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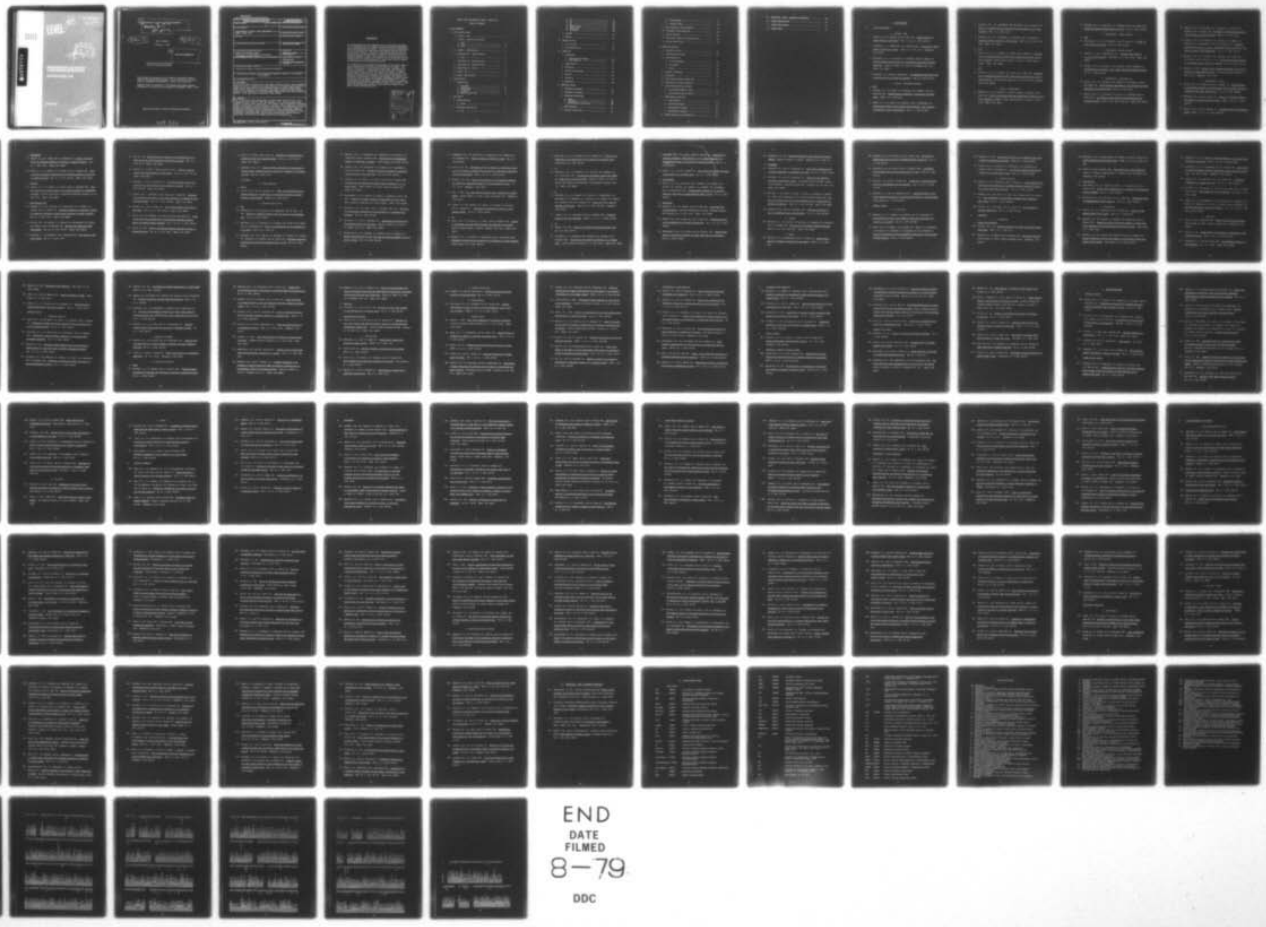

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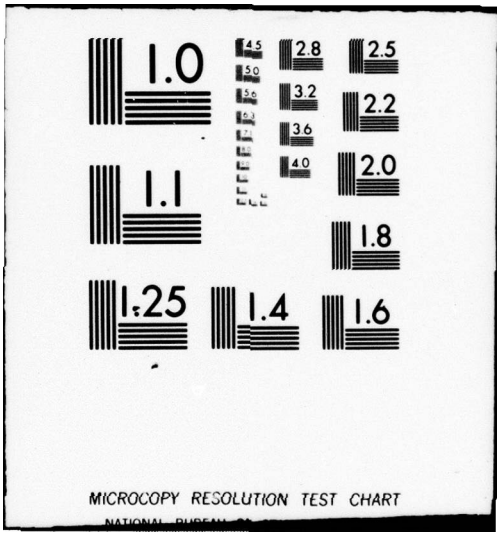
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20. ABSTRACT

This is the Soviet Laser Bibliography for March-April 1978 and is No. 34 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; beam-target interaction; and plasma generation and diagnostics.

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is March-April 1978, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are included, as well as entries from the CIRC data base not otherwise covered. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL), indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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J. BEAM-TARGET INTERACTION

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IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
APC	(APYCA)	Acta physica et chemica (Szeged)
BAPS	(BAPTA)	Biulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Tadzh	(DANTA)	Akademiya nauk Tadzhikskoy SSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
FAiO	(IFAOA)	Akademiya nauk SSSR. Izvestiya. Fizika atmosfery i okeana
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Mash	(IVUSA)	Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy

KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Otkr izobr	(OIPOB)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(RZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1		Sbornik. Vsesoyuznaya konferentsiya "Lazery na osnove slozhnykh organicheskikh soyedineniy i ikh primeneniye". 2nd. Dushanbe, 27-30 September 1977. Tezisy. Minsk, 1977.
Sb2		Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhenykh chastits. 5th. Dubna, 1976. Trudy, v. 2, Moskva, 1977.
Sb3		Shirokopolosnyye usiliteli, no. 5, 1977.
Sb4		Monokristally tugoplavkikh i rezkikh metallov, splavov i soyedineniy. Moskva, 1977.
Sb5		Problemy bioniki, no. 20, 1978.
Sb6		Priborostroyeniye, no. 24, Kiyev, Tekhnika, 1978.
Sb7		Effektivnost' kapital'nykh vlozheniy i novoy tekhniki, no. 2, Cheboksary, 1977.
Sb8		Radiotekhnika, no. 44, 1978.

Sb9		Vsesoyuznaya konferentsiya po generatoram nizkotemperaturnoy plazmy. Materialy, v. 3. Alma-Ata, 1977.
Sb10		International Conference on Phenomena of Ionized Gas. 13th. Berlin, 1977. Proceedings. Contributed Papers. Part 1. Leipzig, 1977.
Sb11		Spektroskopiya fotoprevrashcheniy v molekulakh. Leningrad, 1977.
Sb12		Voprosy prikladnoy matematiki i mekhaniki, no. 3, Alma-Ata, 1976.
Sb13		Vsesoyuznoye soveshchaniye po uskoritelyam zaryazhenykh chastits. 5th. Dubna, 1976. Trudy, v. 1, Moskva, 1977.
Sb14		Vsesoyuznaya shkola-konferentsiya molodykh uchenykh po fizike plazmy "Sovremenyye metody nagreva i diagnostiki plazmy", Khar'kov, 1977. Tezisy dokladov. Khar'kov, 1977.
TKiT	(TKTEA)	Tekhnika kino i televideniya
Tr1		Moskovskiy energeticheskiy institut. Trudy, no. 329, 1977.
Tr2		Belorusskiy universitet. Vestnik, seriya 1, no. 3, 1977.
Tr3		NI tsentr izucheniya prirodnykh resursov. Trudy, no. 4, 1977.
Tr4		Trudy uchebnykh institutov svyazi, no. 85, 1977.
Tr5		VNII metrologii. Sbornik nauchnykh trudov, no. 203(263), 1976.
Tr6		NI tsentr izucheniya prirodnykh resursov. Trudy, no. 3, 1977.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VAN	(VANSA)	Akademiya nauk SSSR. Vestnik
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
ZhTF P	(PZTFD)	Pis'ma v Zhurnal tekhnicheskoy fiziki

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