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Sommario/riassunto	The twentieth century has witnessed phenomenal growth in silicon-based semiconductor technology. This revolution, however, will be dwarfed by photonics technology in the twenty-first century. In this respect, erbium (a rare-earth element of the lanthanide series), will be to photonics technology what silicon is to semiconductor technology. In

this book, spotlight shines on the novel usage of erbium in amplifying optical signals V, a much desired phenomenon implemented in optical communication systems. Due to various loss mechanisms, there is a gradual reduction in the power of light as it propagates through a communication channel, and to recover that, amplification of light becomes vital. Further, this remains very important in order for the information carried by the light to be discernible at the receiving end as there exists a minimum threshold power which the light must always possess.