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3. ABSTRACT This report covers the first quarter of 1972 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 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.			

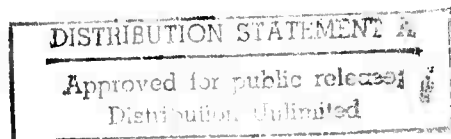
BIBLIOGRAPHY OF SOVIET LASER
DEVELOPMENTS

No. 7, January-March 1972

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Prepared by

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Introduction

This bibliography has been compiled by the staff of Informatics 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 first quarter of 1972, 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 have abbreviated frequently cited source names; a source abbreviation list and an author index are included. Unless indicated by a parenthesized (RZh, LZhS) notation, all cited sources are available at Informatics Inc.

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IV. SOURCE ABBREVIATIONS

DAN SSSR	-	Akademiya nauk SSSR. Doklady
FAiO	-	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
F-KhMM	-	Fiziko-khimicheskaya mekhanika materialov
FTP	-	Fizika i tekhnika poluprovodnikov
FTT	-	Fizika tverdogo tela
IAN AzSSR. Ser. fiz-tekh.	-	Akademiya nauk Azerbaydzhanskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IT	-	Izmeritel'naya tekhnika
IVUZ Fiz.	-	Izvestiya vysshikh uchebnykh zavadeniy. Fizika
IVUZ Geodez	-	Izvestiya vysshikh uchebnykh zavadeniy. Geodeziya i aerofotos"yemka
IVUZ Priboro	-	Izvestiya vysshikh uchebnykh zavadeniy. Priborostroyeniye
IVUZ Radioelektr	-	Izvestiya vysshikh uchebnykh zavadeniy. Radioelektronika
IVUZ Radiofiz	-	Izvestiya vysshikh uchebnykh zavadeniy. Radiofizika
KhVE	-	Khimiya vysokikh energiy
Kristal	-	Kristallografiya
KSpF	-	Kratkiye soobshcheniya po fizike
LZhS	-	Letopis' zhurnal'nykh statey
NM	-	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	-	Optika i spektroskopiya
OMP	-	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	-	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki

Phys abstr	-	Physics abstracts
PTE	-	Pribory i tekhnika eksperimenta
RiE	-	Radiotekhnika i elektronika
RZhElektr	-	Referativnyy zhurnal. Elektronika i yeye primeneniye
RZhF	-	Referativnyy zhurnal. Fizika
RZhGeod	-	Referativnyy zhurnal. Geodeziya i aeros''yemka
RZhKh	-	Referativnyy zhurnal. Khimiya
RZhMekh	-	Referativnyy zhurnal. Mekhanika
RZhMetrolog	-	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	-	Referativnyy zhurnal. Radiotekhnika
Sb 1	-	Ispol'zovaniye opticheskikh kvantovykh generatorov v sovremennoy tekhnike i meditsine, part 2-3. Sbornik. Leningrad, 1971
Sb 2	-	1971 International symposium on antennas and propagation, Sendai, Japan, 1-3 September 1971. Summaries of papers.
Sb 3	-	Teoreticheskiye i prikladnyye problemy rasseyaniya sveta. Sbornik. Minsk, Nauka i tekhnika, 1971
Sb 4	-	Radioelektronika letatel'nykh apparatov, no. 3, Khar'kov, Khar'kovskiy aviatsionnyy institut, 1971
Sb 5	-	Nauchno-tekhnicheskaya konferentsiya Leningradskogo elektrotekhnicheskogo instituta svyazi. Materialy, no. 3, Leningrad, 1971
Sb 6	-	Radiotekhnika, no. 19, Khar'kov, Izd-vo Khar'kovskogo universiteta, 1971
Sb 7	-	Radioelektronika opticheskogo diapazona. Sbornik. Moskva, 1970 (1971)
Sb 8	-	Kvantovaya elektronika, no. 6, Moskva, Sovetskoye radio, 1971

- Sb 9 - Zimnaya shkola po teorii yadra i fiziki vysokikh energiy. 6th. 1971, part 3. Materialy. Leningrad, 1971
- Sb 10 - Elektronnaya tekhnika. Nauchno-tekhnicheskii sbornik. Upravleniye kachestvom i standartizatsiyey, no. 4(10), 1971
- Sb 11 - Sistemy avtomatizatsii nauchnykh eksperimentov. Sbornik. Novosibirsk, 1971
- Sb 12 - Metrologiya v radioelektronike. Sbornik. Moskva, 1971
- Sb 13 - Vysokoskorostniye deformatsiya. Sbornik. Moskva, Izd-vo Nauka, 1971
- Sb 14 - Monokristally i tekhnika, no. 3, 1970
- Sb 15 - Kvantovaya elektronika i lazernaya spektroskopiya. Sbornik. Minsk, 1971
- Sb 16 - Elektrolyuminestsentsiya tverdykh tel. Sbornik. Kiyev, Naukova dumka, 1971
- Sb 17 - Godishn. Vissh. tekhn. uchebni zaved. Fiz., v. 6, no. 2, 1969 (1971) [Bulgarian]
- Sb 18 - Elektronnaya tekhnika. Nauchno-tekhnicheskii sbornik. Gazorazryadnyye pribory
- Sb 19 - Mezhdunarodnaya konferentsiya po nelineynym kolebaniyam. 5th. 1969, v. 4, Kiyev, 1970
- Sb 20 - Sintez, analiz, i struktura organicheskikh soyedineniy. Sbornik, no. 3, Tula, 1971
- Sb 21 - Voprosy elektronnoy tekhniki. Sbornik, no. 2, Saratov, Saratovskiy universitet, 1971
- SOAN SSSR.
Geologiya i geofizika - Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya. Geologiya i geofizika.
- TKiT - Tekhnika kino i televideniya

- Tr 1 - Yerevanskiy universitet. Uchenyye zapiski. Yestestvennyy nauk, no. 1(116). 1971
- Tr 2 - Gruzinskiy politekhnicheskiy institut. Trudy, no. 2, 1971
- Tr 3 - Ul'yanovskiy politekhnicheskiy institut. Trudy, v. 6, no. 3, 1971
- Tr 4 - Tsentral'nyy nauchno-issledovatel'skiy institut svyazi. Sbornik nauchnykh trudov, no. 1, 1971
- Tr 5 - Glavnaya geofizicheskaya observatoriya. Trudy, no. 259, 1971
- Tr 6 - Kiyevskiy politekhnicheskiy institut. Vestnik. Seriya radioelektronika, no. 8, 1971
- Tr 7 - AN SSSR. Radiotekhnicheskiy institut. Trudy, no. 5, 1971
- Tr 8 - Vsesoyuznyy simpozium po difraktsii i rasprostraneniyu voln. 5th. 1970. Trudy, Leningrad, Nauka, 1971
- Tr 9 - Nauchnyy trudy vysshikh zavedeniy. Litovskaya SSR, Ul'trazvuk, no. 3, 1971
- Tr 10 - Moskovskiy gosudarstvennyy zaochnyy pedagogicheskiy institut. Uchenyye zapiski, no. 30, 1971
- Tr 11 - Taganrogskiy radiotekhnicheskiy institut. Trudy, no. 25, 1971
- Tr 12 - Sibirskiy nauchno-issledovatel'skiy institut metrologii. Trudy, no. 9, 1971
- Tr 13 - Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, no. 295, 1970
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Tr 18	-	International conference on high energy accelerators. 8th. Geneva, Switzerland, 20-24 September 1971. Proceedings
Tr 19	-	Proceedings of vibration problems. Polish Academy of Sciences, v. 12, no. 2, 1971
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Tr 21	-	Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskogo i radiotekhnicheskogo izmereniy. Trudy, no. 3, 1970
Tr 22	-	Novocherkasskiy politekhnicheskiy institut. Trudy, no. 236, 1971
Tr 23	-	Trudy metrologicheskikh institutov SSSR
Tr 24	-	Moskovskiy aviatsionnyy institut. Trudy, no. 207, 1971
Tr 25	-	Trudy uchebnykh institutov svyazi, no. 53, Ministerstvo svyazi SSSR, 1971
TVT	-	Teplofizika vysokikh temperatur
UFN	-	Uspekhi fizicheskikh nauk
UFZh	-	Ukrainskiy fizicheskiy zhurnal
VAN	-	Akademiya nauk SSSR. Vestnik
VMU	-	Moskovskiy universitet. Vestnik. Seriya fizika, astronomiya
ZhETF	-	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	-	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	-	Zhurnal nauchnoy i prikladnoy fotografii i kinomatografii

ZhPMTF	-	Zhurnal prikladnoy mekhaniki i teoreticheskoy fiziki
ZhPS	-	Zhurnal prikladnoy spektroskopii
ZhTF	-	Zhurnal tekhnicheskoy fiziki
ZhVMMF	-	Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki

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