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A Bibliography of Laser Applications

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Abstract

This bibliography of laser applications contains 644 entries from the open literature for the period 1961 through September 1966. The entries are divided into the following major areas: mechanical measurements and standards; communications applications; radar and tracking applications; military applications; optical signal processing; interferometry and testing of optical components; applications to scientific studies; applications in chemistry; photographic applications; metalworking; and miscellaneous applications. The entries are further subdivided into 78 other categories. Applications in medical and biological reasearch are not included; complete coverage in the other areas is not guaranteed. Under some topics (detection techniques, spectroscopy, interaction with acoustic waves, plasma diagnostics, nonlinear optics, gas breakdown, scattering, holography) so much has been published that only review articles, articles of major importance, and very recent articles could be included.

Preface

The motivation for the compilation of this bibliography was originally provided by the Research and Education Association, 420 Madison Avenue, New York, N. Y.; it was distributed at a lecture sponsored by that organization along with descriptive lecture notes dealing with the same subject. Later it was updated thru September 1966 for inclusion as an appendix to the chapter on applications of lasers in Lasers: Principles and Applications, McGraw-Hill Book Company; however, it had to be deleted at the last moment because of the length of the book. Descriptive material on laser applications that partially follows the outline of this bibliography can be found in that book. An earlier version of this material was published as Applications of Lasers by C. Martin Stickley, AFCRL 64-914 (AD 609 846). At the present time there are no plans for further updating of this bibliography.

The second author of this bibliography, Arthur Gingrande, Lt. Col. AFRes, participated in the preparation of this during a two-week reserve duty tour at AFCRL during the summer of 1966; he is presently at the Western Electric Co., Lawrence, Massachusetts.

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13. ABSTRACT

This bibliography of laser applications contains 644 entries from the open literature for the period 1961 through September 1966. The entries are divided into the following major areas: mechanical measurements and standards; communications applications; radar and tracking applications; military applications; optical signal processing; interferometry and testing of optical components; applications to scientific studies; applications in chemistry; photographic applications; metalworking; and miscellaneous applications. The entries are further subdivided into 78 other categories. Applications in medical and biological research are not included; complete coverage in the other areas is not guaranteed. Under some topics (detection techniques, spectroscopy, interaction with acoustic waves, plasma diagnostics, nonlinear optics, gas breakdown, scattering, holography) so much has been published that only review articles, articles of major importance, and very recent articles could be included.

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