



Food
science

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Our books publishing programme supports scientists, researchers, students and teachers with high quality, internationally respected chemical science titles spanning the breadth of our subject.

The books we're publishing in 2018 cover the core disciplines, related fields and emerging topics such as chemical biology and functional food. Contributions come from all over the world, from leading researchers including Emma Raven, Mark Vrakking, Jintao Zhang and Bill Price.

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It's been 10 years since the first book in our Catalysis series – *Carbons and Carbon Supported Catalysts in Hydroprocessing* – hit the shelves. Since then, the series has grown to include over 30 titles, and there are five more joining the series this year. Head to page 54 to read more.

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If you have any queries, contact books@rsc.org to talk to the team.

For a list of books published prior to 2018, visit rsc.li/backlist

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The books in this portfolio provide thorough coverage of research developments, breakthroughs, reference information and opinion in a wide range of food science topics, from food packaging to nutrition and allergens. This year, look out for books on the principles of nutrimentabonomics, food labelling and food contact materials analysis.

Five minutes with...



Name Siân Astley

Affiliation EuroFIR AISBL

Editor *Health Claims and Food Labelling*

Book publication date June 2018

ISBN 9781788010733

Why did you become a scientist?

Several reasons. I was good at it, it was interesting and my grades were not good enough to be a vet. In fact, I am not sure I had any idea what research was about, certainly I wasn't offered any advice about it in school and I don't recall wanting to pursue a career because of any heroes. To the horror of some of my more organised colleagues, I have never planned my career; I have ended up doing what I do because I was interested and willing to take a risk, and work hard to make things work, especially if someone said it couldn't be done.



Book series



Professional reference



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Conference proceedings



Textbooks



Popular science

What are your research priorities at the moment?

The projects I am working on, which means consumer-generated data, exploitation of food waste, food allergy, food labelling, etc. and how these can best be used to benefit everyone.

Tell me about your book

The book came about because of new EU law on food information to consumers and the culmination of several EU-funded projects (including BACCHUS and CYMBOL) that offer insights into the putative health benefits of bioactive (non-nutrient) compounds in foods and how consumers use the information provided via packaging. However, food labelling and health claim legislation is different across the globe. The aim is to provide a practical introduction for those exploring these aspects of food labelling.

In your opinion, what is the biggest unanswered question in chemistry?

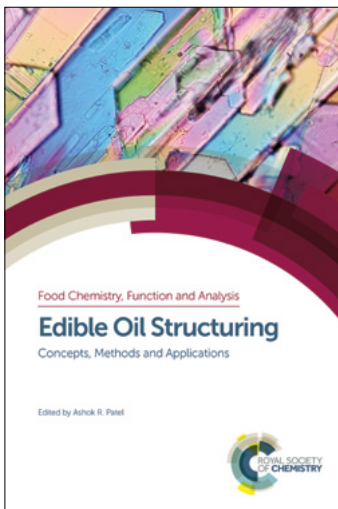
Us. Humans. We are a bunch of fairly well understood chemical reactions in a bag of water and yet we understand so little about how individuals function.



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About the series

ISSN: 2398-0656

Series editors

Gary Williamson The University of Leeds, UK | **Alejandro G Marangoni** University of Guelph, Canada | **Juliet A Gerrard** University of Auckland, New Zealand

Food Chemistry, Function and Analysis provides a suite of reference books focusing on food chemistry, the functions of food in relation to health and the analytical methods and approaches used by scientists in the area. Providing comprehensive coverage of important topics such as the biochemistry of food, physical properties and structure, efficacy and mechanisms of bioactives in the body including biomarkers, nutrient physiology/metabolism and interactions and the role of nutrition and diet in disease. The series is aimed at academic and industrial researchers and graduate students in food science and chemistry as well as for physicists, biochemists, nutritionists and others who work at the interface of the chemistry, physics and biology of food.

Advanced Cheese Chemistry

Manufacture and Ripening

J J Sheehan Teagasc Food Research Centre, Ireland

The manufacture of cheese is a global industry, with production and consumption continuing to increase. Giving a fresh perspective on cheese science, this title provides a specific focus on the chemistry of the complexities of cheese manufacture and ripening. With a multidisciplinary approach, drawing on soft matter theory and material sciences, this book is unique in the breadth of information presented. Written by recognised experts in the field, it will be a great source of information for researchers and practitioners in food science.

Hardback | 352 pages | 9781788011051 | 2019 | £169.00 | \$237.00



Anthocyanins from Natural Sources

Exploiting Targeted Delivery for Improved Health

Marianne Su-Ling Brooks Dalhousie University, Canada | **Giovana B Celli** Dalhousie University, Canada

Interest in anthocyanins has increased in the last few years, due to their potential health-promoting properties as dietary antioxidants, as well as their use as natural dyes. This book discusses ways of targeting the delivery of these compounds, through manipulation of exploitation mechanisms. It addresses all aspects from anthocyanin extraction, health benefits, and metabolism to specialised controlled release applications. This title serves as a reference to those specialising in pharmaceutical science, food engineering, food science or human health and nutrition.

Hardback | 400 pages | 9781788012157 | 2019 | £179.00 | \$251.00





Cereal Grain-based Functional Foods



Carbohydrate and Phytochemical Components

Trust Beta University of Manitoba, Canada | **Mary Ellen Camire** University of Maine, USA

The last decade has seen much new research into determining which carbohydrates and phytochemicals are present in grains, and how to make these nutritionally available. This book covers the chemical composition of cereal grains, with special emphasis on new techniques to improve their functionality. Including topics such as the composition and functionality of oligosaccharides and sugars, polysaccharide types, and the role and definition of dietary fibre, this title provides researchers, clinicians and students with a comprehensive compendium on aspects of whole grain components.

Hardback | 352 pages | 9781788011488 | 2018 | £169.00 | \$237.00



Food Contact Materials Analysis



Mass Spectrometry Techniques

Michele Suman Barilla S.p.A, Italy

Mass spectrometric techniques have developed to provide increasing solutions to solve problems in food processing and packaging. Even the smallest amount of contamination in food can cause a problem for food production companies, thus they are keen to find speedy and efficient quality control methods. This book outlines how ingredients and their interrelationship with processing and packaging have developed with the exploitation of mass spectrometry and gives practical protocols to stakeholders showing the flexibility of this technique. With huge relevance worldwide, it will appeal to food packaging scientists and mass spectrometry practitioners alike.

Hardback | 288 pages | 9781788011242 | 2018 | £149.00 | \$209.00



Eggs as Functional Foods and Nutraceuticals for Human Health



Jianping Wu University of Alberta, Canada

Often described as 'nature's perfect food', perceptions of egg consumption and human health have evolved substantially over the past decades. This book presents recent developments on the processing of eggs for nutritional, biomedical, functional food, nutraceutical and other value-added applications, as well as providing new evidence around egg consumption on cardiovascular diseases, metabolic syndrome, weight management, mental development, eye, muscle, and ageing health. It will appeal to food scientists, food chemists, researchers in human nutrition specialising in eggs and dairy nutrition, and those involved in egg production.

Hardback | 480 pages | 9781788012133 | 2018 | £179.00 | \$251.00



Health Claims and Food Labelling



Sian Astley EUROFIN, UK

Increasing numbers of foods carry nutrition and/or health claims on their packaging. These need to be regulated in order to protect consumers from false claims, and to promote foods with proven health benefits. This title explores the use of nutrition and health claims around the world, the impact of legislation on consumers especially understanding of the terminology used, and likely developments in the future. It is a valuable reference for those in the food industry, as well as in the regulatory environment.

Hardback | 224 pages | 9781788010733 | 2018 | £149.00 | \$209.00





Non-extractable Polyphenols and Carotenoids

Importance in Human Nutrition and Health

Fulgencio Saura-Calixto ICTAN-CSIC, Spain | **Jara Pérez-Jiménez** ICTAN-CSIC, Spain

Polyphenols are the most abundant antioxidants in our diet and are widespread constituents of fruits, vegetables, cereals, dry legumes, chocolate, and beverages such as tea, coffee and wine. Recent research has shown that non-extractable polyphenols are a major part of dietary polyphenols and improving our knowledge of intakes and physiological properties of these will be useful for a better understanding of the potential health effects of dietary polyphenols. Aimed at food chemists and scientists, this will be the first book to cover this important area.

Hardback | 300 pages | 9781788011068 | 2018 | £149.00 | \$209.00



Nutrimetabonomics

Principles and Techniques

Sandrine P Claus University of Reading, UK

Nutrimetabonomics offers insight into the effects of diet and nutrition on humans by measuring and mathematically modelling changes in the levels of products of metabolism found in human fluids and tissues. This book covers the whole process, from experiment design to data analysis and interpretation. Written by world experts in the field, it will appeal to those looking to gain an understanding of the technique and its practical aspects, from food scientists to biochemists.

Hardback | 250 pages | 9781782627777 | 2018 | £159.00 | \$223.00



Steviol Glycosides

Cultivation, Processing, Analysis and Applications in Food

Ursula Wölwer-Rieck Friedrich-Wilhelms-Universität Bonn, Germany

The visibility of the plant *Stevia rebaudiana* has increased in the last few years due to its sweet constituents called steviol glycosides. As they were approved all over the world as food additives in the category sweetener, they received more attention and their use in food has increased significantly. This book presents some of the new techniques for growing stevia which have resulted in varieties with interesting steviol glycoside profiles, new techniques to analyse the content of sweeteners in different matrices, the use of the sweeteners in new food formulations and last but not least totally new manufacturing methods to produce well tasting sweeteners. Unique in the breadth of information presented, this book will appeal food scientists, analytical chemists and health professionals.

Hardback | 250 pages | 9781782628309 | 2018 | £149.00 | \$209.00



Professional Reference

Coffee

Chemistry, Quality and Health Implications

Adriana Farah Universidade Federal do Rio de Janeiro, Brazil

Coffee is one of the most popular drinks in the world but how does the chemistry influence the quality and what are the health advantages or disadvantages from consuming it? This book is unique in covering coffee production, quality, chemistry, and the health implications from its consumption in one volume. Written by an international collection of contributors in the field who concentrate on coffee research, it is aimed at advanced undergraduates, postgraduates and researchers. It provides an accessible reference to the current research in the field and information on the health aspects for nutritionists and other health professionals.

Hardback | 300 pages | 9781782620044 | 2018 | £59.99 | \$84.00



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