

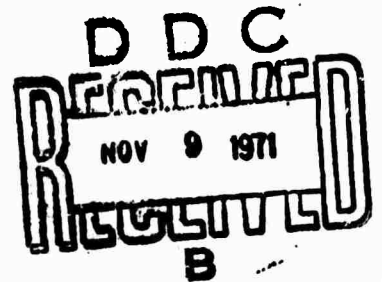
# **BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS**

No. 4

APRIL-JUNE 1971

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## 13. ABSTRACT

This report covers the second quarter of 1971 with the major yield of information coming from the approximately 30 periodicals known to report the most advanced and interesting findings in Soviet laser technology. This as well as the previous three reports covers the following topics: (1) laser research -- solid state, liquid, gas and chemical lasers; UV; components; nonlinear optics; spectroscopy of laser materials; short pulse generation; crystal growing; and general theory; (2) laser applications -- biological effects, communications, computer technology, holography, instrumentation, materials processing, and plasma generation.

**BIBLIOGRAPHY OF SOVIET  
LASER DEVELOPMENTS**

**No. 4, April - June 1971**

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**Prepared By**

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## Introduction

This bibliography has been compiled by the staff of Informatics Tisco, Inc. in response to a continuing contractual assignment to monitor current Soviet-bloc developments in the quantum electronics field. Of all material reviewed, the major yield has been from the approximately 30 periodicals which are known to report the most advanced and interesting findings in Soviet laser technology.

The period covered is the second quarter of 1971, and includes all significant laser-related articles received by us during that interval. The structure and selection criteria are basically those used in the preceding reports.

For convenience we generally have abbreviated source names; a source abbreviation list and an author index are included. Unless indicated by a parenthesized Reference Journal (RZh) notation, all cited sources are available at Informatics Tisco, Inc.

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## I. BASIC RESEARCH

### A. SOLID STATE LASERS

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## C. GAS LASERS

### 1. Simple Mixtures

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#### IV. SOURCE ABBREVIATIONS

|                  |   |                                                                                      |
|------------------|---|--------------------------------------------------------------------------------------|
| DAN ArmSSR       | - | Akademiya nauk Armyanskoy SSR.<br>Doklady                                            |
| DAN BSSR         | - | Akademiya nauk Belorusskoy SSR.<br>Doklady                                           |
| DAN SSSR         | - | Akademiya nauk SSSR. Doklady                                                         |
| FAiO             | - | Akademiya nauk SSSR. Izvestiya.<br>Fizika atmosfery i okeana                         |
| FiKhOM           | - | Fizika i khimiya obrabotki materialov                                                |
| F-KhMM           | - | Fiziko-khimicheskaya mekhanika<br>materialov                                         |
| FTP              | - | Fizika i tekhnika poluprovodnikov                                                    |
| FTT              | - | Fizika tverdogo tela                                                                 |
| GiK              | - | Geodeziya i kartografiya                                                             |
| IAN B            | - | Akademiya nauk Belorusskoy SSR.<br>Izvestiya. Seriya fiziko-matematicheskikh<br>nauk |
| IAN Fiz          | - | Izvestiya AN SSSR. Seriya fizicheskaya                                               |
| I-FZh            | - | Inzhenerno-fizicheskiy zhurnal                                                       |
| IT               | - | Izmeritel'naya tekhnika                                                              |
| IVUZ Fiz         | - | Izvestiya vysshikh uchebnykh<br>zavedeniy. Fizika                                    |
| IVUZ Radioelektr | - | Izvestiya vysshikh uchebnykh zavedeniy.<br>Radioelektronika                          |
| IVUZ Radiofiz    | - | Izvestiya vysshikh uchebnykh zavedeniy.<br>Radiofizika                               |
| KhVE             | - | Khimiya vysokikh energiy                                                             |

|             |   |                                                                                                                                  |
|-------------|---|----------------------------------------------------------------------------------------------------------------------------------|
| Kristall    | - | Kristallografiya                                                                                                                 |
| KiK         | - | Kinetika i kataliz                                                                                                               |
| KSpF        | - | Kratkiye soobshcheniya po fizike                                                                                                 |
| MiTOM       | - | Metallovedeniye i termicheskaya obrabotka materialov                                                                             |
| NM          | - | Akademiya nauk SSR. Izvestiya. Neorganicheskiye materialy                                                                        |
| NTO SSSR    | - | Nauchno-tekhnicheskiye obshchestva SSSR                                                                                          |
| OiS         | - | Optika i spektroskopiya                                                                                                          |
| OMP         | - | Optiko-mekhanicheskaya promyshlennost'                                                                                           |
| Otkr izobr  | - | Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki                                                                |
| PSS         | - | Physica Status Solidi                                                                                                            |
| PTE         | - | Pribory i tekhnika eksperimenta                                                                                                  |
| RiE         | - | Radiotekhnika i elektronika                                                                                                      |
| RZhF        | - | Referativnyy zhurnal. Fizika                                                                                                     |
| RZhGeod     | - | Referativnyy zhurnal. Geodeziya i aeros'yemka                                                                                    |
| RZhKh       | - | Referativnyy zhurnal. Khimiya                                                                                                    |
| RZhMetrolog | - | Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika                                                                      |
| RZhRadiot   | - | Referativnyy zhurnal. Radiotekhnika                                                                                              |
| Sb 1        | - | Sbornik. Materialy I Respublikskoy konferentsii molodykh uchenykh. Institut fizikoy AN BSSR, 1970. Sektsiya fiziki. Minsk, 1970. |
| TKiT        | - | Tekhnika kino i televideniya                                                                                                     |

|            |   |                                                                |
|------------|---|----------------------------------------------------------------|
| TVT        | - | Teplofizika vysokikh temperatur                                |
| UFN        | - | Uspekhi fizicheskikh nauk                                      |
| UFZh       | - | Ukrainskiy fizicheskiy zhurnal                                 |
| VAN        | - | Akademiya nauk SSSR. Vestnik                                   |
| VDNKh SSSR | - | Informatsionnyy byulleten' VDNKh SSSR                          |
| VLU        | - | Leningradskiy universitet. Vestnik.<br>Fizika, khimiya         |
| VMU        | - | Moskovskiy universitet. Vestnik.<br>Seriya fizika, astronomiya |
| ZhETF      | - | Zhurnal eksperimental'noy i<br>teoreticheskoy fiziki           |
| ZhETF P    | - | Pis'ma v zhurnal eksperimental'noy i<br>teoreticheskoy fiziki  |
| Zh NtP Fik | - | Zhurnal nauchnoy i prikladnoy fotografii<br>i kinematografii   |
| ZhPK       | - | Zhurnal prikladnoy khimii                                      |
| ZhPMTF     | - | Zhurnal prikladnoy mekhaniki i<br>tekhnicheskoy fiziki         |
| ZhPS       | - | Zhurnal prikladnoy spektroskopii                               |
| ZhTF       | - | Zhurnal tekhnicheskoy fiziki                                   |

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