

Photonics: Proceedings of the International Meeting of the Délégation générale à la recherche scientifique et technique Editors: Minko Balkanski & Pierre Lallemand Published: 1973/1974

#### Summary of Key Content (English)

1. Introduction to Photonics (Historical & Conceptual Context)
2. Overview of photonics as a discipline applying photons to technologies in light generation, manipulation, and detection.
3. Early use of the term in the 1970s alongside laser and optical communications technologies.
4. Core Themes and Topics Covered

Fundamentals of Light-Matter Interaction - Physical principles of light interaction with materials. - Studies on optical properties, scattering, and absorption.

Lasers and Optical Sources - Development and characteristics of laser systems. - Use of lasers as primary tools in photonics research.

Light Modulation and Control - Techniques for waveguiding, modulation, and deflection of light. - Exploration of light manipulation for information transmission.

Detection and Measurement - Methods for detecting optical signals and analyzing properties. - Early studies in optical communication and sensing.

Applications - Case studies on optical information processing and storage. - Practical applications of photonics technologies in the 1970s.

1. Significance of the Book
2. Captures the state of photonics research in the early 1970s.
3. Defines photonics as a field distinct from traditional optics and electronics.
4. Focuses on the photon as a carrier of information and energy.
5. What You Might Expect in the Full Book
6. Technical research papers from the conference.
7. Figures, equations, and experimental results common in laser and optics research of the era.
8. Discussions on future directions of photonics as envisioned in 1973-1974.