

Preface

An integrated circuit (IC), also known as a microchip or simply chip, is a compact assembly of electronic circuits formed from various electronic components, such as transistors, resistors, and capacitors, and their interconnections. These components are fabricated onto a thin, flat piece ("chip") of semiconductor material, most commonly silicon. Integrated circuits are integral to a wide variety of electronic devices (including computers, smartphones, and televisions) performing functions such as data processing, control, and storage. They have transformed the field of electronics by enabling device miniaturization, improving performance, and reducing cost.¹

In the present book, ten typical literatures about integrated circuit published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on integrated circuit. We hope this book can demonstrate advances in integrated circuit as well as give references to the researchers, students and other related people.

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¹ https://en.wikipedia.org/wiki/Integrated_circuit