

Preface

This published work is intended to serve as a sourcebook on flow microreactor synthesis for students and researchers who are not familiar with this field. This book is aimed at developing a deeper understanding of chemical reactions by taking advantage of the characteristic features of flow microreactors. This book is not a compilation of all fields of flow microreactor synthesis, but it focuses on high-resolution reaction time control and fast micromixing. I do hope that the topics discussed in this book will be sufficient to interest a wide range of readers in this fascinating field of chemistry and to encourage them to try chemical synthesis using flow microreactors. On each topic, I usually focus on the works that have been done in my research group as examples simply because I know them more in detail than other works reported in the literature. I hope that these examples and the accompanying discussions will serve as a guide to how to use a flow microreactor for chemical synthesis. I thank the members of my research group, including Dr. Aiichiro Nagaki, who have performed extensive work to develop the chemistry described in this book. I also appreciate the financial support of a Grant-in-Aid for Scientific Research and NEDO projects to enable our research in this field.

This book is based on the lectures that I gave at the Micro Chemical Production Study Consortium at Kyoto University for several years. This book was first published in Japanese as the basics part of a book entitled *Furoh-, Maikuro-Gousei* (Flow Microreactor Synthesis), by Kagaku Dojin, Kyoto, which I edited in 2014. I thank Kagaku Dojin for allowing me to publish the English version. I also thank Ms. Yukiko Nakayama of U-English for translation to make a draft of the English version and Ms. Yoko Uekawa for checking the manuscript, although I am fully responsible for the final version. I added Chap. 8, and also I made some rearrangements and modifications of the contents in several chapters. Therefore, this book is not a simple English translation, but a revised edition of the Japanese version. For the benefit of the readers who are willing to study wider aspects of flow microreactor synthesis, a list of books and review articles is provided as an appendix.

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