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| | Nota di contenuto | Crystal Growth Processes Based on Capillarity: Czochralski, Floating Zone,Shaping and Crucible Techniques; Contents; Preface; Introduction; Acknowledgements; Nomenclature; Contributors; 1: Basic Principles of Capillarity in Relation to Crystal Growth; 1.1 Definitions; 1.1.1 Characteristic Energies of Surfaces and Interfaces; 1.1.2 Capillary Pressure; 1.1.3 Surface Energy versus Surface Tension; 1.2 Contact Angles; 1.2.1 Thermodynamics; 1.2.2 Dynamics of Wetting; 1.2.3 Measurements of Contact Angle and Surface Tension by the Sessile Drop Technique |
| | | 1.2.4 Selected Data for the Contact Angle for Systems of Interest for Crystal Growth1.3 Growth Angles; 1.3.1 Theory; 1.3.2 Measurements of Growth Angles: Methods and Values; 1.3.3 Application of the Growth Angle Condition in Simulations of Crystal Growth; 1.3.4 Summary; Acknowledgements; References; 2: The Possibility of Shape Stability in Capillary Crystal Growth and Practical Realization of Shaped Crystals; 2.1 Crucible-Free Crystal Growth - Capillary Shaping Techniques; 2.2 Dynamic Stability of Crystallization - the Basis of Shaped Crystal |

| Sommario/riassunto | The demand for large, high-quality single crystals has increased rapidly as a result of the growing semiconductor and optics industry, where perfect single crystals are used as substrates or components for devices.  Crystal Growth Processes Based on Capillarity covers all crystal growth techniques and explains why and how they are dependent on liquid surface phenomena, or capillarity. Each chapter addresses fundamental capillary effects, detailed experimental developments, technically important processes, and associated software. The book includes: Basic prin |