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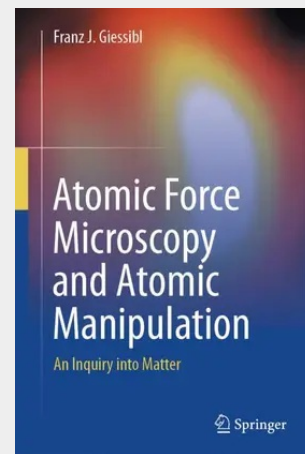
Atomic Force Microscopy and Atomic Manipulation

An Inquiry into Matter

What does it take to see a single atom — or to pick one up and move it? This book takes the reader to the frontier of the very small: atomic force microscopy at its ultimate resolution, force spectroscopy on individual bonds, and the use of the probe tip to manipulate matter atom by atom. It develops both the experimental technique and the underlying theory, examining the origins of interatomic forces and the challenge of measuring them against ubiquitous noise — and the strategies that push the signal-to-noise ratio to its limits.

Many key historical experiments and the pioneers behind them are described, revealing how the founding fathers of nanoscience ventured into territory no one had entered before.

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