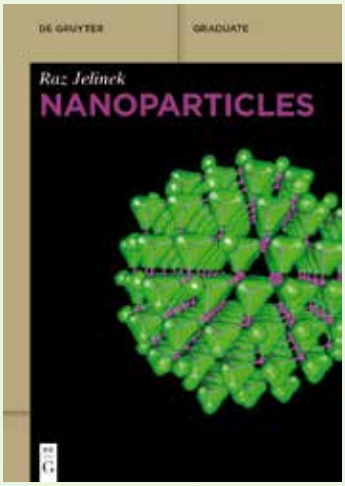


Raz Jelinek
NANOPARTICLES

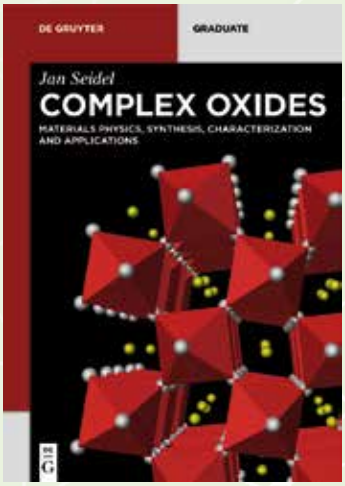
Approx. 410 pp., 200 fig.
Pb. RRP € 69.95 / US$ 98.00
ISBN 978-3-11-033002-1
eBook RRP € 700.00 / US$ 980.00
PDF ISBN 978-3-11-033003-8
ePUB ISBN 978-3-11-038991-3

Nanoparticles provides a comprehensive overview of different nanoparticle families, compositions, structures, and functions. Through presentation of numerous examples and research efforts, this book explores the core promise of NPs: the realization that the properties of matter are often significantly altered as one wades into the nano-scale. The interest and activity in this field have led to dramatic contributions in diverse scientific and technology fields – chemistry, physics, biology, electronics, and others. This textbook introduces this exciting and rapidly evolving field to readers who are not necessarily active or experts in this discipline.

From the Contents

- Introduction and historical perspective
- Semiconductor NPs
- Metal NPs
- Metal-oxide NPs
- Organic NPs
- Hybrid NPs
- NP/biology interface
- Beyond the nanoscale: NP assemblies

Raz Jelinek is at Ben Gurion University, Israel. His research is focused on the interface between biology, chemistry, and nanotechnology, resulting in more than 100 scientific articles and several patents. His textbook *Biomimetics – A Molecular Perspective* was published by De Gruyter in 2013.



Jan Seidel
COMPLEX OXIDES
Materials Physics, Synthesis, Characterization and Applications

Approx. 310 pp. 100 fig.
Pb. RRP € 69.95 / US$ 98.00
ISBN 978-3-11-030424-4
eBook RRP € 700.00 / US$ 980.00
PDF ISBN 978-3-11-030425-1
ePUB ISBN 978-3-11-038281-5

Complex oxides have a wide variety of modern applications – nanoelectronics, thermoelectrics, photo- and electrochemistry, as battery materials, catalysts, for energy conversion and storage, sensors and actuators, coatings, dielectrics and many more. In a clear and accessible way the text provides an overview of all important materials classes, and discusses nanoscale and interface properties and important synthesis and characterization methods. The experimental and theoretical approaches applied to the study of complex oxides are discussed here and the given references will provide the reader with a basis for further study.

From the Contents

- Introduction to correlated electron oxide materials
- Theoretical concepts
- Important material classes
- Nanoscale properties Synthesis methods
- Important experimental characterization methods
- Applications and Outlook

Jan Seidel is Associate Professor and ARC Future Fellow at School of Materials Science & Engineering, UNSW Australia, with research interests in materials physics of complex oxide nanomaterials, especially fundamental electronic, optical and magnetic properties of topological structures.

J. Paulo Davim (Ed.)

MACHINABILITY OF FIBRE-REINFORCED PLASTICS

Machinability ofcomposite materialsprovidesfundamentals and recent advances. Composite materials are engineered materials, made from two or more constituents with significantly different physical or chemical properties which remain separate on a macroscopic level within the finished structure. Due to their special mechanical and physical properties they have the potential to replace conventional materials. In nanocomposites the size of one phase is less than 100 nm in at least one dimension. Nanocomposites with polymer, metal or ceramic matrices find increasing application in bioengineering, battery cathodes, automotives, sensors and computers.

J. Paulo Davim,University of Aveiro, Aveiro, Portugal.

TYPE OF PUBLICATION Specialist Text
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

Advanced Composites 4

Approx. 320 pp., 250 fig.
HC RRP € 139.95/*US$ 196.00
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ePub RRP € 139.95/*US$ 196.00
ISBN 978-3-11-038887-9
Print + eBook RRP € 209.00/*US$ 293.00
ISBN 978-3-11-029226-8

Ulrich Kämper, Patrick Lydon, James Cleland, John Rumble
René Deplanque (Ed.)

CORROSION PROTECTION SYSTEMS

In Industrial Applications

Both anodic and cathodic Corrosion Protection Systems are widely used in chemical industry, pipeline techniques and ship building. The authors present practical aspects of corrosion protection and focus on latest techniques, analysis, system design, financing, and planning. This book thus provides support for each step in implementing the optimal corrosion protection system.

R. Deplanque, Berlin, Germany; U. Kämper, Cologne, Germany; P. Lydon, London, UK; J. Cleland, Cambridge, UK; J.Rumble, Washington, USA.

TYPE OF PUBLICATION Monograph
KEYWORDS Electrochemistry, Corrotion Protection, Cathodic Protection, Anodic Passivation,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

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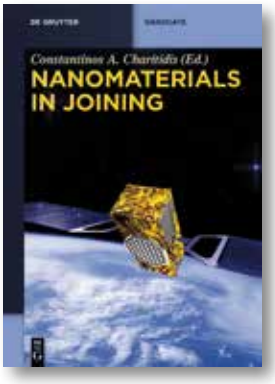

Constantinos A. Charitidis (Ed.)

NANOMATERIALS IN JOINING

Joining techniques in engineering are of major importance. Innovations in the field of composites now allows design of nanomaterials with tailored properties. This book adresses techniques for similar and dissimilar joining, characterization of joint structures and damage prediction by simulation. A special focus is laid on welding of lightweight structures, which are of special economic interest for aeronautical and automotive applications.

Constantinos A.Charitidis, National Technological University of Athens, Athens, Greece.

TYPE OF PUBLICATION Monograph
KEYWORDS Nanomaterials, Composite Materials, Joinings,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

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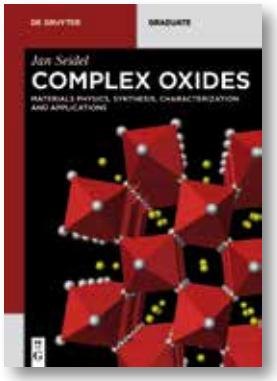

T

Jan Seidel

COMPLEX OXIDES

Materials Physics, Synthesis, Characterization and Applications

Complex oxides have a wide variety of modern applications nanoelectronics, thermoelectronics, photo- and electrochemistry, as battery materials, catalysts and for energy conversion and storage. In a clear and accessible way the text provides an overview of all important materials classes, such as superconductors, manganites, (multi-) ferroics, discusses nanoscale and interface properties and important synthesis and characterization methods.

Jan Seidel, University of New South Wales, Sydney, Australia.

TYPE OF PUBLICATION Textbook
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

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Approx. 310 pp., 100 fig.
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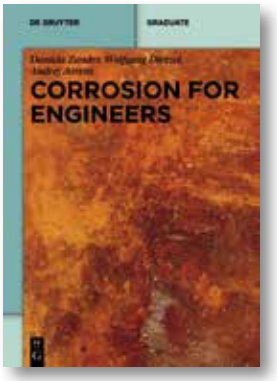

T

Daniela Zander, Wolfgang Dietzel, Andrej Atrens

CORROSION FOR ENGINEERS

This textbook is an introduction and overview of the scientific principles of many metal corrosion problems. Besides a brief insight into thermodynamic, kinetic and biological fundamentals of corrosion phenomena, the corrosion mechanism in aqueous, atmospheric and biological conditions is presented. A major focus lies on the discussion of the influence on alloying elements, microstructures and surfaces on the corrosion properties.

Daniela Zander, RWTH Aachen, Aachen,Germany; Wolfgang Dietzel, Helmholtz-Zentzrum Geesthacht, Geesthacht, Germany; Andrej Atrens, The University of Queensland, Brisbane, Australia.

TYPE OF PUBLICATION Textbook
KEYWORDS Materials Science; Chemical Engineering; Corrosion; Industrial Application
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

De Gruyter Textbook

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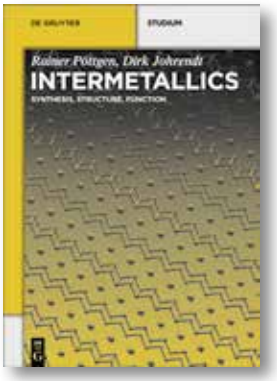

T

Rainer Pöttgen, Dirk Johrendt

INTERMETALLICS

Synthesis, Structure, Function

More than 80 elements of the Periodic Table are metals showing a broad range of structures, bonding peculiarities and physical properties. Thus, alloys and intermetallic compounds play an important role for modern functional and construction materials. Due to the enormous variety of intermetallics the authors introduce to the broad field on the level of final Master studies and focus on the basic materials.

Prof. Dr. Rainer Pöttgen, University of Münster, Germany; Prof. Dr. Dirk Johrendt, Ludwig-Maximilians-University of Munich, Germany.

TYPE OF PUBLICATION Textbook
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2014

De Gruyter Textbook

294 pp., 180 fig.
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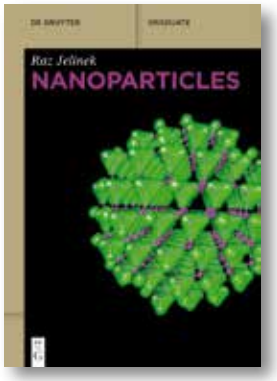

T

Raz Jelinek

NANOPARTICLES

This book provides a broad overview of current scientific and technological aspects of Nanoparticles, their synthesis, structures, and unique properties. Through a wealth of examples, the book will introduce this broad and exciting field to the reader, underscoring the extraordinary diversity and potential of Nanoparticles.

Raz Jelinek, Ben Gurion University, Beer Sheva, Israel.

TYPE OF PUBLICATION Textbook
KEYWORDS Nanotechnology, Nanostructures, Nanomaterials,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

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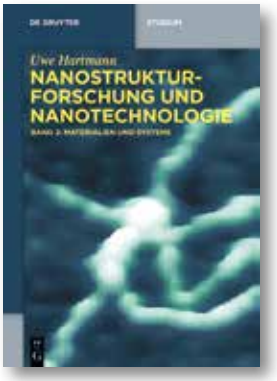

T

Uwe Hartmann

NANOSTRUKTUR-FORSCHUNG UND NANOTECHNOLOGIE

[Nanostructural Research and Nanotechnology]

Band 2: Materialien und Systeme

Band 2 des vierteiligen Lehrbuchs beschäftigt sich mit allen Materialien, die in der Nanostrukturforschung und der Nanotechnologie relevant sind. Zu den Materialien zählt die weiche kondensierte Materie inklusive der biologischen Materie genauso wie nanoskalige Grundbausteine in Form von monolagigen Filmen, Nanoröhrchen, Clustern oder biologischen Maschinen.

Volume 2 of this four-part textbook is devoted to the full range of materials relevant to nanostructural research and nanotechnology. These materials encompass soft condensed matter, including biological matter, along with nano-scale building blocks in the form of monolayer films, nanotubes, clusters, and biological machines.

Uwe Hartmann, Universität des Saarlandes, Saarbrücken.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Weiche kondensierte Materie; Nanoskalige Grundbausteine; Nanopartikel; Niedrigdimensionale Systeme; Metamaterialien / Metamaterials; nanoparticles; nano-scale building blocks; low-dimensional systems; soft condensed matter
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 2. Quartal 2015 / 2nd quarter 2015

De Gruyter Studium

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ISBN 978-3-486-71782-2
eBook € 749,– [D]/UVP/RRP *US$ 1049.00
ISBN 978-3-486-85542-5
ePub/ePub € 749,– [D]/UVP/RRP *US$ 1049.00
ISBN 978-3-11-039886-1

T

Uwe Hartmann

NANOSTRUKTUR-FORSCHUNG UND NANOTECHNOLOGIE

[Nanostructural Research and Nanotechnology: Volume 3: Methods and Procedures]

Band 3: Methoden und Verfahren

Band 3 des vierteiligen Lehrbuchs vermittelt Methoden und Verfahren in der Nanostrukturforschung und der Nanotechnologie. Es werden sowohl theoretische Konzepte zur Beschreibung der spezifischen Eigenschaften von Nanosystemen als auch experimentelle nanoanalytische Verfahren vorgestellt, unter denen die Rastersondenverfahren als die Wegbereiter der Nanotechnologie einen besonderen Stellenwert einnehmen.

Volume 3 of this four-part textbook is devoted to methods and procedures in nanostructural research and nanotechnology. It present theoretical concepts for describing the specific properties of nanosystems as well as experimental nano-analytic procedures, including scanning probe techniques, which are taking on particular importance as indispensable tools in nanotechnology.

Uwe Hartmann, Universität des Saarlandes, Saarbrücken.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 3. Quartal 2015 / 3rd quarter 2015

De Gruyter Studium

Ca./Approx. 380 S./pp.
Br./Pb. € 44,95 [D]/UVP/RRP *US$ 63.00
ISBN 978-3-11-035216-0
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ISBN 978-3-11-036196-4
ePub/ePub € 449,50 [D]/UVP/RRP *US$ 629.00
ISBN 978-3-11-039644-7

J

Ronald M. Latanision, Noam Eliaz (Editors-in-Chief)

CORROSION REVIEWS

Corrosion Reviews is an international bimonthly journal devoted to critical reviews that are key to advancing the understanding and application of corrosion science and engineering in the service of society.

LANGUAGE English
IMPACT FACTOR increased in 2013: 1.714
5-year IMPACT FACTOR: 1.167

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J

Robert Schlögl (Editor-in-Chief)

GREEN

The International Journal of Sustainable Energy Conversion and Storage

GREEN SCIENCES

In 2015 GREEN shifts its primary focus towards a systemic approach to energy issues. A realistic perception on the application of renewable energy resources in conjunction with conventional systems is provided reflecting their various roles in a reliable energy supply worldwide. GREEN provides resilient groundwork for further energy research stimulating the discussion and cooperation between scientists and decision makers.

LANGUAGE English

Volume 5 (2015) Subscription rates
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Print/Online
€ 876.00/*US$ 1314.00
6 issues per volume
ISSN 1869-876X
e-ISSN 1869-8778

J

Hiroyuki Fukuyama (Editor-in-Chief)

HIGH TEMPERATURE MATERIALS AND PROCESSES

HTMP offers an international forum for new ideas, insights and results related to high-temperature materials and processes in science and technology. HTMP publishes original research papers and short communications addressing topics at the forefront of research including processing of various materials at high temperatures. Special issues feature ongoing research programs as well as symposia and other related research activities.

LANGUAGE English
IMPACT FACTOR increased in 2013: 0.356

Volume 34 (2015) Subscription rates
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Individual Subscription € 99.00/*US$ 149.00
Print/Online
€ 719.00/*US$ 1079.00
8 issues per volume
ISSN 0334-6455
e-ISSN 2191-0324

J

Oskar Faix (Editor-in-Chief)

HOLZFORSCHUNG

International Journal of the Biology, Chemistry, Physics, and Technology of Wood

Holzforschung is an international scholarly journal that publishes cutting-edge research on the biology, chemistry, physics and technology of wood and wood components. High quality papers about biotechnology and tree genetics are also welcome. Rated year after year as one of the top scientific journals in the category of Pulp and Paper (ISI Journal Citation Index), Holzforschung represents innovative, high quality basic and applied research.

LANGUAGE English
IMPACT FACTOR 2013: 2.339

Volume 69 (2015) Subscription rates
Print
€ 2040.00/*US$ 3056.00
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Print/Online
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9 issues per volume
ISSN 0018-3830
e-ISSN 1437-434X

J

Elias C. Aifantis (Editor-in-Chief)

JOURNAL OF THE MECHANICAL BEHAVIOR OF MATERIALS

JMBM publishes articles on original research, short communications and reviews covering all modern engineering materials: Metals and alloys, ceramics and glass, polymers and composite materials, wood and elastomers. The journal also covers the area of nanomechanics of materials. In addition to regular issues, special issues on specific subjects with invited reviews by eminent scientists in the field are published.

LANGUAGE English

Volume 24 (2015) Subscription rates
Print
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ISSN 0334-8938
e-ISSN 2191-0243

J

Challa Kumar (Editor-in-Chief)

NANOTECHNOLOGY REVIEWS

Nanotechnology Reviews (NTREV)is a bimonthly, peer-reviewed journal that is dedicated in general to Nanoscience and Nanotechnology covering: Synthesis and Fabrication; Characterization; Materials and Surfaces; Computation and Theoretical Aspects; Biology and Biotechnology; Medicine; Energy. NTREV addresses scientists as well as engineers.

LANGUAGE English

Volume 4 (2015) Subscription rates
Print
€ 418.00/*US$ 627.00
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Individual Subscription € 99.00/*US$ 149.00
Print/Online
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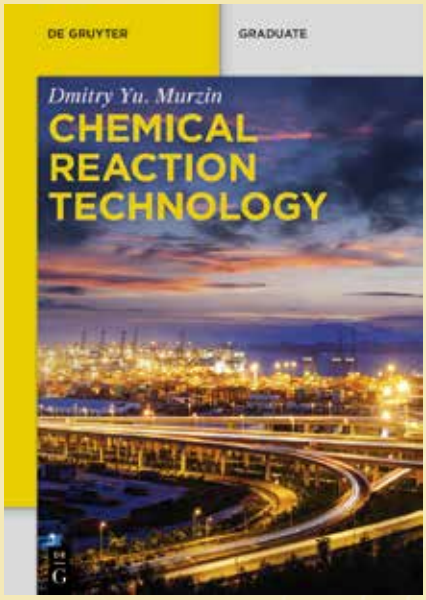
6 issues per volume
ISSN 2191-9089
e-ISSN 2191-9097

NEW TEXTBOOK



Dmitry Yu. Murzin
CHEMICAL REACTION TECHNOLOGY

2015. Approx. 310 pages. 150 fig. 100 tables
Pb. RRP € 59.95 / US$ 84.00
ISBN 978-3-11-033643-6
eBook RRP € 600.00 / US$ 840.00
PDF ISBN 978-3-11-033644-3
ePUB ISBN 978-3-11-038931-9

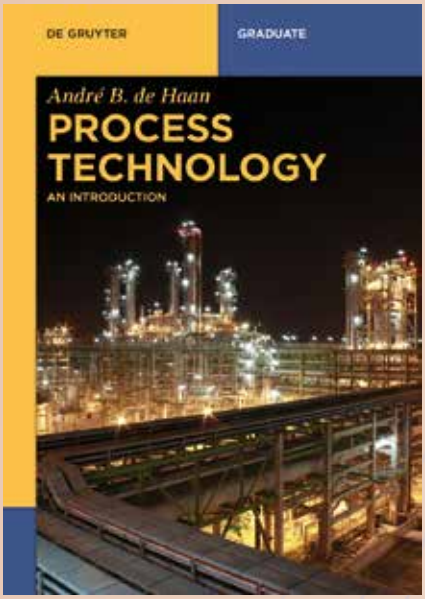
The content of this textbook is based in part on a course on chemical reaction technology, which the author is teaching for almost 15 years, first covering the basics of chemical technology providing also an overview of modern chemical and petrochemical industry. It then goes in depth into different chemical reactions. Variability of process technologies applied industrially for the same reaction is another key feature which is specifically addressed.

From the Contents

- Chemical Technology as science
- Physico-chemical basis of chemical processes
- Chemical processes and unit operations
- Chemical process industry
- Hydrogen and syngas generation
- Cracking
- Catalytic reforming of gasoline fractions: combining isomerization and dehydrogenation
- Halogenation
- Oxidation
- Hydrogenation and dehydrogenation
- Reactions involving water: hydration, dehydration, etherification, hydrolysis, esterification
- Alkylation
- Reactions with CO, CO2 and syngas
- Key reactions in synthesis of intermediates: nitration, sulfation, sulfonation, alkali fusion, ketone and aldehyde condensation
- Polymerization

Dmitry Yu. Murzin studied chemistry and chemical engineering at the Mendeleev University of Chemical Technology in Moscow and obtained his PhD and DrSc degrees at Karpov Institute of Physical Chemistry. He worked at Universite Louis Pasteur, Strasbourg, France and Åbo Akademi University, Turku, Finland as a post-doc and was also associated with BASF, being involved in research, technical marketing and management. Since 2000 Prof. Murzin holds the Chair of Chemical Technology at Åbo Akademi University.

NEW TEXTBOOK



André B. de Haan
PROCESS TECHNOLOGY
An Introduction

2015. Approx 610 pages. 400 figures
Pb. RRP € 69.95 / US$ 98.00
ISBN 978-3-11-033671-9
eBook RRP € 700.00 / US$ 980.00
PDF ISBN 978-3-11-033672-6
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The main objective of this textbook is to provide a general overview of chemical and biochemical process and product technology. It focuses on the structure and development of production processes, main technological operations and the most important aspects of product and process development including economics. For the technological operations the emphasis is on their operating principles, reasons for application and available industrial equipment. Design calculations and mathematics are kept to the absolute minimum required to understand why process technologists and engineers need certain information. All topics are extensively illustrated by representative examples.

From the Contents

- The Chemical Industry
- The Structure of Chemical and Biochemical Process Systems
- Principles of Chemical Reaction Engineering
- Chemical Reactors and Their Industrial Applications
- Biochemical Reaction Technology
- Evaporative Separations
- Extraction & Leaching
- Absorption & Stripping
- Adsorption & Ion Exchange
- Solid-Liquid Separation
- Particle Removal from Gases
- Membrane Separations
- Crystallization & Precipitation
- Solids Finishing Technologies
- Product Technology
- Development & Engineering
- Hydrodynamic Aspects of Scale-Up
- Process Safety

André B. de Haan, Chairman in separation technology at University of Twente and Eindhoven. At present he holds a position as corporate scientist process technology at Corbion Purac, combined with a professor position at Delft University of Technology.

Carolina Machado, J. Paulo Davim (Eds.)

INNOVATION MANAGEMENT

In Research and Industry

As a consequence of social, technological, political and economic changes, the field of organizations management and engineering becomes highly complex, calling for more effective strategies. In this book, the authors discuss innovative technological resources and their implications on organizational policies, strategies, and flexibility, as well as on sustainable management.

Paulo Davim, University of Aveiro, Portugal; Carolina Machado, University of Minho, Portugal.

TYPE OF PUBLICATION Monograph
KEYWORDS Technological Challanges, Management, Process Engineering, Risk Management, Sustainability,
LANGUAGE English
DATE OF PUBLICATION 1st quarter 2015

Approx. 220 pp., 8 fig.
HC RRP € 99.95/*US$ 140.00
ISBN 978-3-11-035872-8
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ISBN 978-3-11-035875-9
ePub RRP € 99.95/*US$ 140.00
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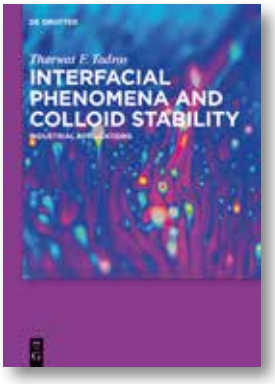

Tharwat F. Tadros

INDUSTRIAL APPLICATIONS

This volume providesthe knowledge that is essential for the formulation of the complex multi-phase systems used varied areas of application. It enables the physical and formulation chemist as well as the chemical engineer in designing the formulation on the basis of a rational approach, and the formulation scientist to better understanding the factors responsible for producing a stable formulation with optimum application conditions.

Tharwat Tadros, Wokingham, UK.

TYPE OF PUBLICATION Monograph
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

Approx. 510 pp., 350 fig.
HC RRP € 189.95/*US$ 266.00
ISBN 978-3-11-037107-9
eBook RRP € 189.95/*US$ 266.00
ISBN 978-3-11-036647-1
ePub RRP € 189.95/*US$ 266.00
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Tharwat F. Tadros

BASIC PRINCIPLES

Interfacial Phenomena and Colloid Stability deals with the fundamental aspects of interfacial phenomena, which form the basis of applications of interface and colloid science to various disperse systems. These include suspensions, emulsions, nano-dispersions, wetting, spreading, deposition and adhesion of particles to surfaces. This book is valuable for research scientists and PhDs. investigating various aspects of interface and colloid science.

Tharwat Tadros,Wokingham, UK.

TYPE OF PUBLICATION Monograph
KEYWORDS Analytical Chemistry; Nanotechnology; Physical Chemistry; Spectroscopy
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

Approx. 510 pp., 350 fig.
HC RRP € 189.95/*US$ 266.00
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ePub RRP € 189.95/*US$ 266.00
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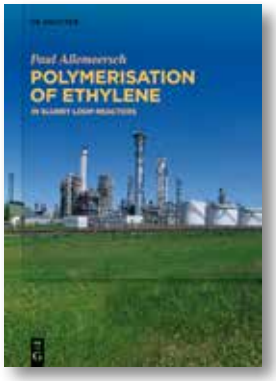
D Database **J** Journal **T** Textbook **Y** Yearbook Open Access



Paul Allemeersch

POLYMERISATION OF ETHYLENE

In Slurry Loop Reactors

This book is based on full scale experience, and allows to understand the functioning of the slurry loop reactor, and to operate it. All necessary aspects of the reactor are treated, and then combined in a simple off-line model, valid for all commercial types of catalysts. A detailed method to scale-up products from the laboratory directly to the full scale loop reactor is given.

Paul Allemeersch, Tessenderlo, Belgium.

TYPE OF PUBLICATION Monograph
KEYWORDS Polyethylene Polymers Polymerization Slurry Loop Reactor
LANGUAGE English
DATE OF PUBLICATION 1st quarter 2015

206 pp., 150 fig.
HC RRP € 99.95/*US$ 140.00
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ePub RRP € 99.95/*US$ 140.00
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T

Michele Aresta, Angela Dibenedetto, Franck Dumeignil (Eds.)

BIOREFINERIES

An Introduction

Replacing fossil fuels with renewable resources is a major challenge these days. This book presents the basic science and technologies used to convert terrestrial and aquatic biomass into fuels and chemicals. The value chain for biomass conversion into platform molecules and their transformation into final products are presented in detail. Focusing on both general sciences and innovations in the field, this book is intended for students and researchers in industry.

Michele Aresta and Angela Dibendetto, University of Bari, Italy; Franck Dumeignil, University of Lille - Nord de France, Villeneuve d'Ascq, France.

TYPE OF PUBLICATION Textbook
KEYWORDS Renewable Resources, Alternative Energy, Biomass Conversion,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

De Gruyter Textbook

Approx. 470 pp., 100 fig.
Pb. RRP € 69.95/*US$ 98.00
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ISBN 978-3-11-038999-9

T

Basu Saha (Ed.)

CATALYTIC REACTORS

Reactor design for Chemical Engineering deals with maximization of product yields and the net present value for the chemical reaction, optimization of the reaction efficiency, and minimization of costs. This book discusses the best choice of catalysts, different reaction steps and intermediates and the design of the catalytic reactors, in which the catalysis and chemical reaction are combined to achieve intensification.

Prof. Basu Saha, London South Bank University, London, UK.

TYPE OF PUBLICATION Textbook
KEYWORDS Reactor Design, Reaction Optimization, Catalysis,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

De Gruyter Textbook

Approx. 370 pp., 200 fig.
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ePub RRP € 600.00/*US$ 840.00
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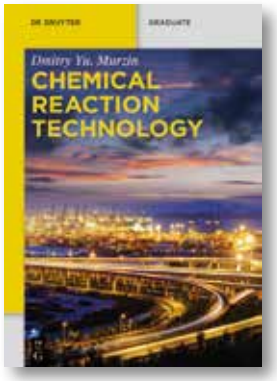

T

Dmitry Yu. Murzin

CHEMICAL REACTION TECHNOLOGY

The book discusses the sciences of operations, converting raw materials into desired products on an industrial scale by applying chemical transformations and other industrial technologies. Basics of chemical technology combining chemistry, physical transport, unit operations and chemical reactors are thoroughly prepared for an easy understanding.

Dmitry Yu. Murzin, Abo Akademi University, Turku, Finland.

TYPE OF PUBLICATION Textbook
KEYWORDS Thermodynamics, Kinetics, Unit Operations, Chemical Reactors,
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

De Gruyter Textbook

Approx. 310 pp., 200 fig.
Pb. RRP € 59.95/*US$ 84.00
ISBN 978-3-11-033643-6
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ISBN 978-3-11-033644-3
ePub RRP € 600.00/*US$ 840.00
ISBN 978-3-11-038931-9

T

Alfons Vogelpohl

DISTILLATION

The Theory

Distillation basedon Mass Transfer Processes, starting from the basic equation of ternary distillation published by Hausen in 1932 and exploiting the properties of this equation covering all modes of distillation. The material is intended as a graduate textbook for an advanced course on distillation but will also help the practicing engineer to better understand the complex interrelationships of multicomponent distillation.

Alfons Vogelpohl, University Clausthal, Clausthal-Zellerfeld, Germany.

TYPE OF PUBLICATION Textbook
LANGUAGE English
DATE OF PUBLICATION 1st quarter 2015

De Gruyter Textbook

Approx. 160 pp., 85 fig.
Pb. RRP € 29.95/*US$ 42.00
ISBN 978-3-11-029284-8
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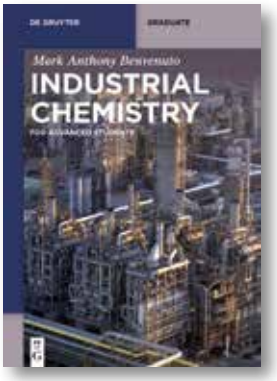
ePub RRP € 450.00/*US$ 630.00
ISBN 978-3-11-039013-1



T

Mark Anthony Benvenuto

INDUSTRIAL CHEMISTRY

For Advanced Students

Along with the first volume on „Industrial Chemistry“ this book discusses, illustrates and explains many of the major chemical processes performed by industry, looks at how transformations affect the quality of our lives, examines the various types of waste produced as necessary products are developed and marketed, and shows techniques and practices in which many industries have made strides to improve or „green“ specific chemical processes.

Mark Anthony Benvenuto, University of Detroit Mercy, Detroit, USA.

TYPE OF PUBLICATION Textbook
KEYWORDS Chemical Engineering; Chemical Industry; Process Engineering
LANGUAGE English
DATE OF PUBLICATION 1st quarter 2015

De Gruyter Textbook

Approx. 310 pp., 100 fig.
Pb. RRP € 69.95/*US$ 98.00
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eBook RRP € 800.00/*US$ 1120.00
ISBN 978-3-11-035170-5
ePub RRP € 800.00/*US$ 1120.00
ISBN 978-3-11-038339-3

T

Clemens Posten

INTEGRATED BIOPROCESS ENGINEERING

Integrated Bioprocess Engineering covers engineering tasks around the cultivation process in bioreactors like media design, feeding strategies, or cell harvesting. All aspects are described from conceptual considerations to technical realization. It gives insight to students of technical biology, bioengineering, and biotechnology by detailed explanations, drawings, formulas, and example processes of medical and industrial applications.

Clemens Posten, Karlsruhe Institute of Technology, Karlsruhe, Germany.

TYPE OF PUBLICATION Textbook
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

De Gruyter Textbook

Approx. 410 pp., 50 fig.
Pb. RRP € 69.95/*US$ 98.00
ISBN 978-3-11-031538-7
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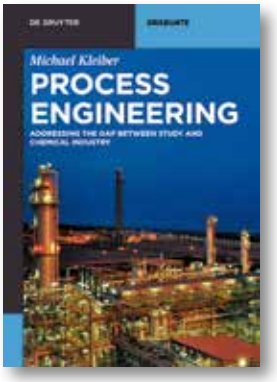
ISBN 978-3-11-038200-6



T

Michael Kleiber

PROCESS ENGINEERING

Addressing the Gap between Studies and Chemical Industry

This textbook provides a comprehensive introduction to chemical process engineering, linking the fundamental theory and concepts to the industrial day-to-day practice. It closes the gap between the chemical sciences and the chemical industry. The book enables the reader to integrate fundamental knowledge of the basic disciplines, to understand the most important chemical processes, and to apply this knowledge to the practice in the industry.

Michael Kleiber, ThyssenKrupp Uhde GmbH, Bad Soden, Germany.

TYPE OF PUBLICATION Textbook
KEYWORDS Chemical Engineering; Chemical Industry; Process Engineering
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

De Gruyter Textbook

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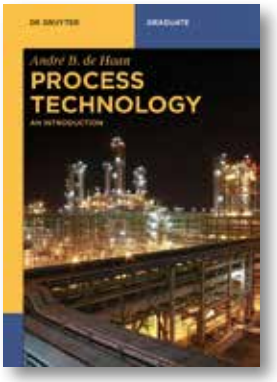

T

André B. de Haan

PROCESS TECHNOLOGY

An Introduction

This book provides a general overview about chemical and biochemical process technology. It focuses on the structure and development of production processes, main technological operations and some important aspects of process economics. For the technological operations the author emphasis operating principles, reasons for application and available industrial equipment.

André B. de Haan, Delft University of Technology, Delft, The Netherlands.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Chemische Industrie; Technische Chemie; Chemieingenieurwesen; Verfahrenstechnik / Production Processes, Technological Operations, Process Economics,
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 2. Quartal 2015 / 2nd quarter 2015

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Ca./Approx. 610 S./pp., 400 Abb./fig.
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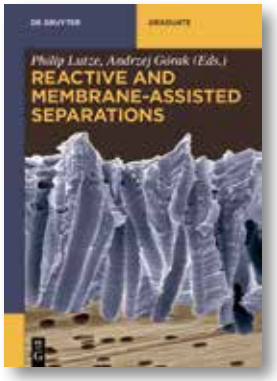
ePub/ePub UVP/RRP € 700,–/*US$ 980.00
ISBN 978-3-11-038278-5



T

Philip Lutze, Andrzej Górak (Eds.)

REACTIVE AND MEMBRANE-ASSISTED SEPARATIONS

With contrib. by Johannes Holtbrügge, Anna Katharina Kunze, Jovana Micovic, Alex Niesbach, Patrick Schmidt, Robin Schulz, Daniel Sudhoff, John Woodley

Process intensification aims for increasing efficiency and sustainability of (bio-)chemical production processes. This book presents strategies for improving fluid separation such as reactive distillation, reactive absorption and membrane assisted separations. The authors discuss computer simulation, model development, methodological approaches for synthesis and the design and scale-up of the final industrial processes.

Philip Lutze and Andrzej Gorak, Technical University Dortmund, Dortmund, Germany.

TYPE OF PUBLICATION Textbook
KEYWORDS Process Intensification, Sustainable Production Processes, Fluid separation, Scale-Up,
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

De Gruyter Textbook

Approx. 320 pp., 200 fig.
Pb. RRP € 59.95/*US$ 84.00
ISBN 978-3-11-030783-2
eBook RRP € 600.00/*US$ 840.00
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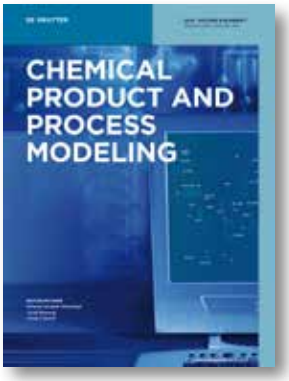
ePub RRP € 600.00/*US$ 840.00
ISBN 978-3-11-038820-6



J

Rhamat Sotudeh-Gharebagh, Navid Mostoufi, Jamal Chaouki (Eds.)

CHEMICAL PRODUCT AND PROCESS MODELING

NEW JOURNAL AT DE GRUYTER!

CPPM is the premier forum for theoretical and applied research on product and process modeling, simulation and optimization. The journal assembles the best papers from around the world and covers the gap between product and process. It brings together chemical engineering researchers, practitioners, and software developers in a new forum for the international modeling and simulation community.

LANGUAGE English

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Print
€ 283.00/*US$ 379.00
Single Issue € 78.00/*US$ 104.00
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Institutional Subscription € 283.00/*US$ 379.00
Individual Subscription € 49.00/*US$ 74.00
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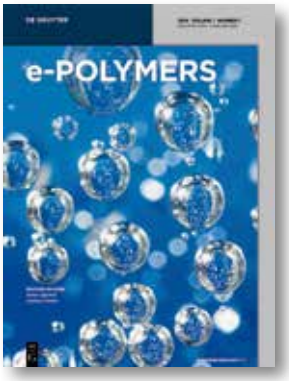

J

Andreas Greiner, Seema Agarwal (Editors-in-Chief)

E-POLYMERS

Founded by: Hartwig Hoecker and Stanislaw Penczek

The aim of *e-Polymers* is to publish original research articles, reviews, and feature articles related to pure and applied polymer science. This includes synthetic methodologies, characterization and processing techniques for polymer materials. Reports on interdisciplinary polymer science and on applications of polymers in all areas are especially welcome.

LANGUAGE English
IMPACT FACTOR 2013: 0.330

Volume 15 (2015) Subscription rates
Print
€ 418.00/*US$ 564.00
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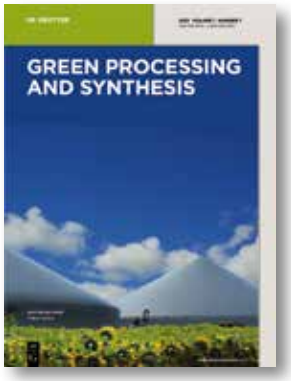

J

Volker Hessel (Editor-in-Chief)

GREEN PROCESSING AND SYNTHESIS

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Green Processing and Synthesis (GPS) is a bimonthly, peer-reviewed journal that provides up-to-date research reports both in fundamental as well as applied aspects, giving an appropriate share to industrial views. GPS is dedicated in general to innovative and green process development and chemical synthesis.

LANGUAGE English

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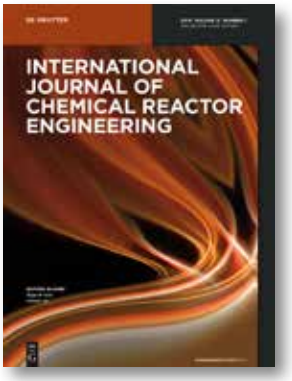
Individual Subscription € 99.00/*US$ 149.00
Print/Online
€ 502.00/*US$ 753.00
6 issues per volume
ISSN 2191-9542
e-ISSN 2191-9550



J

Hugo de Lasa, Charles Chunbao Xu (Eds.)

INTERNATIONAL JOURNAL OF CHEMICAL REACTOR ENGINEERING

NEW JOURNAL AT DE GRUYTER!

This journal covers the broad fields of theoretical and applied reactor engineering. The range of topics includes single-phase and multi-phase reactor design, operation and control, new chemical reactor concepts, fluid mechanics and dynamics, computational fluid dynamics, catalysis, low and high pressure and temperature operation, environmental and economical implications.

LANGUAGE English
IMPACT FACTOR 2013: 0.584

Volume 13 (2015) Subscription rates
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Individual Subscription € 49.00/*US$ 74.00
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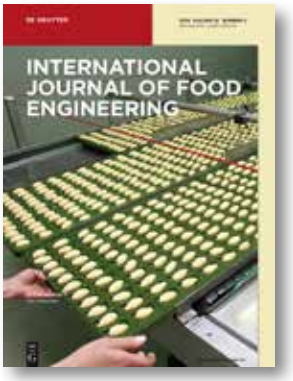

J

Xiao Dong Chen (Editor-in-Chief)

INTERNATIONAL JOURNAL OF FOOD ENGINEERING

NEW JOURNAL AT DE GRUYTER!

IJFE is devoted to engineering disciplines related to processing foods. The areas of interest include heat, mass transfer and fluid flow in food processing; food microstructure development and characterization; application of artificial intelligence in food engineering research and in industry; food biotechnology; and mathematical modeling and software development for food processing purposes.

LANGUAGE English
IMPACT FACTOR 2013: 0.349

Volume 11 (2015) Subscription rates
Print
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Single Issue € 52.00/*US$ 71.00
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Individual Subscription € 49.00/*US$ 74.00
Print/Online
€ 343.00/*US$ 463.00
6 issues per volume
ISSN 2194-5764
e-ISSN 1556-3758

J

Ramana G. Reddy (Editor-in-Chief)

JOURNAL FOR MANUFACTURING SCIENCE AND PRODUCTION

The journal reports on the latest science and engineering developments and original applications in all fields related to manufacturing and production. Topics include manufacturing processes and measurements, physical chemical processing, production systems, computer integrated manufacturing, quality control, meteorology, engineering design, nano/micro devices manufacturing and environmental conscious manufacturing.

LANGUAGE English

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Print/Online
€ 433.00/*US$ 582.00
4 issues per volume
ISSN 2191-4184
e-ISSN 2191-0375

J

Nino Grizzuti (Editor-in-Chief)

JOURNAL OF POLYMER ENGINEERING

Journal of Polymer Engineering publishes reviews, original basic and applied research contributions as well as recent technological developments in polymer engineering. Polymer engineering is a strongly interdisciplinary field and papers published by the journal may span areas such as polymer physics, polymer processing and engineering of polymer-based materials and their applications.

LANGUAGE English
IMPACT FACTOR increased in 2013: 0.500
5-year IMPACT FACTOR: 0.437

Volume 35 (2015) Subscription rates
Print
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Institutional Subscription € 638.00/*US$ 958.00
Individual Subscription € 99.00/*US$ 149.00
Print/Online
€ 766.00/*US$ 1149.00
9 issues per volume
ISSN 0334-6447
e-ISSN 2191-0340

J

Dan Luss, Neima Brauner (Editors-in-Chief)

REVIEWS IN CHEMICAL ENGINEERING

Reviews in Chemical Engineering publishes authoritative review articles by leading chemical engineers, applied scientists and mathematicians on all aspects of the broad field of chemical engineering and applied chemistry.

LANGUAGE English
IMPACT FACTOR increased in 2013: 2.833
5-year IMPACT FACTOR: 2.675

Volume 31 (2015) Subscription rates
Print
€ 494.00/*US$ 739.00
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Institutional Subscription € 494.00/*US$ 739.00
Individual Subscription € 99.00/*US$ 149.00
Print/Online
€ 593.00/*US$ 888.00
6 issues per volume
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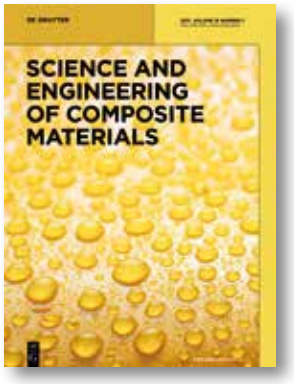

J

Suong V. Hoa (Editor-in-Chief)

SCIENCE AND ENGINEERING OF COMPOSITE MATERIALS

Science and Engineering of Composite Materials is a publication that provides a forum for discussion of all aspects related to the structure and performance under simulated and actual service conditions of composites. As of 2015, the journal will enhance its annual periodicity to six issues.

LANGUAGE English
IMPACT FACTOR increased in 2013: 0.593

Volume 22 (2015) Subscription rates
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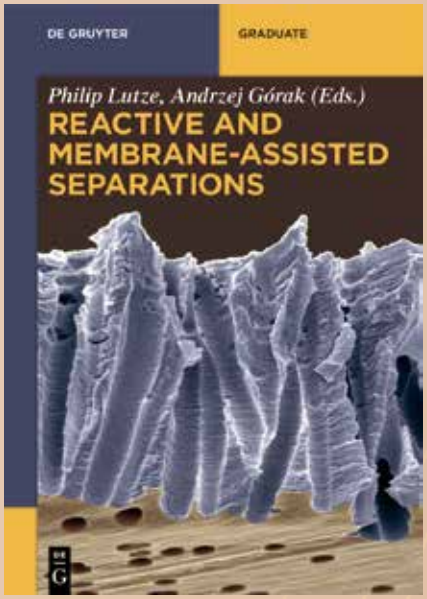
€ 541.00/*US$ 811.00
Single Issue € 99.00/*US$ 149.00
Online
Institutional Subscription € 541.00/*US$ 811.00
Individual Subscription € 99.00/*US$ 149.00
Print/Online
€ 649.00/*US$ 973.00
6 issues per volume
ISSN 0792-1233
e-ISSN 2191-0359

NEW TEXTBOOK



Philip Lutze, Andrzej Górak (Eds.)
REACTIVE AND MEMBRANE-ASSISTED SEPARATIONS

With contrib. by Johannes Holtbrügge, Anna Katharina Kunze, Jovana Micovic, Alex Niesbach, Patrick Schmidt, Robin Schulz, Daniel Sudhoff, John Woodley

Approx. 320 pp. 200 fig.
Pb. RRP € 59.95 / US$ 84.00
ISBN 978-3-11-030783-2
eBook RRP € 600.00 / US$ 840.00
PDF ISBN 978-3-11-030784-9
ePUB ISBN 978-3-11-038820-6

This graduate-level textbook focuses on strategies for improving processes by integration of reaction and fluid separation. The selected technologies range from concepts of reactive separators including chemical but also biocatalytic reaction steps such as reactive distillation, reactive absorption, reactive extraction and membrane-assisted reactions but also hybrid separations including pervaporation, distillation, crystallization, organic solvent nanofiltration and innovatiove separation technologies such as Higee distillation. In each chapter, the authors discuss the concept and the fundamentals behind the technologies, present methodological approaches for synthesis and the design and scale-up as well as computer simulation, model development. Furthermore, each chapter contains a short quiz as well as tutorials to strengthen the previously explained material.

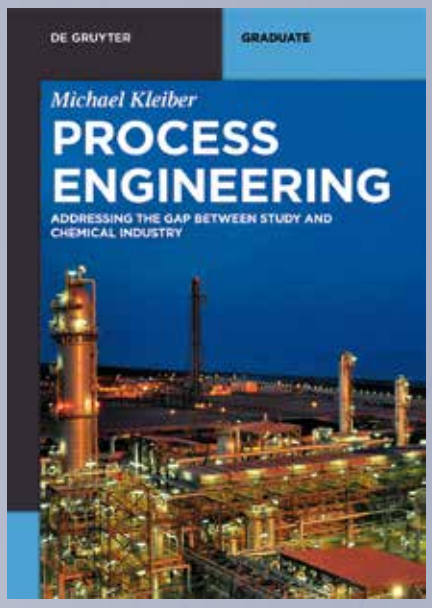
From the Contents

- Introduction to Process Intensification
- Reactive Distillation
- Reactive Absorption
- Reactive Extraction
- Integration of Biocatalytic reaction and separation
- Integration of reaction and organic solvent nanofiltration
- Hybrid separations
- Membrane-assisted (reactive) distillation
- Innovative Separation Concepts for Flexible Processing

Philip Lutze studied energy and process engineering at the Technical University of Berlin. He graduated in November 2008. Following, he worked on the “Development of a systematic synthesis/design methodology to achieve process intensification” in the group CAPEC & Process at the Technical University of Denmark in Lyngby. Since December 2011 Philip Lutze is working as a group leader for „Process Intensification“at the laboratory of fluid separations, TU Dortmund.

Andrzej Górak studied chemistry at the Technical University of Lodz in Poland and obtained his Ph.D. from the Faculty of Process Engineering in 1979 and worked at the same faculty as senior researcher until 1988. The following four years he spent as a researcher at Henkel KGaA in Düsseldorf. After his habilitation at RWTH Aachen in 1989, Andrzej Górak became professor at the chair of fluid separation processes at TU Dortmund University in 1992. In 2000 he became the head of laboratory of fluid separations, at TU Dortmund University. Apart from this, he has been full professor at the Technical University of Lodz since 2003.

NEW TEXTBOOK



Michael Kleiber
PROCESS ENGINEERING
Addressing the Gap between Studies and Chemical Industry

Approx. 310 pp. 50 fig.
Pb. RRP € 69.95 / US$ 98.00
ISBN 978-3-11-031209-6
eBook RRP € 700.00 / US$ 980.00
PDF ISBN 978-3-11-031211-9
ePUB ISBN 978-3-11-038310-2

Process Engineering provides an introduction to chemical process engineering, explaining the fundamental theory and concepts concisely, avoiding long derivations but pointing out how theory is effectively used. Its goal is to close the gap between university and chemical industry, addressing the typical problems where professional beginners have no experience. The book addresses topics that many students have learned at the university without thoroughly understanding their implications. It prepares the reader for the everyday business in process engineering and guides them in solving typical tasks. The author has coached many beginners in process engineering in their first months in industry and knows what their typical questions are.

From the Contents

- Engineering Projects
- Thermodynamic Models in Process Simulation
- Working on a Process
- Distillation Design
- Heat Exchanger Design
- Piping
- Utilities and Waste Streams
- Process Safety

Michael Kleiber started as a scientific assistant at the TU Brunswick, where he completed his thesis in 1994. In his professional career, he worked for the former Hoechst AG and its successors in the fields of process development, process simulation and engineering calculations, before moving to ThyssenKrupp Industrial Solutions as a Chief Development Engineer. Dr. Kleiber is a member of the German Board of Thermodynamics and contributor to several standard works on process engineering.

Juin J. Liou, Shien-Kuei Liaw, Yung-Hui Chung (Eds.)

NANO DEVICES AND SENSORS

This volume on semiconductor devices focuses on such topics as nano-imprinting, lithography, nanowire charge-trapping, thermo-stability in nanowires, nano-electrodes, and voltage and materials used for fabricating and improving electrical characteristics of nano-materials.

Juin J. Liou, University of Central Florida, USA; Chun-Chieh Lin, National Dong-Hwa University, Taiwan.

TYPE OF PUBLICATION Collection
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

Approx. 250 pp., 75 fig.
HC RRP € 79.95/*US$ 112.00
ISBN 978-1-5015-1050-2
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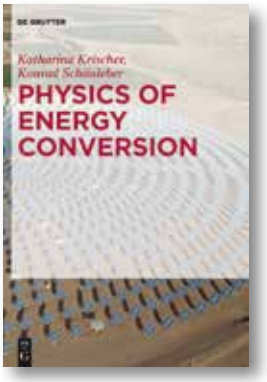
ePub RRP € 79.95/*US$ 112.00
ISBN 978-1-5015-0155-5
Print + eBook RRP € 119.95/*US$ 168.00
ISBN 978-1-5015-0154-8



T

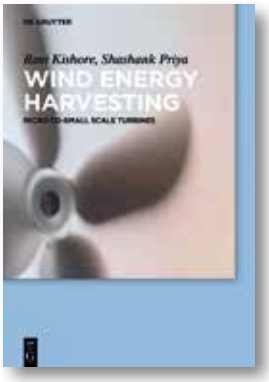
Katharina Krischer, Konrad Schönleber

PHYSICS OF ENERGY CONVERSION

Covers the physical basis of the most important energy conversion processes used for energy supply. Provides the fundamentals and a scientific understanding of the physics behind thermal power plants, solar cells and power plants, batteries and fuels cells as well as energy storage devices.

TYPE OF PUBLICATION Textbook
KEYWORDS energy, exergy, process evaluation, sustainable energy supply, energy storage
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

50 fig.
HC RRP € 69.95/*US$ 99.00
ISBN 978-1-5015-0763-2
eBook RRP € 69.95/*US$ 98.00
ISBN 978-1-5015-1063-2
Print + eBook
ISBN 978-1-5015-1064-9



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Ravi Kishore, Shashank Priya

WIND ENERGY HARVESTING

Micro-to-Small Scale Turbines

Basic design techniques are covered, as well as various fabrication techniques that can be used to manufacture cost-effective and efficient small scale wind turbines. Coverage of aspects related to materials science and engineering, as well as mechanical engineering, is included. Each chapter has solved numerical problems which are used as examples. Additional unsolved problems are provided at the end of each chapter.

Shashank Priya, VA Tech, Blacksburg, VA; Ravi Anant Kishore,VA Tech, Blacksburg, VA

TYPE OF PUBLICATION Textbook
KEYWORDS Energy Harvesting Energy Scavenging Wind Turbines Sustainable Energy Wind power
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

Approx. 210 pp., 102 fig.
HC RRP € 69.95/*US$ 98.00
ISBN 978-1-61451-565-4
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ISBN 978-1-61451-417-6
ePub RRP € 1050.00/*US$ 1470.00
ISBN 978-1-61451-979-9
Print + eBook RRP € 109.95/*US$ 154.00
ISBN 978-1-61451-418-3

INORGANIC SUBSTANCES

2016

Pierre Villars, Karin Cenzual, Marinella Penzo

BIBLIOGRAPHY

By browsing about 10 000 000 scientific articles of over 200 major journals some 200 000 publications were selected. The extracted data is part of the following material research fields: crystal structures (S), phase diagrams (C) and intrinsic physical properties (P). These research field codes as well as the chemical systems investigated in each publication were included in the present work. The aim of this Bibliography is to provide researchers with a comprehensive compilation of all up to now published scientific publications on inorganic systems in only three handy volumes.

Pierre Villars, Material Phases Data System, Vitznau, Switzerland; Karin Cenzual, Geneva University, Geneva, Switzerland; Marinella Penzo, Geneva University, Geneva, Switzerland

TYPE OF PUBLICATION Bibliography
KEYWORDS Bibliography, Inorganic Chemistry, Inorganic Substances, Materials Science
LANGUAGE English
DATE OF PUBLICATION 4th quarter 2015

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ePub RRP € 349.00/*US$ 489.00
ISBN 978-3-11-038267-9
Print + eBook RRP € 519.00/*US$ 727.00
ISBN 978-3-11-033472-2

Pierre Villars, Karin Cenzual

HANDBOOK

Since the discovery of X-ray diffraction in 1913 over 100 000 different inorganic substances (also called compounds or phases) have been structurally characterized. The aim of this reference work is to provide the researcher with a comprehensive compilation of all up to now crystallographically identified inorganic substances in only one volume. All data have been processed and critically evaluated by the „Pauling File“ editorial team using a unique software package. Each substance is represented in a single row containing information adapted to the number of chemical elements.

Pierre Villars, Material Phases Data System, Vitznau, Switzerland; Karin Cenzual, Geneva University, Geneva, Switzerland

TYPE OF PUBLICATION Reference Work
KEYWORDS Crystallography, Inorganic Chemistry, Inorganic Substances, Materials Science
LANGUAGE English
DATE OF PUBLICATION 1st quarter 2016

HC RRP € 249.00/*US$ 349.00
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ePub RRP € 249.00/*US$ 349.00
ISBN 978-3-11-039023-0
Print + eBook RRP € 369.00/*US$ 517.00
ISBN 978-3-11-033468-5

22ND ANNUAL CONFERENCE OF THE GERMAN CRYSTALLOGRAPHIC SOCIETY. MARCH 2014, BERLIN, GERMANY

Zeitschrift für Kristallographie. Supplement Volume 34 presents the complete Abstracts of all contributions to the 22nd Annual Conference of the German Crystallographic Society in Berlin 2014.

Authors presenting their research results at the Annual Meeting of the German Society of Crystallography in Berlin 2014.

TYPE OF PUBLICATION Yearbook
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2014

Zeitschrift für Kristallographie / Supplemente 34

218 pp., 72 fig.
Pb. RRP € 169.95/*US$ 238.00
ISBN 978-3-11-037599-2
eBook RRP € 169.95/*US$ 238.00
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ePub RRP € 169.95/*US$ 238.00
ISBN 978-3-11-039648-5
Print + eBook RRP € 259.00/*US$ 363.00
ISBN 978-3-11-040492-0

Ingo Klöckl

CHEMIE DER FARBMITTEL

[Colorant Chemistry: In Painting]
In der Malerei

Das vorliegende Buch behandelt die chemischen Strukturen von Farben, Pigmenten, Farbstoffen, Bindemitteln und Hilfsstoffen. Beginnend bei den naturwissenschaftlichen Prinzipien, auf denen Farbigkeit beruht, über die Vorstellung von molekularen Zusammensetzungen gängiger Farben und Tinten bis hin zur historischen Betrachtung der Farbchemie und Industrie wird dem Leser hiermit ein umfassender Überblick über das Gebiet der Farbchemie geboten.

This book deals with the chemical structures of paints, pigments, dyes, binders, and excipients. Starting from the principles of natural science that underlie coloration, it presents the molecular structure of common paints and inks. It includes a historical review of color chemistry and the paint industry to give the reader a comprehensive review of the entire field of color chemistry.

Ingo Klöckl, Karlsruhe, Deutschland.

WERKTYP/TYPE OF PUBLICATION Monographie/ Monograph
SCHLAGWORTE/KEYWORDS Anorganisches Pigment; Chemie; Farbmittel; Organisches Pigment / Inorganic pigments, chemistry, colorants, organic pigments
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 1. Quartal 2015 / 1st quarter 2015

Ca./Approx. 650 S./pp., 500 Abb./fig.
Geb./HC € 149,95 [D]/UVP/RRP *US$ 210.00
ISBN 978-3-11-037451-3
eBook € 149,95 [D]/UVP/RRP *US$ 210.00
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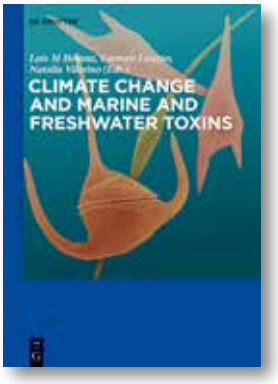
ePub/ePub € 149,95 [D]/UVP/RRP *US$ 210.00
ISBN 978-3-11-038624-0
Print + eBook € 229,– [D]/UVP/RRP *US$ 321.00
ISBN 978-3-11-037633-3



Luis M Botana, Carmen Louzao, Natalia Vilarino (Eds.)

CLIMATE CHANGE AND MARINE AND FRESHWATER TOXINS

Production of toxins by marine and freshwater microalgae has been known for decades. However, toxic blooms have increased in frequency and distribution raising serious concerns regarding seafood and drinking water safety.This book compiles current evidence on the influence of climate change on the spreading of toxin producing species in aquatic systems. The chemistry and biology of toxin production is revised and an outlook on control and prevention of the toxin‘s impact on human and animal health is given.

Prof. Luis M Botana, Prof. Natalia Vilariño and Prof. M Carmen Louzao, Universidad de Santiago de Compostela, Lugo, Spain.

TYPE OF PUBLICATION Monograph
KEYWORDS Marine Toxins, Freshwater Toxins, Drinking Water Safety, Food and Feedstock, Climate Change,
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

Approx. 520 pp., 200 fig.
HC RRP € 199.95/*US$ 280.00
ISBN 978-3-11-033303-9
eBook RRP € 199.95/*US$ 280.00
ISBN 978-3-11-033359-6
ePub RRP € 199.95/*US$ 280.00
ISBN 978-3-11-038261-7
Print + eBook RRP € 299.00/*US$ 419.00
ISBN 978-3-11-033360-2

Luis M Botana, Maria J Sainz (Eds.)

CLIMATE CHANGE AND MYCOTOXINS

Climate change greatly affects yield and quality of food crops as a result of changes in rainfall, temperature and concentration of greenhouse gases. This book compiles current evidence on the influence of climate change on mycotoxigenic fungi and mycotoxins in food crops pre- and postharvest and during storage of food and animal feed. The chemistry and biology of toxin production is revised and an outlook on control and prevention of the toxin‘s impact on food and animal feed is given.

Prof. Luis M Botana and Prof. María J Sainz, Universidad de Santiago de Compostela, Lugo, Spain.

TYPE OF PUBLICATION Monograph
KEYWORDS Mycotoxins, Food Crops, Climate Change,
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

Approx. 520 pp., 200 fig.
HC RRP € 199.95/*US$ 280.00
ISBN 978-3-11-033305-3
eBook RRP € 199.95/*US$ 280.00
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ePub RRP € 199.95/*US$ 280.00
ISBN 978-3-11-039015-5
Print + eBook RRP € 299.00/*US$ 419.00
ISBN 978-3-11-033362-6

Janine Cossy (Ed.)

GRIGNARD REAGENTS AND TRANSITION METAL CATALYSTS

Formation of C-C Bonds by Cross-Coupling

The Grignard reaction is one of the fundamental organometallic reactions, often used in alcohol syntheses. With transition metals like iron, cobalt and nickel or with noble metals like copper, silver and palladium, modern Grignard reagents can be designed in reactivity, selectivity and functional group tolerance. This book, written by international experts, presents an overview on timely Grignard chemistry involving transition metals.

Janine Cossy, ESPCI ParisTech, Paris, France.

TYPE OF PUBLICATION Monograph
LANGUAGE English
DATE OF PUBLICATION 4th quarter 2015

Approx. 270 pp., 150 fig.
HC RRP € 119.95/*US$ 168.00
ISBN 978-3-11-035266-5
eBook RRP € 119.95/*US$ 168.00
ISBN 978-3-11-035272-6
ePub RRP € 119.95/*US$ 168.00
ISBN 978-3-11-038343-0
Print + eBook RRP € 179.95/*US$ 252.00
ISBN 978-3-11-035273-3

Michael Seitz

MOLECULAR LANTHANOID CHEMISTRY

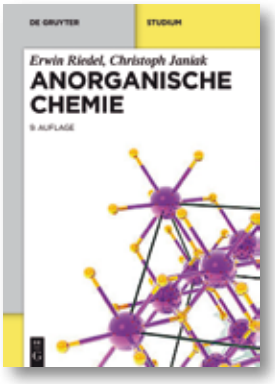
From Basics to Applications

Molecular lanthanoid complexes have found widespread use due to theirunique chemical and physical properties which make them indispensable inmany key technologies of the future. This book gives a comprehensive overview of the molecular coordination chemistry of the lanthanoids, from the very basics to modern applications in all areas of chemical and biomedical research.

Michael Seitz, Ruhr University Bochum, Germany.

TYPE OF PUBLICATION Specialist Text
KEYWORDS Organolanthanoid Chemistry, Luminescence Applications, Organic Catalysis, Complex Chemistry,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

Approx. 360 pp., 200 fig.
HC RRP € 149.95/*US$ 210.00
ISBN 978-3-11-026078-6
eBook RRP € 149.95/*US$ 210.00
ISBN 978-3-11-026154-7
ePub RRP € 149.95/*US$ 210.00
ISBN 978-3-11-039207-4
Print + eBook RRP € 229.00/*US$ 321.00
ISBN 978-3-11-916354-5



T

Erwin Riedel, Christoph Janiak

ANORGANISCHE CHEMIE

[Inorganic Chemistry]

ERGÄNZUNG: ÜBUNGSBUCH, 3. A.

Das Lehrbuch für alle, die solide Grundkenntnisse in anorganischer Chemie benötigen, informiert umfassend über theoretische Grundlagen und anorganische Stoffchemie. Die 9. Auflage präsentiert Lerninhalte in gewohnt klarer und verständlicher Weise mit über 400 Abbildungen und Tabellen zur Veranschaulichung und zusätzlichem Online-Material.

This is the perfect textbook for anyone who needs to develop a solid basic understanding of organic chemistry. It provides extensive information about the theoretical principles of inorganic general chemistry. The 9th edition is written in the clear and understandable style for which this textbook is known, with over 400 figures and tables for added visual impact along with additional materials online.

Erwin Riedel, Technische Universität Berlin; Christoph Janiak, Heinrich-Heine-Universität Düsseldorf.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Chemie; Chemiestudium; Anorganische Chemie; Stoffchemie / Inorganic Chemistry; General Chemistry; Chemistry Education
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 2. Quartal 2015 / 2nd quarter 2015

De Gruyter Studium

9. Auflage
Ca./Approx. 1015 S./pp., 400 Abb./fig.
Br./Pb. UVP/RRP € 79,95/*US$ 112.00
ISBN 978-3-11-035526-0
eBook UVP/RRP € 800,–/*US$ 1120.00
ISBN 978-3-11-035528-4
ePub/ePub UVP/RRP € 800,–/*US$ 1120.00
ISBN 978-3-11-038774-2

T

Michael Springborg

EINFÜHRUNG IN DIE PHYSIKALISCHE CHEMIE

[Introduction to Physical Chemistry]

Vor allem das Verständnis mathematischer Formulierungen und physikalischer Zusammenhänge stellt eine große Herausforderung für Studierende der Physikalischen Chemie dar. Diesen Schwierigkeiten begegnet der erfahrene Dozent und führt schrittweise und leicht in alle Teilgebiete der Physikalischen Chemie ein.

Among the greatest challenges for students of physical chemistry is to understand mathematical formulations and physical relationships. The author, an experienced lecturer, deals with these difficulties step by step and provides an introduction to all subareas of physical chemistry.

Michael Springborg, Universität des Saarlandes.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 3. Quartal 2015 / 3rd quarter 2015

De Gruyter Studium

Ca./Approx. 300 S./pp.
Br./Pb. € 39,95 [D]/UVP/RRP *US$ 56.00
ISBN 978-3-11-040550-7
eBook € 600,– [D]/UVP/RRP *US$ 840.00
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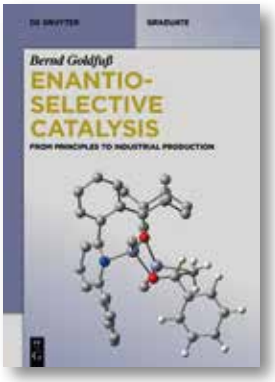
ISBN 978-3-11-040893-5



T

Bernd Goldfuß

ENANTIOSELECTIVE CATALYSIS

From Principles to Industrial Production

Enantioselective or asymmetric catalysis is considered the supreme discipline in organic chemistry. It is widely used in modern laboratory synthesis and industrial production processes of bioactive molecules, e.g. pharmaceuticals. This book provides thorough knowledge for students, scientists and beginners in industry on all important aspects, from basic principles to industrial application.

Bernd Goldfuß, University of Cologne, Germany.

TYPE OF PUBLICATION Textbook
KEYWORDS Enantioselective Catalysis, Asymmetric Synthesis, Organic Chemistry,
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

De Gruyter Textbook

Approx. 310 pp., 200 fig.
Pb. RRP € 59.95/*US$ 84.00
ISBN 978-3-11-034040-2
eBook RRP € 900.00/*US$ 1260.00
ISBN 978-3-11-034041-9
ePub RRP € 900.00/*US$ 1260.00
ISBN 978-3-11-038959-3

T

Joachim Buddrus, Bernd Schmidt

GRUNDLAGEN DER ORGANISCHEN CHEMIE

[Fundamentals of Organic Chemistry]

NEUE AUFLAGE

Die 5. Auflage dieses erfolgreichen Lehrbuches wurde sowohl didaktisch als auch inhaltlich überarbeitet. Mit ausführlichen und einfachen Erklärungen bietet das Buch einen optimalen Einstieg in die organische Chemie. Jedes Kapitel enthält zahlreiche Übungsaufgaben mit Lösungen. - Eine gute Wahl für den Einstieg in die Organische Chemie!

The 5th edition of this successful textbook has been revised both in terms of content and its teaching approach. With comprehensive but simple explanations, the work provides an optimal introduction to organic chemistry. Each chapter contains numerous practice exercises and solutions, making it an excellent work for students new to the field.

Joachim Buddrus, Universität Dortmund (em.); Bernd Schmidt, Universität Potsdam.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Isomerien; Kohlenstoffverbindungen; Naturstoffe; Organische Chemie; Spektroskopie / Isomers; carbon compounds; organic chemistry; spectroscopy; synthetic chemistry; nomenclature; functional groups; organic reactions
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 4. Quartal 2014 / 4th quarter 2014

De Gruyter Studium

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974 S./pp., Zahlr. Abb. und Tab.
1 Beil. (Periodensystem der Elemente)
Br./Pb. € 49,95 [D]/UVP/RRP *US$ 70.00
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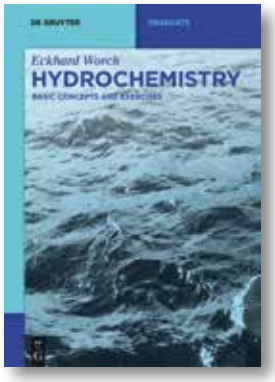

T

Eckhard Worch

HYDROCHEMISTRY

Basic Concepts and Exercises

Quality and usability of water is determined by its dissolved or suspended constituents. This book provides an overview of the physical and chemical processes in aquatic systems that determine the input, output, or transformation of water constituents. Emphasis is placed on the mathematical description of relevant reaction equilibria in aquatic systems and the practical application of equilibrium relationships. An outstanding text and exercise book for students in all environmental study programs.

Eckhard Worch, Dresden University of Technology, Dresden, Germany.

TYPE OF PUBLICATION Textbook
KEYWORDS Aquatic systems, Hydrochemistry, Hydrochemical reactions, Water constituents, Water quality.
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

De Gruyter Textbook

Approx. 230 pp., 65 fig.
Pb. RRP € 49.95/*US$ 70.00
ISBN 978-3-11-031553-0
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ePub RRP € 500.00/*US$ 700.00
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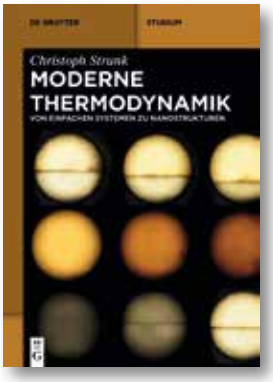


T

Christoph Strunk

MODERNE THERMODYNAMIK

[Modern Thermodynamics: From Simple Systems to Nanostructures]

Von einfachen Systemen zu Nanostrukturen

Dieses Buch schlägt eine neuartige Brücke zwischen dem traditionellen und dem statistischen Zugang zur Thermodynamik. Es ist aus experimenteller Perspektive geschrieben und vermeidet Grundprobleme und Inkonsistenzen der traditionellen Darstellungsweise. Grundbegriffe der makroskopischen Thermodynamik an vertrauten Systemen der Mechanik und Elektrizitätslehre werden erläutert, bevor der Autor Besonderheiten des Phänomens der Wärme bespricht.

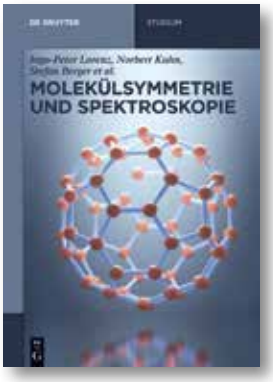
This book provides an innovative bridge between traditional and statistical approaches to thermodynamics. It is written from an experimental perspective and avoids the basic difficulties and inconsistencies of traditional presentations. The author elucidates the basic concepts of macroscopic thermodynamics using familiar systems of mechanics and electricity before addressing the particular features of thermal energy phenomena.

Christoph Strunk, Fakultät für Physik, Universität Regensburg.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 4. Quartal 2014 / 4th quarter 2014

De Gruyter Studium

650 S./pp., 5 Abb./fig.
Durchgehend 2-farbig
Br./Pb. € 49,95 [D]/UVP/RRP *US$ 70.00
ISBN 978-3-11-037105-5
eBook € 500,– [D]/UVP/RRP *US$ 700.00
ISBN 978-3-11-037106-2
ePub/ePub € 500,– [D]/UVP/RRP *US$ 700.00
ISBN 978-3-11-039679-9



T

Ingo-Peter Lorenz, Norbert Kuhn, Stefan Berger, Dines Christen

MOLEKÜLSYMMETRIE UND SPEKTROSKOPIE

[Molecular Symmetry and Spectroscopy]

Basierend auf einem Kompaktkurs, bringt dieses Buch den Studenten der Chemie die grundlegenden Konzepte der Molekülsymmetrie, Symmetrieoperationen und Punktgruppen nahe und behandeln Schwingungs- und Elektronenspektroskopie, sowie Kernmagnetische Resonanz. Im Rahmen der Diskussion werden sowohl spektroskopische Befunde mit Hilfe der Molekülsymmetrie erklärt, als auch aus Messdaten Informationen zur Molekülsymmetrie abgeleitet.

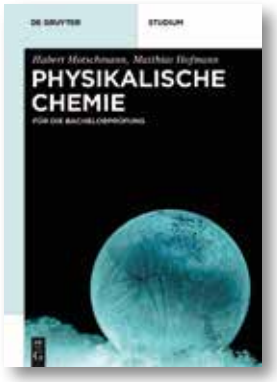
Based on a compact course, this book familiarizes chemistry students with the fundamental concepts of molecular symmetry, symmetry operations, and point groups. It covers vibrational spectroscopy and electron spectroscopy along with nuclear magnetic resonance. The discussion describes the correlation of spectroscopic findings with molecular symmetry, and also shows how principles of molecular symmetry can be demonstrated with measurement data.

I.-P. Lorenz, LMU, München, Deutschland; N. Kuhn und D. Christen, Univ. Tübingen, Deutschland; S. Berger, Univ. Leipzig, Deutschland.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Spektroskopie; Physikalische Chemie; Gruppentheorie; Molekülgeometrie / Spectroscopy, physical chemistry, group therapy, molecular geometry
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 1. Quartal 2015 / 1st quarter 2015

De Gruyter Studium

Ca./Approx. 360 S./pp., 120 Abb./fig.
Br./Pb. UVP/RRP € 49,95/*US$ 70.00
ISBN 978-3-11-036492-7
eBook UVP/RRP € 750,–/*US$ 1050.00
ISBN 978-3-11-036493-4
ePub/ePub UVP/RRP € 750,–/*US$ 1050.00
ISBN 978-3-11-039123-7



T

Hubert Motschmann, Matthias Hofmann

PHYSIKALISCHE CHEMIE

[Physical Chemistry: For the Bachelor's Examination]

Für die Bachelorprüfung

MIT PRÜFUNGSGESPRÄCH

Dieses Buch bespricht in klarer und verständlicher Sprache alle für die Bachelorprüfung in Physikalischer Chemie relevanten Themengebiete: Thermodynamik, Kinetik, quantenchemische Grundlagen, statistische Thermodynamik, sowie die notwendigen mathematischen Grundlagen. Darüber hinaus befindet sich am Ende eines jeden Kapitels ein inspirierendes, fiktives Prüfungsgespräch, das mit Studenten erarbeitet wurde und Raum zu eigenen Überlegungen lässt.

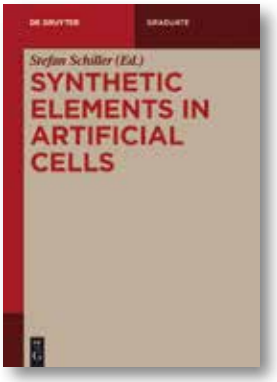
In clear and understandable language, this book covers all subject areas relevant for the Bachelor's examination in physical chemistry: thermodynamics, kinetics, fundamentals of quantum chemistry, statistical thermodynamics, along with their underlying mathematical principles. In addition, at the end of each chapter there is an imaginative fictional exam dialogue, which was developed together with students.

Hubert Motschmann und Matthias Hofmann, Universität Regensburg, Deutschland.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Physikalische Chemie; Thermodynamik; Kinetik; Quantenmechanik / Kinetics; physical chemistry; quantum mechanics; thermodynamics
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 3. Quartal 2014 / 3rd quarter 2014

De Gruyter Studium

371 S./pp., 200 Abb./fig.
Br./Pb. € 49,95 [D]/UVP/RRP *US$ 70.00
ISBN 978-3-11-034877-4
eBook € 500,– [D]/UVP/RRP *US$ 700.00
ISBN 978-3-11-034878-1
ePub/ePub € 500,– [D]/UVP/RRP *US$ 700.00
ISBN 978-3-11-038403-1



T

Stefan Schiller (Ed.)

SYNTHETIC ELEMENTS IN ARTIFICIAL CELLS

This book explains how to design synthetic cell compartments by chemical and biological methods. Top-down and bottom-up strategies for mimicking functionality of natural compartments, as well as for creating new properties by complex modification of cells, are presented. Additionally, the authors provide information on cutting-edge technologies for producing new materials and using artificial cells as nano-machines.

Stefan Schiller, University Freiburg, Germany.

TYPE OF PUBLICATION Textbook
KEYWORDS Synthetic Cell Compartments, Artificial Cells, Nano-Machines,
LANGUAGE English
DATE OF PUBLICATION 4th quarter 2015

De Gruyter Textbook

Approx. 320 pp., 200 fig.
Pb. RRP € 59.95/*US$ 84.00
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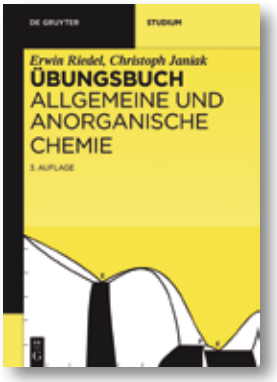
eBook RRP € 600.00/*US$ 840.00
ISBN 978-3-11-033372-5
ePub RRP € 600.00/*US$ 840.00
ISBN 978-3-11-039017-9



T

Erwin Riedel, Christoph Janiak

ÜBUNGSBUCH

[Workbook in General and Inorganic Chemistry]

Allgemeine und Anorganische Chemie

ERGÄNZUNG: LEHRBUCH, 9. A.

Hunderte anspruchsvolle und abwechslungsreiche Aufgaben und Lösungen aus der anorganischen Chemie bieten Studenten im Bachelorstudium oder mit Nebenfach Chemie eine umfassende Prüfungsvorbereitung. Diese 3. vollständig überarbeitete Auflage enthält detaillierte Erklärungen zum Lösungsweg und zahlreiche veranschaulichende Abbildungen.

Hundreds of challenging and varied exercises and solutions in organic chemistry provide undergraduate chemistry students and students with chemistry as a minor field with comprehensive exam preparation. The third, fully revised edition includes detailed explanations of solutions methods and numerous illustrations.

Erwin Riedel, Technische Universität Berlin; Christoph Janiak, Heinrich-Heine-Universität Düsseldorf.

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SCHLAGWORTE/KEYWORDS Anorganische Chemie; Chemie / Aufgabensammlung; Chemie Studium / Chemistry; Problems and Solutions; Chemistry Studies; Inorganic Chemistry
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 1. Quartal 2015 / 1st quarter 2015

De Gruyter Studium

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eBook UVP/RRP € 300,–/*US$ 420.00
ISBN 978-3-11-035518-5
ePub/ePub UVP/RRP € 300,–/*US$ 420.00
ISBN 978-3-11-038354-6

J

(Managing Editor)

CHEMISTRY INTERNATIONAL

The News Magazine of IUPAC

Chemistry International is the newsmagazine of the International Union of Pure and Applied Chemistry (IUPAC). News about IUPAC, its chemists, its publications, its recommendations, its conferences and the work of its commissions and committees is published bimonthly in *CI*.

LANGUAGE English

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Print
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Single Issue € 16.00/*US$ 22.00
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Individual Subscription € 49.00/*US$ 65.00
Print/Online
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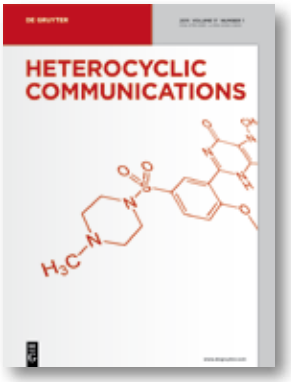
e-ISSN 1365-2192



J

Lucjan Strekowski (Editor-in-Chief), Shizuaki Murata, Jaroslaw Saczewski, Chad Stephens (Eds.)

HETEROCYCLIC COMMUNICATIONS

This peer-reviewed journal publishes preliminary communications, research articles and reviews on developments in all phases of heterocyclic chemistry, including inorganic ring systems. The scope includes development of novel synthetic methods, rational design and synthesis of new drugs targeting specific biological receptors and development of new substrates and catalysts in materials chemistry.

LANGUAGE English
Increased IMPACT FACTOR 2013: 0.727

Volume 21 (2015) Subscription rates
Print
€ 479.00/*US$ 722.00
Single Issue € 88.00/*US$ 132.00
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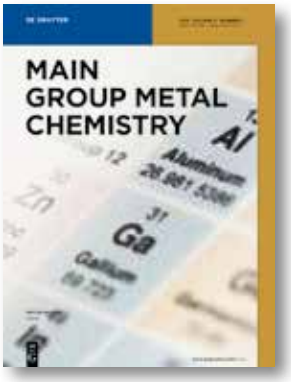
Institutional Subscription € 479.00/*US$ 722.00
Individual Subscription € 99.00/*US$ 149.00
Print/Online
€ 576.00/*US$ 866.00
6 issues per volume
ISSN 0793-0283
e-ISSN 2191-0197



J

Klaus Jurkschat (Editor-in-Chief)

MAIN GROUP METAL CHEMISTRY

Main Group Metal Chemistry is committed to the publication of studies addressing the theoretical, spectroscopic, mechanistic and synthetic aspects of inorganic, coordination and organometallic main group metal and semi-metal compounds, including zinc, cadmium and mercury. The journal also publishes studies relating to environmental aspects of these metals, their toxicology, release pathways and fate.

LANGUAGE English

Volume 38 (2015) Subscription rates
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€ 463.00/*US$ 695.00
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Institutional Subscription € 463.00/*US$ 695.00
Individual Subscription € 99.00/*US$ 149.00
Print/Online
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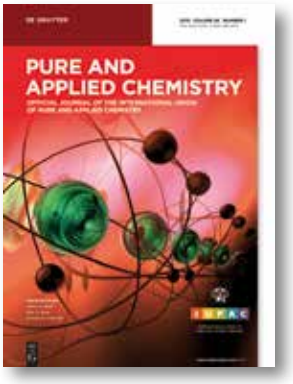
e-ISSN 2191-0219



J

Hugh D. Burrows, Ron D. Weir, Jürgen Stohner (Eds.)

PURE AND APPLIED CHEMISTRY

The Scientific Journal of IUPAC

Pure and Applied Chemistry is the official monthly Journal of the International Union of Pure and Applied Chemistry (IUPAC), with responsibility for publishing works arising from those international scientific events and projects that are sponsored and undertaken by the Union.

LANGUAGE English
IMPACT FACTOR 2013: 3.112

Volume 87 (2015) Subscription rates
Print
€ 1607.00/*US$ 2170.00
Single Issue € 149.00/*US$ 199.00
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Institutional Subscription € 1607.00/*US$ 2170.00
Individual Subscription € 149.00/*US$ 265.00
Print/Online
€ 1849.00/*US$ 2496.00
12 issues per volume
ISSN 0033-4545
e-ISSN 1365-3075

J

Syed M. Qaim (Ed.)

RADIOCHIMICA ACTA

International Journal for chemical aspects of nuclear science and technology

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Radiochimica Acta publishes Original Papers, Review Articles, and Rapid Communications (short communications of more timely interest) encompassing chemical aspects of nuclear science and technology. The journal is meant for scientists who are actively engaged in research work.

LANGUAGE English
IMPACT FACTOR increased in 2013: 1.411
5-year IMPACT FACTOR: 1.515

Volume 103 (2015) Subscription rates
Print
€ 1818.00/*US$ 2454.00
Single Issue € 167.00/*US$ 225.00
Online
Institutional Subscription € 1818.00/*US$ 2454.00
Individual Subscription € 249.00/*US$ 374.00
Print/Online
€ 1999.00/*US$ 2702.00
12 issues per volume
ISSN 0033-8230
e-ISSN 2193-3405

J

Israel Schechter (Editor-in-Chief)

REVIEWS IN ANALYTICAL CHEMISTRY

Reviews in Analytical Chemistry publishes authoritative reviews by leading experts in the dynamic field of chemical analysis. The subjects can encompass all branches of modern analytical chemistry such as spectroscopy, electrochemistry, chromatography, trace analysis and solution chemistry and their applications to areas such as environmental control, mineral resources, drug analysis, and other relevant areas.

LANGUAGE English
IMPACT FACTOR increased in 2013: 1.000

Volume 34 (2015) Subscription rates
Print
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Institutional Subscription € 427.00/*US$ 642.00
Individual Subscription € 99.00/*US$ 149.00
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ISSN 0793-0135
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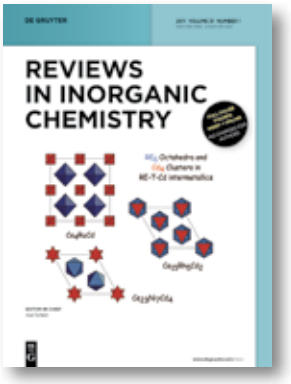

J

Axel Schulz (Editor-in-Chief)

REVIEWS IN INORGANIC CHEMISTRY

REVIC publishes high-quality reviews on developments in inorganic chemistry. Critical scientific reviews provide an overview of the current discussions in inorganic chemistry and a perspective on future research directions. Technical reviews offer detailed synthesis protocols, reviews of methodology and descriptions of apparatus. The journal publishes all aspects of solid-state, molecular and surface chemistry.

LANGUAGE English
IMPACT FACTOR increased in 2013: 2.833
5-year IMPACT FACTOR: 2.675

Volume 35 (2015) Subscription rates
Print
€ 469.00/*US$ 705.00
Single Issue € 129.00/*US$ 194.00
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Institutional Subscription € 469.00/*US$ 705.00
Individual Subscription € 99.00/*US$ 149.00
Print/Online
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ISSN 0193-4929
e-ISSN 2191-0227

J

Evgeny Antipov, Ulrich Bismayer, Hubert Huppertz, Václav Petrícek, Rainer Pöttgen, Wolfgang Schmahl, E. R. T. Tiekink, Xiaodong Zou (Eds.)

ZEITSCHRIFT FÜR KRISTALLOGRAPHIE - CRYSTALLINE MATERIALS

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Zeitschrift für Kristallographie – Crystalline Materials offers a place for researchers to present results of their crystallographic studies. The journal includes theoretical as well as experimental research. It publishes Original Papers, Letters and Review Articles in manifold areas of crystallography.

LANGUAGE English
IMPACT FACTOR increased in 2013: 0.118
5-year IMPACT FACTOR: 0.129

Volume 230 (2015) Subscription rates
Print
€ 2026.00/*US$ 2735.00
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ISSN 2194-4946
e-ISSN 2196-7105

J

ZEITSCHRIFT FÜR NATURFORSCHUNG B

A Journal of Chemical Sciences

Zeitschrift für Naturforschung B is an international scientific journal which publishes original papers, microreviews, and letters from all areas of inorganic chemistry, solid state chemistry, coordination chemistry, molecular chemistry, and organic chemistry.

LANGUAGE English

Volume 70 (2015) Subscription rates
Print
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Institutional Subscription € 1024.00/*US$ 1382.00
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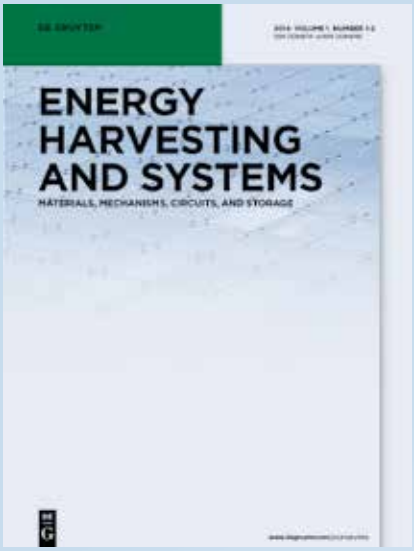
ISSN 0932-0776
e-ISSN 1865-7117

NEW JOURNAL

ENERGY HARVESTING AND SYSTEMS

Materials, Mechanisms, Circuits and Storage

Editor-in-Chief: Shashank Priya



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Energy Harvesting and Systems publishes original research in the areas of energy harvesting materials, energy storage materials, conversion, and system design. Papers published EHS cover any or all of the stages of energy harvesting systems. The following topics are of interest to the journal:

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- Li-ion batteries, micro batteries and hybrid supercapacitors
- Bio-inspired energy generation and conversion
- Energy harvesting circuits and interface electronics
- Wireless sensor networks powered by energy harvesting
- Electrochemical storage systems
- Wind and flow energy systems

Articles cover the areas of materials synthesis, thin-film deposition, energy conversion devices, micro/nano electronics, electrochemical storage systems, sensor development, system design, integrated hybrid architectures, computational and theoretical modeling, and nanoscale fabrication techniques. Publications on the system level will cover diverse spectrum of technology such as electronics, sensors, aircraft, medical, wireless communication, storage, textile, and materials.

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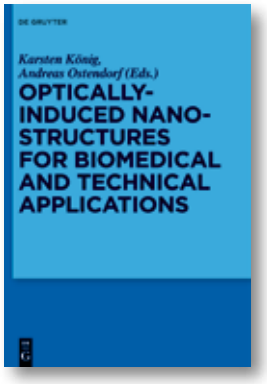

Karsten König, Andreas Ostendorf (Eds.)

OPTICALLY-INDUCED NANOSTRUCTURES FOR BIOMEDICAL AND TECHNICAL APPLICATIONS

Nanostructuring of materials is a task at the heart of many modern disciplines in mechanical engineering, as well as optics, electronics, and the life sciences. This book includes an introduction to the relevant nonlinear optical processes as well as coverage of state-of-the-art applications of non-UV radiation such as cell reprogramming, surface treatments of implants, production of nanowires, friction modification, and 3D data storage.

Karsten König, Saarland University, Saarbrücken, Germany; Andreas Ostendorf, Ruhr University Bochum, Germany.

TYPE OF PUBLICATION Monograph
LANGUAGE English
DATE OF PUBLICATION 2nd quarter 2015

416 pp., 144 fig.
HC RRP € 119.95/*US$ 168.00
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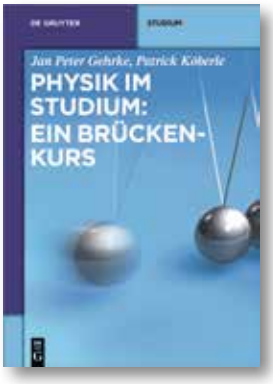

Jan Peter Gehrke, Patrick Köberle

PHYSIK IM STUDIUM: EIN BRÜCKENKURS

[Physics for Students: A Bridge Course]

Dieser Vorkurs bereitet Studienanfänger der Ingenieurswissenschaften auf das Hochschulstudium Physik vor, indem er die Grundlagen des Fachgebiets ausführlich und ohne allzu großen Rückgriff auf Mathematik vermittelt und die Theorie mit ausführlich gerechneten Beispielen auflockert.

This pre-course is designed to prepare beginning students of engineering for a college course in physics by providing a detailed presentation of the basic principles of the discipline without excessive recourse to mathematics and by illustrating the theory through examples presented in full detail.

Jan Peter Gehrke, Duale Hochschule Baden-Württemberg, Stuttgart; Dr. Patrick Köberle, Duale Hochschule Baden-Württemberg,Stuttgart

WERKTYP/TYPE OF PUBLICATION Lehrbuch/Textbook
SPRACHE/LANGUAGE Deutsch/German
ERSCHEINUNGSTERMIN/DATE OF PUBLICATION 3. Quartal 2014 / 3rd quarter 2014

De Gruyter Studium

360 S./pp., 87 Abb./fig.
Br./Pb. € 29,95 [D]/UVP/RRP *US$ 42.00
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eBook € 300,– [D]/UVP/RRP *US$ 420.00
ISBN 978-3-11-036195-7
ePub/ePub € 29,95 [D]/UVP/RRP *US$ 42.00
ISBN 978-3-11-039647-8

Thomas Schäpers

SEMICONDUCTOR SPINTRONICS

As the first comprehensive introduction into the rapidly evolving field of spintronics this textbook covers magnetism in solids, transport of spins and the practical use of these effects in next-generation electronics. Based on foundations in solid state physics, optics, and quantum mechanics, this textbook guides the reader to the forefront of research and development in the field, based on repeated lectures given by the authors.

Thomas Schäpers, Research Center Jülich, Germany. Bernd Beschoten, RWTH Aachen, Germany.

TYPE OF PUBLICATION Textbook
LANGUAGE English
DATE OF PUBLICATION 3rd quarter 2015

De Gruyter Textbook

316 pp., 200 fig.
Pb. RRP € 59.95/*US$ 84.00
ISBN 978-3-11-036167-4
eBook RRP € 900.00/*US$ 1260.00
ISBN 978-3-11-042544-4

J

Karl Heinz Hoffmann (Editor-in-Chief), Efstathios E. Michaelides, J. Miguel Rubi (Eds.), Katharina Wagner (Managing Editor)

JOURNAL OF NON-EQUILIBRIUM THERMODYNAMICS

Founded by: Jürgen U. Keller

JNET serves as an international publication organ for new ideas, insights and results on non-equilibrium phenomena in science, engineering and related natural systems. The central aim of the journal is to provide a bridge between science and engineering and to promote scientific exchange on the observation, description and interpretation of non-equilibrium phenomena.

LANGUAGE English
IMPACT FACTOR 2013: 0.805

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Individual Subscription € 149.00/*US$ 224.00
Print/Online
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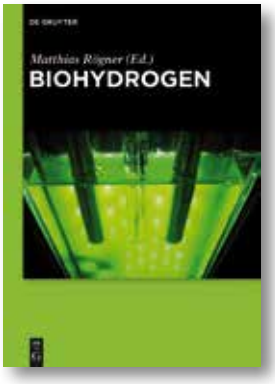

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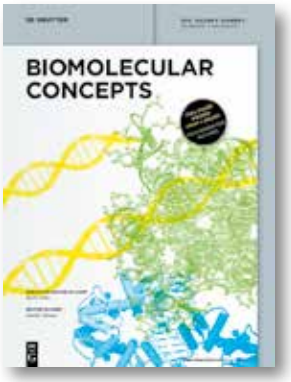

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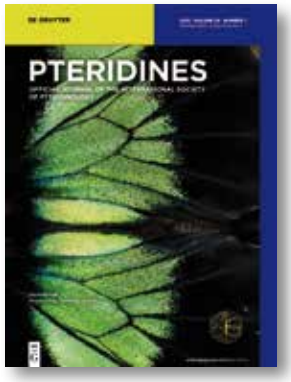

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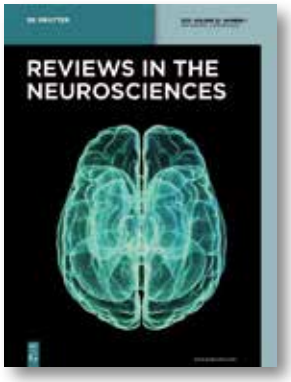

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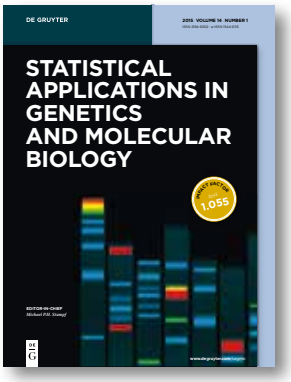

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TYPE OF PUBLICATION Monograph
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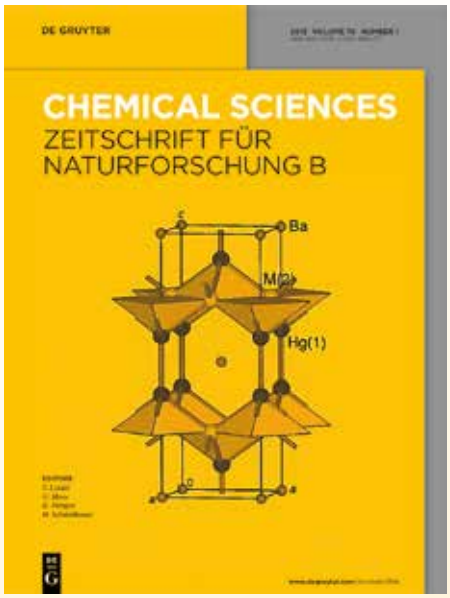

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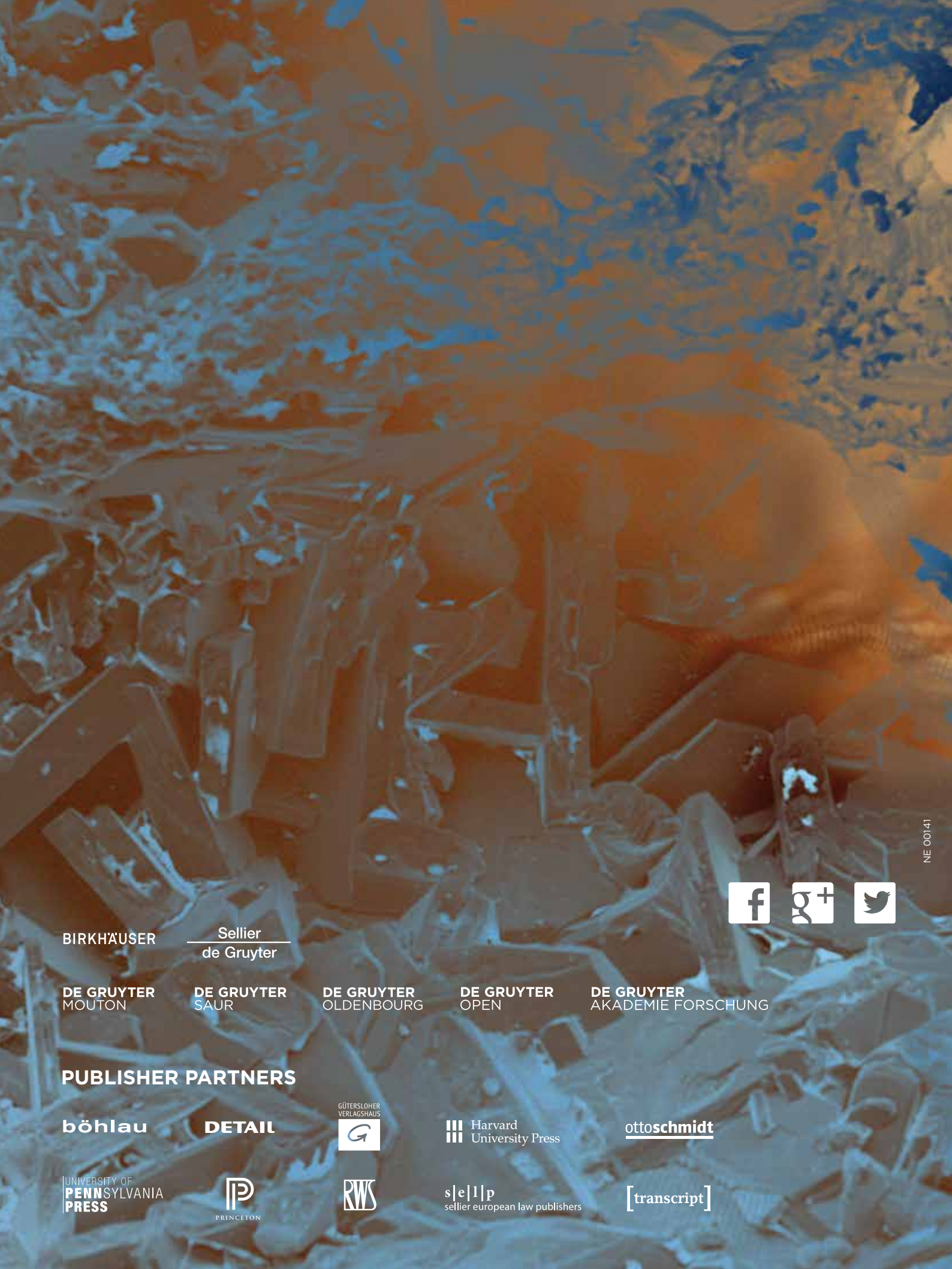

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