

Handbook of Porphyrin Science

with Applications to Chemistry, Physics,
Materials Science, Engineering, Biology
and Medicine



Volume 32
Materials

Karl M. Kadish ■ Kevin M. Smith ■ Roger Guilard

Editors

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Karl M. Kadish

University of Houston, USA

Kevin M. Smith

Louisiana State University, USA

Roger Guillard

Université de Bourgogne, France

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Editors: Karl M. Kadish (*University of Houston, USA*),
Kevin M. Smith (*Louisiana State University, USA*) and
Roger Guilard (*Université de Bourgogne, France*)

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Preface for Volumes 31–35

The previous five volumes in our evolving series of monographs on porphyrin science were dedicated to *Porphyrin Biochemistry* with an emphasis on *Applications to Biomedicine and Bio-inspired Energy*. That set of volumes (26–30) was expertly handled by our guest editor Professor Gloria C. Ferreira. In the present set of five volumes, we once again delve into the organic and physical chemistry, as well as the materials and applications areas of tetrapyrrole science. Second volumes focusing on *Synthesis* and on *Applications* are presented, as well as a volume on *Materials* and another on the topical and rapidly expanding area associated with the *Harnessing of Solar Energy*. This five-volume set is rounded out with a fully comprehensive *Index* for volumes 1 through 34.

Once again we thank our contributing authors for their diligence and for holding to their promises regarding both writing and actually producing a thorough, readable and comprehensive contribution to *Porphyrin Science*; everything depends upon them! We also acknowledge the first rate production team that *World Scientific Publishing Company* has put at our disposal, and that brought this part of our continuing project to fruition in an efficient and timely manner.

Karl M. Kadish (Houston, Texas, USA)

Kevin M. Smith (Baton Rouge, Louisiana, USA)

Roger Guillard (Dijon, Bourgogne, France)

March 15, 2014

Preface for Volumes 1–10

Although the porphyrin and tetrapyrrole research area was regarded as “fully matured” during the 20th century, as evidenced for example by the awarding of numerous Nobel Prizes to its principal researchers, new advances and accomplishments in the field still amaze us as editors. The area continues to blossom and to expand into new areas of science and applications that would probably never have occurred to our 20th century heroes. An earlier *Porphyrin Handbook* assembled the large amount of factual data that had been accumulated during the 20th century. Our new venture, the *Handbook of Porphyrin Science* takes a completely new look at our research area and comprehensively details the contemporary science now appearing in the scientific literature that would indeed have been hard to predict even 10 years ago. In particular, fundamentally new methodologies and potential commercial applications of the beautiful compounds that we all love are exemplified, fully recognizing the subtitle of the series — “with applications to chemistry, physics, materials science, engineering, biology and medicine”.

The three of us have complementary expertise in physical chemistry, synthetic and bioorganic chemistry, and in synthetic and mechanistic organometallic chemistry; this has enabled us to cover the whole field of porphyrin science and applications, and to devise comprehensive volume and author content. As of the date of writing, between the three of us, we have published more than 1600 tetrapyrrole research articles, and hold 31 patents related to commercial applications of porphyrin science. So we do know our field, and this has enabled us to assemble a first-rate group of experts who have written comprehensive up-to-date chapters with accuracy and authority; we thank our authors for their cooperation and willingness to go along with our highly ambitious schedule for production of these volumes.

We look forward to comments from our readers, and to suggestions that might enable us to expand our basic interests and scientific coverage even further. Meanwhile, we hope that porphyrin researchers, old, new and of the future, will enjoy reading these volumes just as much as we enjoyed planning and, with the help of World Scientific Publishing Company, producing them from manuscript to published article, in a timely manner.

Karl M. Kadish (Houston, Texas, USA)
Kevin M. Smith (Baton Rouge, Louisiana, USA)
Roger Guilard (Dijon, Bourgogne, France)
January, 2010

Contributing Authors for Volumes 1–34*

Joshua Akhigbe

University of Connecticut
Storrs, CT 06269-3060
USA

Chapter 164

Karl E. Anderson

University of Texas Medical Branch
Galveston, TX 77555-1109, USA
kanderso@utmb.edu

Chapter 152

Roger Alberto

University of Zürich
CH-8057 Zürich
Switzerland
Chapter 116

Bernie J. Anding

Iowa State University
Ames, IA, 50010, USA
Chapter 100

Hasrat Ali

Université de Sherbrooke
Sherbrooke, Québec, Canada
Chapter 16

Edith Antunes

Rhodes University
Grahamstown, 6139, South Africa
Chapter 34

Salam Al-Karadaghi

Lund University
Lund, Sweden
Salam.Al-Karadaghi@biochemistry.lu.se
Chapter 137

Naoki Aratani

Kyoto University
Kyoto 606-8502, Japan
aratani@kuchem.kyoto-u.ac.jp
Chapter 1

Cristina Alonso

University of Hull
Kingston-upon-Hull, HU6 7RX, UK
Chapter 17

Margarida Archer

Universidade Nova de Lisboa
2781-901 Oeiras, Portugal
Chapter 89

*Full contact information for authors can be found on the title page of each chapter.

Katsuhiko Ariga

National Institute for Materials Science
Tsukuba, Ibaraki 305-0044, Japan
ARIGA.Katsuhiko@nims.go.jp

Chapter 81

Teodor Silviu Balaban

Aix-Marseille University
13397 Marseille, France
ts.balaban@univ-amu.fr

Chapter 3

Dennis P. Arnold

Queensland University of Technology
Brisbane, Australia 4001
d.arnold@qut.edu.au

Chapter 165

Alan L. Balch

University of California, Davis
Davis, CA 95616, USA
balch@chem.ucdavis.edu

Chapter 40

Ally Aukaaloo

Université de Paris-Sud XI
F-91405 Orsay, France
ally.aukaaloo@u-psud.fr

Chapter 179

David P. Ballou

University of Michigan
Ann Arbor, MI 48109-5606, USA

Chapter 28

Kunio Awaga

Nagoya University
Nagoya 464-8602, Japan
awaga@mbox.chem.nagoya-u.ac.jp

Chapter 83

Kylie D. Barker

University of Maryland
Baltimore, MD 21201-1180, USA

Chapter 72

Yosra M. Badiei

Johns Hopkins University
Baltimore, Maryland 21218, USA

Chapter 66

Ines Batinić-Haberle

Duke University Medical School
Durham, NC 27710, USA
ibatinic@duke.edu

Chapter 52

Michael N. Badminton

University Hospital of Wales
Cardiff, CF14 4XW, UK
badmintonmn@cardiff.ac.uk

Chapter 146

Aurélié Bedel

Université Bordeaux Segalen
Bordeaux, 33076, France

Chapter 154

Ireana Bagai

University of Michigan
Ann Arbor, MI 48109-5606, USA

Chapter 156

Fethi Bedioui

Université Paris Descartes
75231 Paris cedex 05, France
fethi-bedioui@enscp.fr

Chapter 55

Irina P. Beletskaya

Russian Academy of Sciences
119071 Moscow, Russian Federation
Chapter 108

Ludmil Benov

Kuwait University
13110 Safat, Kuwait
Chapter 52

Timothy C. Berto

University of Michigan
Ann Arbor, MI 48109, USA
Chapter 63

Yongzhong Bian

University of Science and Technology
Beijing
Beijing 100083, China
Chapter 64

Sara Bonacchi

Università degli Studi di Bologna
40126 Bologna, Italy
Chapter 57

Christian W. von Borczyskowski

National Technical University of Belarus
220013 Minsk, Belarus
Chapter 104

Victor Borovkov

Osaka University
Osaka 565-0871, Japan
Chapter 170

Sylvia S. Bottomley

University of Oklahoma College
of Medicine
Oklahoma, OK 73104, USA
Sylvia-Bottomley@ouhsc.edu
Chapter 144

Faye Bowles

University of California, Davis
Davis, CA 95616, USA
Chapter 40

Ross W. Boyle

University of Hull
Kingston-upon-Hull, HU6 7RX, UK
r.w.boyle@hull.ac.uk
Chapters 17, 135

Ozguncem Bozkulak

Children's Hospital Los Angeles
Los Angeles, CA 90027, USA
Chapter 22

Pierre-Francois Brevet

Université Claude Bernard Lyon 1
F-69622 Villeurbanne cedex
France
Chapter 175

Tomáš Bříza

Institute of Chemical Technology
16628 Prague 6
Czech Republic
Chapter 171

Martin Bröring

Technische Universität Carolo-Wilhelmina
zu Braunschweig
Braunschweig, Germany
m.broering@tu-bs.de
Chapter 41

Markus J. Bröcker

Yale University
New Haven
CT 06511, USA
Chapter 94

Christian Brückner

University of Connecticut
Storrs, CT 06269-3060, USA
c.bruckner@uconn.edu
Chapters 76, 164

Donald A. Bryant

Pennsylvania State University
University Park, PA 16802, USA
dab14@psu.edu
Chapter 96

Christophe Bucher

Université Joseph Fourier/CNRS
Grenoble, France
christophe.bucher@ujf-grenoble.fr
Chapter 78

Mihai Buda

“POLITEHNICA” University
of Bucharest
Bucharest, Romania
mihai@catedra.chfiz.pub.ro
Chapter 78

Paul W. Buehler

Center for Biologics Evaluation and
Research (CBER)
Bethesda, MD 20892, USA
paul.buehler@fda.hhs.gov
Chapter 131

Véronique Bulach

Université de Strasbourg
67000 Strasbourg, France
Chapter 62

Kevin Burgess

Texas A&M University
College Station, TX 77842, USA
burgess@tamu.edu
Chapter 37

Andrew N. Cammidge

University of East Anglia
Norwich, NR4 7TJ, UK
a.cammidge@uea.ac.uk
Chapter 75

Christopher J. Carrell

University of Minnesota
Minneapolis, MN 55455, USA
Chapter 127

Eric Carter

University of Michigan
Ann Arbor, MI 48109-5606, USA
Chapter 156

José A.S. Cavaleiro

University of Aveiro
3810-193 Aveiro, Portugal
jcavaleiro@ua.pt
Chapter 9

Isabelle Chambrier

University of East Anglia
Norwich, NR4 7TJ, UK
i.fernandes@uea.ac.uk
Chapter 75

Giorgos Charalambidis

University of Crete
Heraklion, Crete
Greece
Chapter 180

Tavarekere K. Chandrashekar

National Institute of Science Education
and Research (NISER)
Bhubaneswar 751005, Odisha, India
director@niser.ac.in
Chapter 169

Arvind Chaudhary

National Institute of Science Education
and Research (NISER)
Bhubaneswar-751005, Odisha, India
Chapter 169

Chi-Ming Che

University of Hong Kong
Hong Kong, China
cmche@hku.edu
Chapter 101

Caiyong Chen

University of Maryland
Maryland 20742, USA
Chapter 67

Andrei V. Cheprakov

Moscow State University
119992, Moscow, Russia
avchep@elorg.chem.msu.ru
Chapter 58

Soizic Chevance

Université de Rennes
35042 Rennes, France
Chapter 102

Sung Cho

Yonsei University
Seoul, 120-747, Korea
Chapter 5

Alessia Coletti

Milan, Politecnico di Milano
Italy
Chapter 174

Daniel P. Collins

University of South Carolina
Columbia, SC 29208, USA
Chapter 28

Valeria Conte

Università di Roma Tor Vergata, Rome
Italy
Chapter 174

Michael J. Cook

University of East Anglia
Norwich, NR4 7TJ, UK
M.Cook@uea.ac.uk
Chapter 75

Maria Almira Correia

University of California San Francisco
San Francisco, CA 94158-2517, USA

almira.correia@ucsf.edu

Chapter 158

Anne Corrigan

University of Cape Town
Rondebosch 7701, South Africa

Chapter 149

Athanassios G. Coutsolelos

University of Crete

Heraklion, Crete

Greece

coutsole@chemistry.uoc.gr

Chapter 180

Harry A. Dailey

University of Georgia

Athens, GA 30602, USA

Chapter 123

Dimitra Daphnomili

University of Crete

Heraklion, Crete

Greece

Chapter 180

John H. Dawson

University of South Carolina

Columbia, SC 29208, USA

dawson@mail.chem.sc.edu

Chapter 28

Simon Dalglish

Nagoya University

Nagoya 464-8602, Japan

Chapter 83

Katherine A. de Villiers

Stellenbosch University

Stellenbosch 7602, South Africa

Chapter 133

Serena DeBeer

Cornell University

Ithaca, NY 14853, USA

Chapter 66

Richard A. Decréau

Université de Bourgogne

21078 Dijon, France

Richard.Decreau@u-bourgogne.fr

Chapter 106

Philippe Deleplaire

Université Paris Diderot — Paris 7

75252 Paris Cedex 05, France

Chapter 122

Dorjnamjin Demberelnyamba

Inje University, Gimhae 621-749

Korea

Chapter 173

Tyler G. St. Denis

Columbia University

New York City, NY, USA

Chapter 134

Ilia G. Denisov

University of Illinois

Urbana, IL 61801, USA

Denisov@illinois.edu

Chapter 26

Jean-Charles Deybach

Université Paris Diderot

75018, Paris, France

jean-charles.deybach@lmr.aphp.fr

*Chapter 145***Eric Wei-Guang Diau**

National Chiao Tung University

Hsinchu, Taiwan

diau@mail.nctu.edu.tw

*Chapter 142***Dilek K. Dogutan**

Massachusetts Institute of Technology

Cambridge, USA

*Chapter 99***Charles Michael Drain**Hunter College of City University
of New York

New York, NY 10065, USA

cdrain@hunter.cuny.edu

*Chapter 15***Francis D'Souza**

University of North Texas

Denton, TX 76203-5017, USA

Francis.DSouza@UNT.edu

*Chapter 4***Florence Duclairoir**

Institut Nanosciences et Cryogénie

38054 Grenoble cedex 9, France

*Chapter 47***Alessandro D'urso**

Università di Catania

95125 Catania, Italy

*Chapter 59***Jennifer L. DuBois**

Montana State University

Bozeman, MT 59717, USA

jdubois@chemistry.montana.edu

*Chapters 90, 127***Timothy J. Egan**

University of Cape Town

Rondebosch 7701, South Africa

Timothy.Egan@uct.ac.za

*Chapter 133***George H. Elder**

Cardiff University

Cardiff, CF14 4XN, UK

*Chapter 146***Johannes A. A. W. Elemans**

Radboud University Nijmegen

6525 AJ Nijmegen

Netherlands

*Chapter 79***Juan Engel**

University of California San Francisco

San Francisco, CA 94158-2517, USA

*Chapter 158***Manivannan Ethirajan**

Roswell Park Cancer Institute

Buffalo, NY 14263, USA

*Chapter 19***Allison J. Farrand**

Vanderbilt University

Nashville, TN 37232, USA

Chapter 125

Alessandro Feis

University of Florence
I-50019 Sesto Fiorentino, Italy
Chapter 31

Angela Ferrario

Children's Hospital Los Angeles
Los Angeles, CA 90027, USA
Chapter 22

Gloria C. Ferreira

University of South Florida
Tampa, FL, 33612, USA
gferreir@health.usf.edu
Chapters 68, 119, 121

Stuart J. Ferguson

University of Oxford
Oxford, OX1 3QU, UK
stuart.ferguson@bioch.ox.ac.uk
Chapter 93

Kimberly B. Fields

University of South Florida
Tampa, FL 33620, USA
Chapters 13, 43

Mark D. Fleming

Children's Hospital and Harvard Medical
School
Boston, MA 02115, USA
Chapter 144

Barbara Floris

Università di Roma Tor Vergata
Rome, Italy
Chapter 174

Antonio Fontanellas

University of Navarra
Pamplona 31008, Spain
afontanellas@unav.es
Chapter 153

Nicole Frankenberg-Dinkel

Ruhr-University Bochum
44780 Bochum, Germany
nicole.frankenberg@rub.de
Chapter 140

Erica J. Fratz

University of South Florida
Tampa, FL 33612, USA
Chapter 119

Petra Fromme

Arizona State University
Tempe, AZ 85287-1604, USA
pfromme@asu.edu
Chapter 136

Raimund Fromme

Arizona State University
Tempe, AZ 85287-1604, USA
Chapter 136

Takamitsu Fukuda

Osaka University
Toyonaka 560-0043, Japan
tfukuda@chem.sci.osaka-u.ac.jp
Chapter 42

Shunichi Fukuzumi

Osaka University
Osaka 565-0871, Japan
fukuzumi@chem.eng.osaka-u.ac.jp
Chapter 46

Hiroyuki Furuta

Kyushu University
Fukuoka 819-0395, Japan
hfuruta@cstf.kyushu-u.ac.jp
Chapter 10

Kazumichi Furuyama

Tohoku University Graduate School of
Medicine
Sendai, Miyagi 980-8575, Japan
k-furuya@mail.tains.tohoku.ac.jp
Chapter 128

Mary Grace I. Galinato

University of Michigan
Ann Arbor, MI 48109, USA
Chapter 63

Pierluca Galloni

Università di Roma Tor Vergata
Rome, Italy
galloni@scienze.uniroma2.it
Chapter 174

Emanuela Gatto

Università di Roma Tor Vergata
Rome, Italy
Chapter 174

François Moreau-Gaudry

Université Bordeaux Segalen
Bordeaux, 33076, France
Chapter 154

Cécile Ged

Université Bordeaux Segalen
Bordeaux, 33076, France
Chapter 154

Damiano Genovese

Università degli Studi di Bologna
40126 Bologna, Italy
Chapter 57

Peter E.M. Gibbs

University of Rochester School of
Medicine and Dentistry
Rochester, NY 14642, USA
Chapter 126

Mallory E. Gillam

University of South Florida
Tampa, Florida FL 33612, USA
Chapter 121

Hubert H. Girault

Ecole Polytechnique Fédérale
de Lausanne
CH-1015 Lausanne
Switzerland
hubert.girault@epfl.ch
Chapter 175

Jean-Paul Gisselbrecht

Université de Strasbourg
67000 Strasbourg, France
gissel@unistra.fr
Chapter 14

Francesca Giuntini

Liverpool John Moores University
Liverpool, UK
Chapter 135

Mean See Goh

Queensland University of Technology
Brisbane, Australia 4001
Chapter 165