Preface

Because of its superior heat transfer characteristics, flow boiling in microdomains has received much attention in recent years. Over the course of this research initiative, it became clear that flow instabilities are a series problem that can hinder the realization of many practical miniature evaporators. Knowledge about the cause of these instabilities and methods to mitigate their deleterious effects must be effectively disseminated in order to enable development of technology related to flow boiling in diminishing length scales.

Literature concerning flow boiling instabilities in microchannels is available through quite a few journal and conference papers. However, these papers are scattered through assorted publication avenues and typically address one or several narrow aspects of flow instabilities. They generally target an audience with an extensive background and prior knowledge of the field. Practitioners who are not experts in flow instabilities and novice researchers to this fascinating field have difficulties comprehending the knowledge communicated in these papers. This book was written to bridge this gap and accelerate the learning process for these individuals.

There are many people to whom I owe a debt of gratitude for the roles they played in making this book possible. Satish Kandlikar, my friend and colleague, had the vision to develop this series of books dealing with contemporary perspectives in emerging technologies. Without his inspiration and support, this book would not have come to fruition. I would also like to thank Michael Jensen, my close collaborator. I benefited immensely from his scholarship and friendship.

The support of my research programs pertinent to flow boiling, including flow boiling instabilities, by the Office of Naval Research is also greatly appreciated. And of course, I feel honored to have worked with an outstanding group of graduate students and postdocs at Rensselaer Polytechnic Institute, including Ali Koşar, Chih-Jung Kuo, Santosh Krishnamurthy, Chandan Mishra, Eric Browne, Sidy Ndao, Tiejun Zhang, Junkyu Jung, Farzad Houshmand, Daren Elcock, Saptarshi Basu, Abhay Varghese Thomas, Catano Montoya Juan, Zhen Zhang, Yingying Wang, Abhra Chatterjee, Philip Meppen, Brandon Schneider, Shih-Chieh Chang, Gregory Michna, Hee Lee, and Zenghui Zhao.

Finally, I could not have done anything without the endless support of my wonderful family. This book is dedicated to my devoted parents, Yoram and Vera, to my loving wife and friend, Nirit, and to my two fabulous sons, Saar and Rom. To them I owe more than I can tell.

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