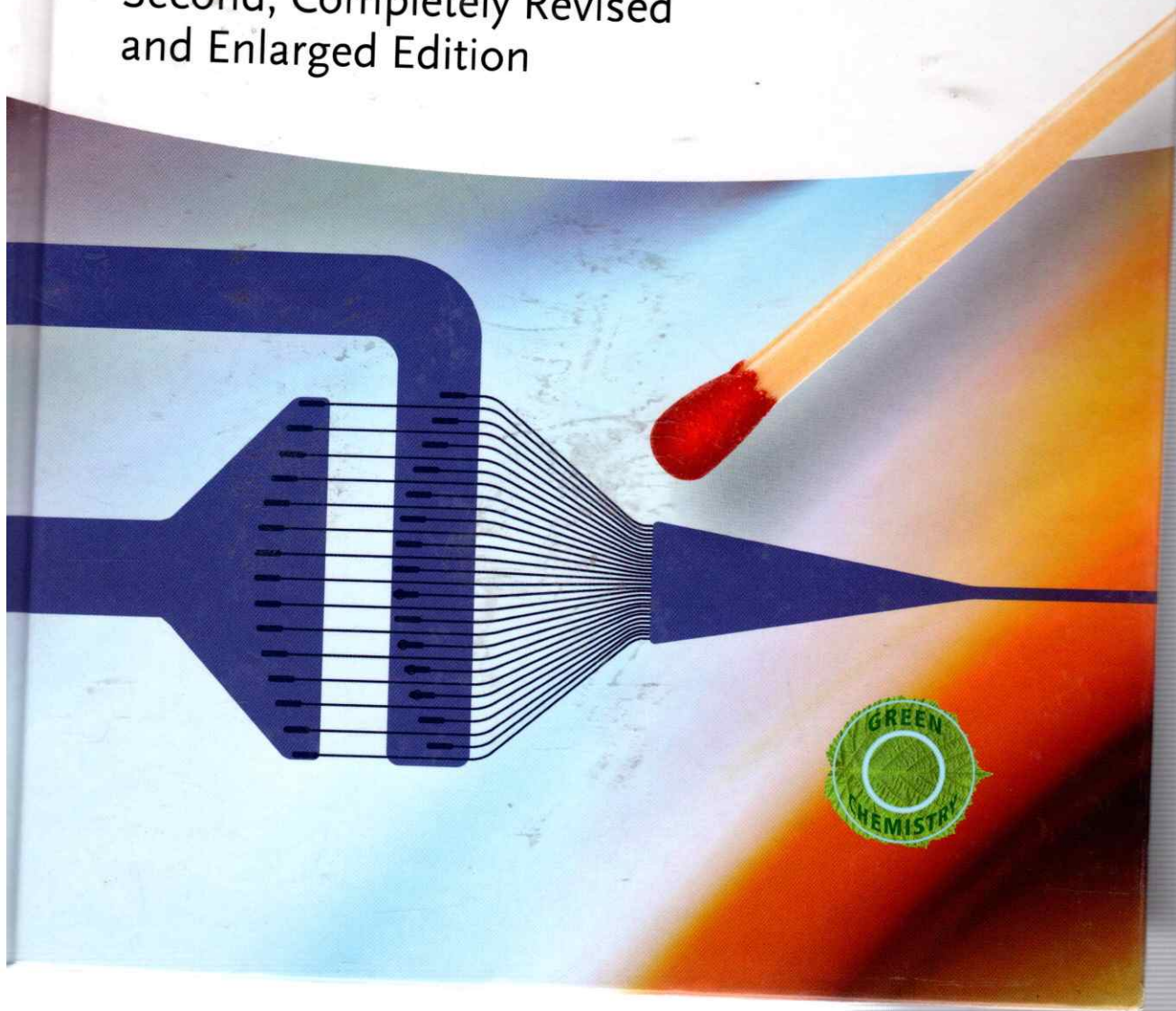


Edited by Thomas Wirth



Microreactors in Organic Chemistry and Catalysis

Second, Completely Revised
and Enlarged Edition



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For the second edition of "Microreactors in Organic Chemistry and Catalysis" all chapters have been revised and updated to reflect the latest developments in this rapidly developing field. This new edition has 60% more content, and it remains a comprehensive publication covering most aspects of the topic. The use of microreactors in homogeneous, heterogeneous as well as biphasic reactions is covered in the main part of the book, together with catalytic, bioorganic and automation approaches. The initial chapters also provide a solid physical chemistry background on fluidics in microdevices. Finally, a chapter on industrial applications and developments covers recent progress in process chemistry.

An excellent reference for beginners and experts alike.

From the contents:

- Properties and use of microreactors
- Fabrication of microreactors made from metals and ceramic
- Microreactors made of glass and silicon
- Automation in microreactor systems
- Homogeneous reactions (including photochemical and electrochemical reactions and radiopharmaceutical synthesis)
- Heterogeneous reactions
- Biphasic reactions (liquid/liquid, liquid/gas)
- Bioorganic and biocatalytic reactions
- Industrial microreactor process development up to production



Thomas Wirth is professor of organic chemistry at Cardiff University. After studying chemistry in Bonn and at the Technical University of Berlin, he obtained his PhD in 1992 with Professor S. Blechert. After a postdoctoral stay with Professor K. Fuji at Kyoto University as JSPS fellow, he started his independent research at the University of Basel (Switzerland). In the group of Professor B. Giese he obtained his habilitation on stereoselective oxidation reactions supported by various scholarships before taking up his current position at Cardiff University in 2000. He was invited as a visiting professor to a number of places including the University of Toronto/Canada (1999), various universities in Japan including Chuo University (2000), Osaka University (2004), Osaka Prefecture University (2008) and Kyoto University (2012, with a JSPS short term fellowship). He was awarded the Werner-Prize from the New Swiss Chemical Society in 2000. His main interests of research concern stereoselective electrophilic reactions, oxidative transformations with hypervalent iodine reagents including mechanistic investigations and organic synthesis performed in microreactors.

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