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Microworld modeling in vacuum and gaseous environments / Pierre Lambert and Stephane Regnier -- Microworld modeling : impact of liquid and roughness / Pierre Lambert and Stephane Regnier -- Unified view of robotic microhandling and self-assembly / Quan Zhou and Veikko Sariola -- Toward a precise micromanipulation / Melanie Dafflon and Reymond Clavel -- Microhandling strategies and microassembly in submerged medium / Michael Gauthier -- Robotic microassembly of 3D MEMS structures / Nikolai Dechev -- High-yield automated MEMS assembly / Dan O. Popa and Harry E. Stephanou -- Design of a desktop microassembly machine and its industrial application to microsolder ball manipulation / Akihiro Matsumoto, Kunio Yoshida, and Yusuke Maeda.

Sommario/riassunto

Discover the latest models and methods for robotic microassembly from around the world This book presents and analyzes new and emerging models and methods developed around the world for robotic microassembly, a new and innovative way to produce better microsystems. By exploring everything from the physics of micromanipulation to microassembly to microhandling, it provides the first complete overview and review of this rapidly growing field. Robotic Microassembly is divided into three parts: Part One: Modeling of the Microworld Part Two: Handling Strategies Part T
