



# Molecular Beam Epitaxy and Heterostructures

Edited by

Leroy L. Chang and Klaus Ploog

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# Molecular Beam Epitaxy and Heterostructures

edited by

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## About the book

In an integrated and coherent fashion, this book covers two forefronts of semiconductors: molecular beam epitaxy and heterostructures. The technique of molecular beam epitaxy is the most advanced for thin film deposition, capable of providing the ultimate in interface quality and structural control that semiconductor heterostructures demand. The heterostructures with various configurations of single heterojunctions, isolated potential wells and periodic structures provide electron systems of different characters, resulting in unusual electronic properties not commonly encountered. This book addresses the fundamental process of molecular beam epitaxy and its use in the growth of all the common, important semiconductors. It also describes, both theoretically and experimentally, the heterostructure properties for scientific investigations and device applications. This book covers a broad spectrum of technical disciplines, including material science, physics and electronics. Indeed, it represents the first book of its kind in putting the two semiconductor forefronts together, both of which experienced parallel and complementary progress in the past decade, and attract intense current interest.