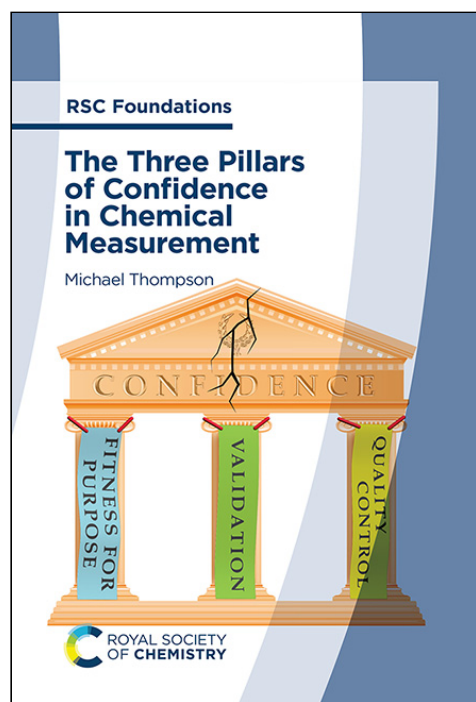




All information is subject to change without notice

The Three Pillars of Confidence in Chemical Measurement

A Collection of Essays

Michael Thompson Birkbeck University of London, UK

Synopsis

In this lively and incisive collection, a leading analytical chemist distils sixty years of experience to challenge assumptions at the heart of qualimetrics. The author explores the fault lines embedded in today's "official" metrological landscape. Why are some pillars of chemical measurement taken as gospel when they fail under scrutiny? How did essential concepts become so obscured by dogma and terminology? Blending scientific insight with personal recollections, the book offers a fresh, forthright vision for improving quality in chemical measurement and for escaping the dogma that holds the field back.

Key Features and Highlights

- Written by an experienced scientist, this book challenges the current orthodoxy about traceability and uncertainty in chemical measurement.
- Guides readers towards a more coherent and less dogmatic understanding of analytical measurement.
- Provides unique insights into the imperfection of measurement and how this can be addressed with thoughtful consideration of the three pillars of quality: fitness for purpose, validation and quality control.

Brief Contents

- Introduction
- The Three Pillars of Confidence
- Robust Statistics
- Rounding in Chemical Measurement and Reporting
- In Praise of Mass Fractions
- Duplicate Measurements are Valuable
- *p*-Values in Significance Testing
- Improving Collaborative Trials
- Off Limits
- Samples and Their Uncertainties
- The 'Jaws Syndrome' and Analytical Chemists
- Experiments in Qualimetrics
- Blowing the Horwitz Trumpet
- Theobald and the Pipette
- Validation in Chemical Measurement: A Critique
- "All Results are Wrong"
- Certification of Chemical Matrix Reference Materials as Consensus Values Derived from Proficiency Tests
- 'Empirical' and 'Rational' Analytical Procedures
- Stiffening-up Proficiency Testing (and Its Accreditation)
- Bosses
- Misconceptions in the 'Metrological Paradigm' of Chemical Measurement

To order

For UK, Europe and ROW, please contact Ingram Publisher Services UK:

Ingram Publisher Services UK | 1 Deltic Avenue | Rooksley | Milton Keynes | MK13 8LD | UK

Tel: 44(0)1752 202301 Email: ipsuk.customercare@ingramcontent.com

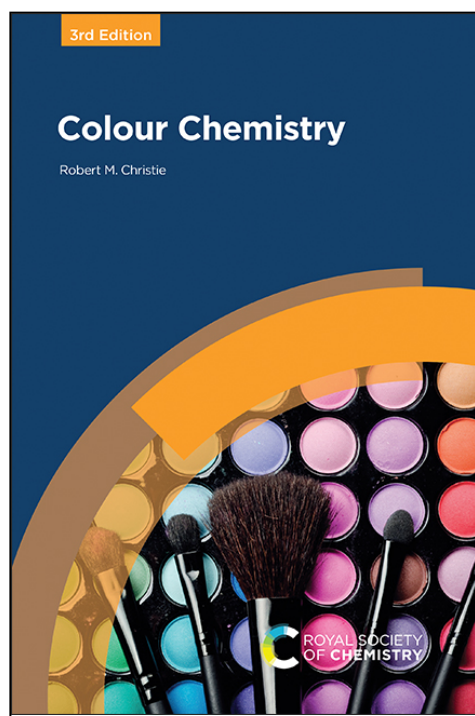
Customers in North and South America, please contact Ingram Publisher Services:

Ingram Publisher Services | Customer Service | Box 631 | 14 Ingram Blvd | La Vergne | TN 37086 | USA

Tel: +1 (866) 400 5351 Fax: +1 (800) 838 1149 Email: ips@ingramcontent.com

Registered charity number 207890 www.rsc.org/books

Advance Book Information



All information is subject to change without notice

Publisher: Royal Society of Chemistry

ISBN: PB 9781837671830
PDF 9781837679157
EPUB 9781837679164

Price: £59.99 | \$83.99 | €74.99

Publication Date: 04 September 2026

Date:

Target: College/higher education, ,

Audience: Professional and scholarly

Size: 234 x 156 (Royal 8vo) mm

Pages: 364

BIC: PN, TDCJ, PDG

THEMA: PN, PDG, TDCJ, 4TC, 4CT

BISAC: SCI013000, SCI003000,
EDU015000

Colour Chemistry

Robert M Christie Heriot-Watt University, UK (retired)

Synopsis

Colour pervades all aspects of our lives, influencing our moods and emotions and generally enhancing the way in which we enjoy our environment. This revised and updated third edition provides a current insight into how the fundamental principles of the chemistry of colour are applied in dyes and pigments. The text has been expanded and re-written throughout, but the structure of the previous editions is largely maintained with some redistribution of content to improve the logic of presentation and clarity. This book will be of interest to academics and industrialists and is ideal for students and graduates seeking an introduction to the topic.

Key Features and Highlights

- Provides a current insight into how the fundamental principles of the chemistry of colour are applied in dyes and pigments.
- The text has been expanded and re-written throughout, reflecting recent and current trends.
- Broad and balanced in its coverage, this book introduces the chemistry of colour that is ideal for students, graduates and those in industry and academia seeking an introduction to the topic.

Brief Contents

- Colour: A Historical Perspective
- The Physical and Chemical Basis of Colour
- Azo (Hydrazone) Colorants
- Carbonyl Colorants
- Phthalocyanines
- Miscellaneous Chemical Classes of Organic Colorants
- Dyes for Textiles and Related Substrates
- Pigments
- Colorants in Cosmetics (Including Hair Dyes)
- π -Functional Colorants
- Colour and the Environment

To order

For UK, Europe and ROW, please contact Ingram Publisher Services UK:

Ingram Publisher Services UK | 1 Deltic Avenue | Rooksley | Milton Keynes | MK13 8LD | UK

Tel: 44(0)1752 202301 Email: ipsuk.customercare@ingramcontent.com

Customers in North and South America, please contact Ingram Publisher Services:

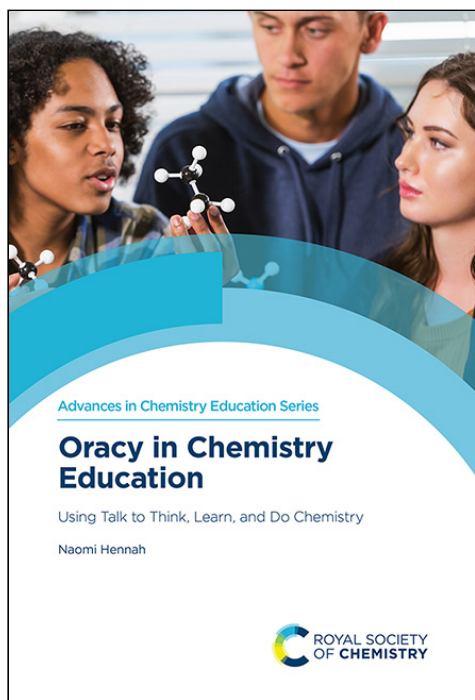
Ingram Publisher Services | Customer Service | Box 631 | 14 Ingram Blvd | La Vergne | TN 37086 | USA

Tel: +1 (866) 400 5351 Fax: +1 (800) 838 1149 Email: ips@ingramcontent.com

Registered charity number 207890 www.rsc.org/books



Advance Book Information



All information is subject to change without notice

Publisher: Royal Society of Chemistry
ISBN: HB 9781837673964
EPUB 9781837678594
PDF 9781837678587
Price: £99.00 | \$140.00 | €125.00
Publication Date: 06 November 2026
Target Audience: College/higher education, Professional and scholarly
Size: 234 x 156 (Royal 8vo) mm
Pages: 330
BIC: JNT, JNU
THEMA: JNT, JNU
BISAC: EDU029100, EDU029030, EDU037000
Series: Advances in Chemistry Education Series Volume 16

Oracy in Chemistry Education

Using Talk to Think, Learn, and Do Chemistry

Naomi Hennah Northampton School for Boys, UK

Synopsis

Oracy is a powerful mode of learning, central to how students think, reason, and make meaning in chemistry. This book shows how purposeful, research-informed talk can transform conceptual understanding, practical reasoning, and inclusive participation across secondary and tertiary chemistry education. Blending theory, research, and educational practice, **A Chemistry Educator's Guide to Oracy** offers actionable strategies for designing oracy-rich learning that strengthens collaboration and disciplinary engagement, offering value for educators, teacher educators, and researchers in chemistry teaching and learning.

Key Features and Highlights

- Provides a how to guide on incorporating oracy into chemistry education
- Offers vignettes showcasing how oracy-focused lessons might look for different stages of education
- Incorporates discussion on the use of modern technology including AI tools and augmented reality for incorporating oracy into lessons

Brief Contents

- Theoretical Foundations of Oracy in Chemistry Education: A Sociocultural Perspective
- Oracy, Scientific Reasoning, and Access to Meaning
- Culture, Representation, and Epistemic Inclusion in Chemistry
- Dialogic Pedagogy and Teacher-led Talk in Chemistry Education
- Small Group Dialogue, Division of Labour, and Collective Reasoning
- Practical Work as Embodied and Dialogic Activity
- Assessing Oracy and Epistemic Agency in Chemistry
- Digital Mediation and the Expansion of Dialogic Space

To order

For UK, Europe and ROW, please contact Ingram Publisher Services UK:

Ingram Publisher Services UK | 1 Deltic Avenue | Rooksley | Milton Keynes | MK13 8LD | UK

Tel: 44(0)1752 202301 Email: ipsuk.customercare@ingramcontent.com

Customers in North and South America, please contact Ingram Publisher Services:

Ingram Publisher Services | Customer Service | Box 631 | 14 Ingram Blvd | La Vergne | TN 37086 | USA

Tel: +1 (866) 400 5351 Fax: +1 (800) 838 1149 Email: ips@ingramcontent.com

Registered charity number 207890 www.rsc.org/books

