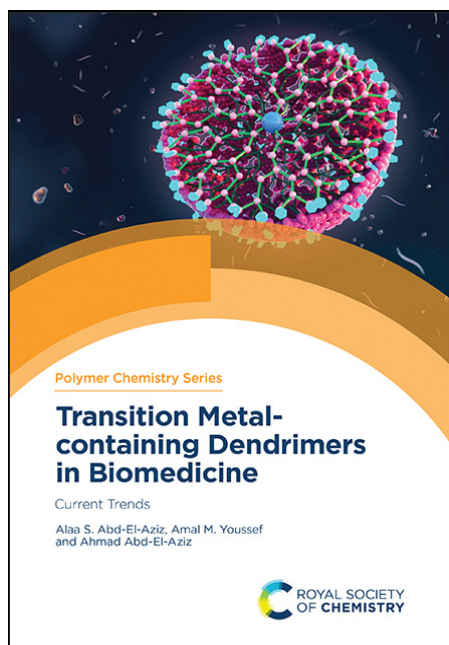




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**Pages:** 320  
**BIC:** PNND, PNNP, PSB  
**THEMA:** PNND, PNNP, PSB  
**BISAC:** SC1007000, SC1097000

## Transition Metal-containing Dendrimers in Biomedicine Current Trends

Alaa S Abd-El-Aziz University of Prince Edward Island, Canada

Amal M Youssef Alexandria University, Egypt

Ahmad Abd-El-Aziz University of Prince Edward Island, Canada

### Synopsis

There has been increasing research into designing transition metal-containing dendrimers as innovative materials, especially in the field of biomedicine and pharmaceutical science. This book will introduce readers to a number of classes of metal-containing dendrimers, before moving onto their design and synthesis and finally, highlighting future research targets. The book brings chemistry, biology, pharmaceutical science and medical fields together to design these future materials which will have global benefits.

### Brief Contents

- Introduction
- Antimicrobial Activity of Transition Metal-containing Dendrimers
- Anticancer Activity of Metal-containing Dendrimers
- Other Therapeutic Applications
- Biosensors and Bioimaging

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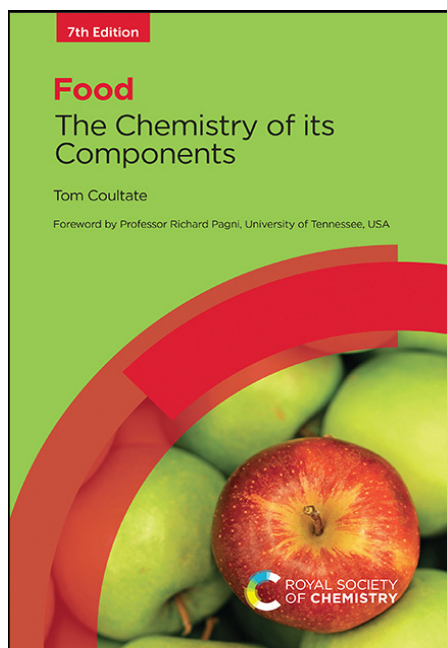
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## Food The Chemistry of its Components

Tom Coultate

### Synopsis

This new edition of the highly successful textbook provides a source of detailed information on the chemistry of food. The book investigates food components which are present in large amounts (carbohydrates, fats, proteins, minerals and water) and also those that occur in smaller amounts (colours, flavours, vitamins and preservatives). Food borne toxins, allergens, pesticide residues and other undesirables are also given detailed consideration. Attention is drawn to the nutritional and health significance of food components. A go-to text for students and teachers of food science and nutrition and for those interested in food composition.

### Brief Contents

- Sugars
- Polysaccharides
- Lipids
- Proteins
- Colours
- Flavours
- Vitamins
- Preservatives
- Undesirables
- Minerals
- Enzymes
- Water

**Publisher:** Royal Society of Chemistry

**ISBN:** 978-1-83916-814-7

**Price:** £42.99 | \$59.99

**Publishing date:** 09/08/2023

**Target Audience:** College/higher education, General/Trade, Professional and scholarly

**Format:** Paperback

**Edition:** 7

**Size:** 246 x 189 (Crown Quarto) mm

**Pages:** 528

**BIC:** KNDF, TDCT, YQTF

**THEMA:** 4CT, 4TC, PND, TDCT

**BISAC:** SC1013000, TEC012000

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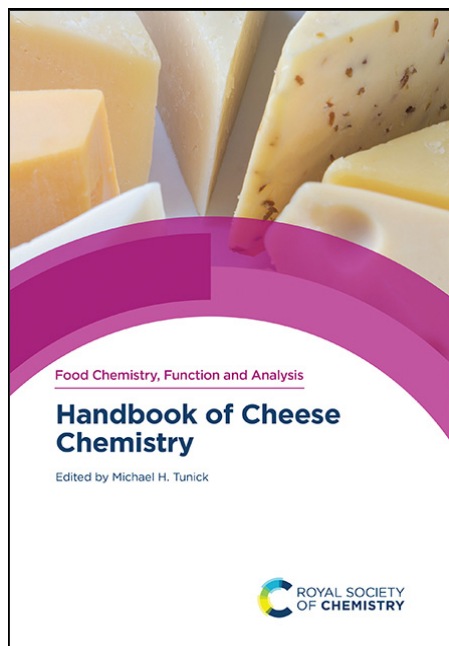
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**ISSN:** 2398-0656

**Publisher:** Royal Society of Chemistry

**ISBN:** 978-1-83916-309-8

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**Publishing date:** 28/07/2023

**Target Audience:** Professional and scholarly

**Format:** Hardback

**Size:** 234 x 156 (Royal 8vo) mm

**Pages:** 293

**BIC:** KNDF, PNF, TDCT

**THEMA:** PND, PNF, TDCT

**BISAC:** SC1013010, TEC012010

## Handbook of Cheese Chemistry

Michael H. Tunick Drexel University, USA

### Synopsis

Edited and authored by global experts, this book explores the newest areas of research into cheese manufacturing and engineering, as well as the latest developments concerning properties and structure. Information dealing with cheese manufacture includes starter and adjunct cultures, nonstarter lactic acid bacteria, coagulants, novel processing techniques and ripening. The chapters on cheese properties outline rheology, microscopy, flavours and other interesting topics. Discover comparisons of cheese made from milk of various mammals and delve into the fascinating area of artisanal and large-scale cheese manufacturing including vegan cheeses.

### Brief Contents

- Introduction to Cheese Chemistry
- Coagulants and Starter Cultures
- Nonstarter Lactic Acid Bacteria in Cheese
- Cheese Manufacture
- Chemistry of Cheese Ripening
- Cheese Ripening: An Overview of Technological Strategies Towards Process Acceleration
- Flavour Development in Cheese
- Cheese Microstructure
- Cheese Rheology and Texture
- Artisanal Cheese Chemistry
- Production, Consumption, and Nutritive Value of Cheese from Cows and other Mammals
- Non-dairy Cheese

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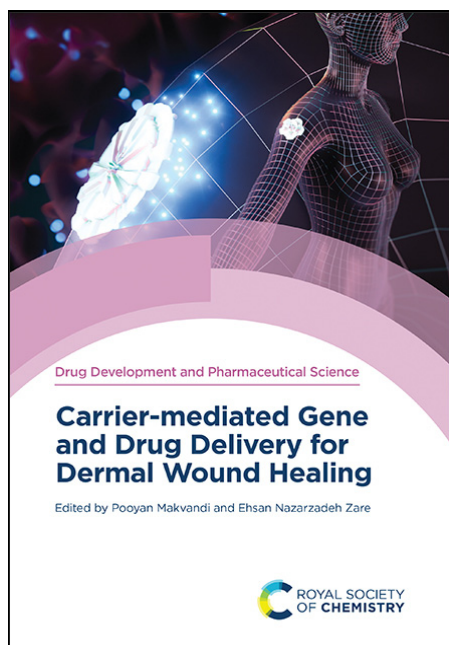
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## Carrier-mediated Gene and Drug Delivery for Dermal Wound Healing

Pooyan Makvandi Istituto Italiano Di Tecnologia, Italy  
Ehsan Nazarzadeh Zare Damghan University, Iran

### Synopsis

Wound healing—following trauma, illness, or surgery—is a complex process and is comprised of a particularly fragile sequence of biochemical events that are susceptible to interruption or failure which can lead to non-healing chronic wounds, scarring and other issues. Non-healing wounds are also commonly associated with diabetes, arterial disease, infection, and the metabolic deficiencies of aging. Treatment of dermal wounds can therefore be challenging and as such the ability to localise the effect of drugs and treatments to promote healing through protective materials is an attractive area of research. This book introduces the essential areas of skin anatomy and the wound healing process, how this can be disrupted by various pathologies and proceeds to outline how biomaterials and devices for dermal drug delivery can be utilised in effective wound management. This book is an ideal companion for postgraduates and researchers in a variety of disciplines including biomedical engineering, biomaterials, drug development and delivery, formulation science and tissue engineering.

### Brief Contents

- Introduction
- Skin Anatomy
- Cutaneous Barrier and Skin Infections
- The Wound Healing Process
- Infections
- Antibacterial and Antifungal Materials
- Pharmaceutical Compounds with Antioxidant Properties
- Antioxidant Carriers
- Gene Delivery
- Drug Delivery
- Stimuli-responsive Systems for Wound Healing
- Stimuli-responsive Systems: External Triggers
- Safety, Regulation, and Clinical Translation

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**Publisher:** Royal Society of Chemistry

**ISBN:** 978-1-83916-872-7

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**Target Audience:** Professional and scholarly

**Format:** Hardback

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**Pages:** 292

**BIC:** TCB, TDCW, TGB

**THEMA:** TDCW, TGML

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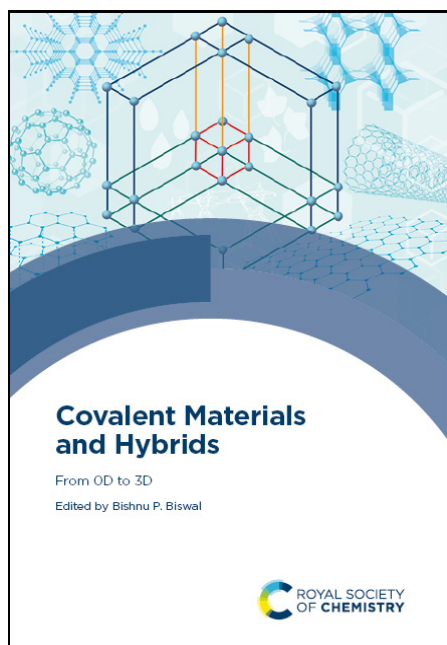
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## Covalent Materials and Hybrids From 0D to 3D

Bishnu P Biswal National Institute of Science Education and Research (NISER), India

### Synopsis

Readers will take a journey on how covalently bonded materials and their hybrids can change the material world through applications relevant to energy, water and the environment. Arranged in chronological order, to show changes made in ideas and strategies in developing these covalently framed materials to meet modern requirements, this is an ideal introduction for students wanting to pursue this emerging field and gain knowledge on polymers and advanced organic materials. It will also update current researchers on recent developments, explored properties and arising challenges of covalent materials.

### Brief Contents

- Polymer Chemistry: An Overview
- 0D Covalent Organic Cages: Design, Synthesis, and Applications
- Graphene, Its Family and Potential Applications
- Conjugated Porous Polymers and Hybrids
- 2D Covalent Organic Frameworks
- 3D Covalent Organic Frameworks
- Carbon-Carbon Linked Covalent Organic Frameworks
- Structural Characterization of Porous Organic Materials
- Covalent Organic Framework-based Hybrid Materials and Their Applications
- Computational Insights of Dimensional Organic Materials

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**Target Audience:** Professional and scholarly  
**Format:** Hardback  
**Size:** 234 x 156 (Royal 8vo) mm  
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**THEMA:** PNNP, TGM  
**BISAC:** SCI013040, SCI097000, TEC021000

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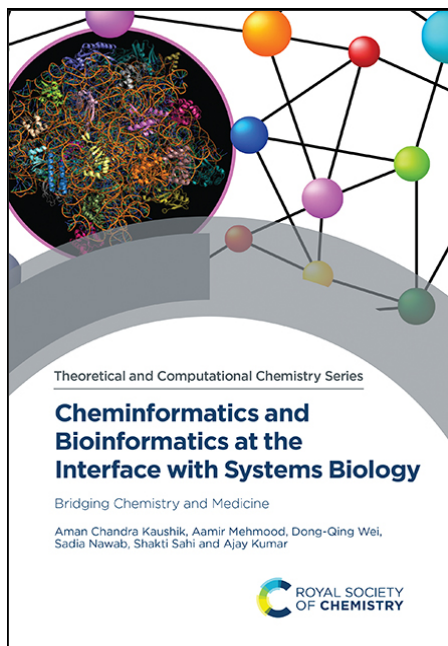
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**Pages:** 287

**BIC:** PNRP, TDCW, UYM

**THEMA:** PNB, PNRA

**BISAC:** SCI013020, SCI013050, SCI013070, SCI102000

## Cheminformatics and Bioinformatics at the Interface with Systems Biology

### Bridging Chemistry and Medicine

**Aman Chandra Kaushik** Shanghai Jiao Tong University, China

**Aamir Mehmood** Shanghai Jiao Tong University, China

**Dongqing Wei** Shanghai Jiao Tong University, China

**Sadia Nawab** Shanghai Jiao Tong University, China

**Shakti Sahi** Gautam Buddha University, India

**Ajay Kumar** National Sun Yat-sen University, Taiwan

### Synopsis

Addressing the lack of knowledge on the fundamental aspects of the various computational tools for drug discovery, this book is a compilation of recent bioinformatics and cheminformatics approaches, and their integration with systems biology.

### Brief Contents

- System Biology and Drug Target Identification
- Modulating Drug Target Gene Expression in Cancer
- Drug Repositioning Using Genome-wide Screening and Systems Biology
- System Biology-based Target Identification and Cancer Genome Analysis
- Protein-Protein Interaction Candidates Related to Mammalian Brain
- Biological Systems to Computational Systems Biology
- Controlled Vocabularies and Semantics in Systems Biology
- Photographing Single Molecules in Biosystems
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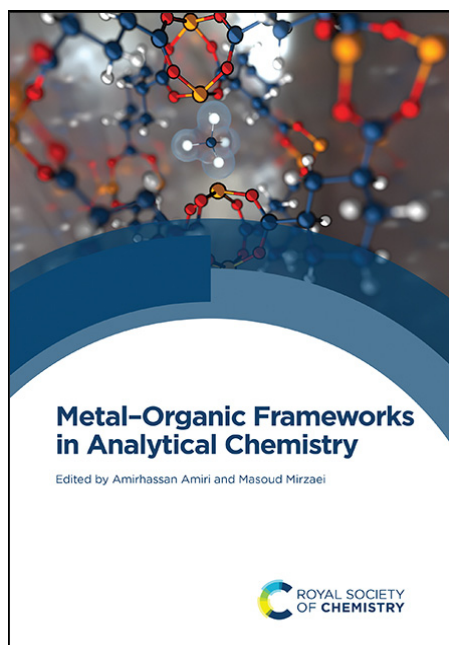
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**Format:** Hardback  
**Size:** 234 x 156 (Royal 8vo) mm  
**Pages:** 477  
**BIC:** PDG, PNF, TGM  
**THEMA:** PDG, PNF, TGM  
**BISAC:** SCI013010, TEC021000

## Metal-Organic Frameworks in Analytical Chemistry

Amirhassan Amiri Ferdowsi University of Mashhad, Iran  
Masoud Mirzaei Ferdowsi University of Mashhad, Iran

### Synopsis

One of the current research lines in analytical chemistry is the design and utilisation of novel materials with higher selectivity and improved analytical performance in various steps of chemical analysis. In this sense, metal-organic frameworks (MOFs) have attracted attention as a potential alternative to current commercially available materials. The MOFs present an interesting set of properties, such as diverse structural topologies, modifiable pore size, high porosity, tuneable surface area, diverse composition, and versatile functionality. This book covers the multipurpose usage of MOFs in sample preparation, integration, and detection stages of analytical chemistry. It will serve as a reference book for researchers, scientists and engineers who are interested in developing new materials as well as researchers who are interested in new application development.

### Brief Contents

- MOFs in Green Analytical Chemistry
- Chemistry of MOFs
- MOFs Nanocomposites
- Cleanup and Remediation Based on MOFs
- MOFs in Sample Preparation Stage of Analysis
- MOFs in Solid Phase Extraction of Traces Organic and Inorganic Analytes in Food and Environmental Samples
- Use of MOFs in Separation/Identification Stage of Analysis
- Use of MOFs in Detection Stage of Analysis/Miniaturization Devices
- MOFs for Sensing Applications
- Sensors Based on Conductive MOFs
- Metal-Organic Framework/Enzyme Composites
- Molecularly Imprinted MOFs
- Chiral MOFs
- Application of MOFs Nanocomposites

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