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Nota di contenuto	Part 1: The need for Science Communication -- Chapter 1: Introduction -- Chapter 2: Why Science Needs a Voice -- Chapter 3: Why Scientist Must Communicate -- Chapter 4: Strategies for Communicating Complex Science -- Part 2: How Science is Actually Made in the Lab Today -- Chapter 5: Introduction -- Chapter 6: Probing Single-Molecules -- Chapter 7: Single-Molecules Biophotonics -- Chapter 8: Real-World Applications of Single-Molecule Probing -- Chapter 9: The Future of Single-Molecule Research -- Chapter 10: Conclusions.
Sommario/riassunto	This Brief explores the vital role of science communication in today's world while demystifying how research is actually conducted in modern labs today. Divided into two parts, it begins by highlighting the need for scientists to share their work with the public through accessible and

nuanced communication. The first part of the book covers key concepts such as the democratization of science, the benefits of effective communication for scientists, and strategies for educators to engage diverse audiences. Readers will discover how digital amnesia affects science communication and how, rather than facts, it is the scientific method itself that needs to be taught. The second part dives into the author's cutting-edge research, offering a behind-the-scenes look at the experimental setups and methodologies that drive scientific innovation at the frontiers of photonics and biology. From building setups with lasers and coding image processing algorithms to researching innovative drugs with machine learning, the author shares the actual process through which scientific discoveries are made in labs today. Building on an award-winning 2024 Science in Shorts mediation content, this book is an essential resource for researchers, educators, and science communicators who seek to bridge the gap between the scientific community and the public. It is also invaluable for students and professionals in the fields of photonics and biology, providing a comprehensive understanding of the latest research techniques and their real-world applications.
