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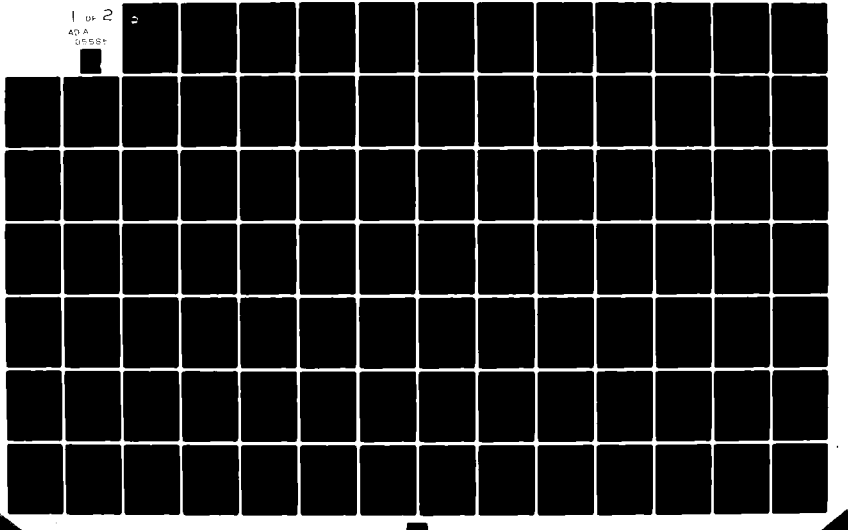

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BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 47

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Vice Director for Foreign Intelligence
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20. ABSTRACT

This is the Soviet Laser Bibliography for May-June 1980, and is No. 47 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; crystal growing; 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; laser spectroscopy; 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 May-June 1980, 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 also included. 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)	
APP (A)	(ATPLB)	Acta physica polonica
BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BAPS Chim	(BAPCA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Chimique
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 Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
Elek	(EKNTB)	Elektronika [Poland]
ETP	(EXPPA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSR. Izvestiya. Fizika atmosfery i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN Az	(IAFMA)	Akademiya nauk Azerbaydzhanskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskiya
IAN Lat	(LZFTA)	Akademiya nauk Latviyskoy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk
IAN M	(IZFMB)	Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk

IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHVKA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	(KRISA)	Kristallografiya
Lit fiz sb	(LFSBA)	Litovskiy fizicheskiy sbornik
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'
Opt app	(OPAPB)	Optica applicata [Poland]
Otkr izobr	(OIPOV)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PSS	(PSSAB)	Physica Status Solidi (A). Applied Research
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
Roz elektr	(RZETA)	Rozprawy elektrotechniczne
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(GZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika

Sb1	Sbornik	Kvantovaya elektronika, no. 18, Kiyev, 1980.
Sb2		Fotometriya i yeye metrologicheskoye obespecheniye. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya. 3rd. Tezisy dokladov. Moskva, 1979.
Sb3		Wissenschaftliche Zeitschrift der Friederich-Schiller-Universitaet Jena. Matematisch-naturwissenschaftliche Reihe, no. 2-3, 1979.
Sb4		Obrashcheniye volnogo fronta opticheskogo izlucheniya v nelineynykh sredakh. Institut prikladnoy fiziki AN SSSR. Gor'kiy, 1979.
Sb5		Tekhnika elektroniki i elektrodinamiki, no. 4, Saratov, 1979.
Sb6		Fizicheskiye yavleniya v segnetoelektrikakh. Riga, 1979.
Sb7		Lazernyye puchki. Khabarovsk, 1979.
Sb8		Teplovyye nelineynyye yavleniya v plazme. Institut prikladnoy fiziki AN SSSR. Gor'kiy, 1979.
Sb9		Analele Universitatii Timisoara. Serie stiintele fizica-chimie, no. 1, 1978.
Sb10		Voprosy teorii plazmy, no. 10, Moskva, 1980.
Sb11		Problemy statisticheskoy i kvantovoy fiziki. Moskva, 1979.
Sb12		Obrabotka i interpretatsiya fizicheskogo eksperimenta. Moskva. 1979.
Sb13		Primeneniye lazerov v atomnoy, molekulyarnoy i yadernoy fizike. Vsesoyuznaya shkola. 1st. Vil'nyus, 21-31 Aug 1978. Trudy. Moskva, Nauka, 1979.
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Sb20		Metodologicheskiye voprosy prikladnoy elektrodinamiki. Leningrad, 1978.
Sb21		Uchenyye zapiski TsAGI, no. 3, 1980.
Sb22		Razvedochnaya geofizika, no. 89, 1980.
Sb23		Fiziko-tekhnologicheskiye voprosy kibernetiki. Kiyev, 1979.
Sb24		Problemy energeticheskoy fotometrii. Moskva, 1979.
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Sb26		Sovetsko-Amerikanskiy seminar po ionnoy implantatsii. 2nd. Pushchino, 1979. Trudy. Novosibirsk, 1979.
Sb27		Fizika metallov i ikh soyedineniy. Sverdlovsk, 1979.
Sb28		Dinamika izlucheyushchego gaza, no. 3, Moskva, 1980.
Sb29		Gazovaya i volnovaya dinamika, no. 3, Moskva, 1979.
TiEKh	(TEKHA)	Teoreticheskaya i eksperimental'naya khimiya
TKiT	(TKTEA)	Tekhnika kino i televedeniya
Tr1	Trudy	VNII monokristallov, Stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv. Sbornik nauchnykh trudov, no. 4, 1979.
Tr2		Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 250, 1979.
Tr3		Moskovskiy fiziko-tekhnicheskiy institut. Trudy, no. 11, 1979.
Tr4		Azerbaydzhanskiy universitet. Nauchnyye trudy. Seriya fiziko-matematicheskikh nauk, no. 4, 1979.
Tr5		Vychislitel'nyy tsentr Moskovskogo GU. Sbornik rabot, no. 31, 1979.
Tr6		Moskovskiy energeticheskiy institut. Trudy, no. 450, 1980.
Tr7		Nauchnyye trudy vysshikh uchebnykh zavedeniy Litovskoy SSR. Ultrazvuk, no. 12, 1980.
Tr8		Leningradskiy politekhnicheskiy institut. Trudy, no. 366, 1979.
Tr9		Karakalpakskiy filial AN UzSSR. Vestnik, no. 3, 1979.
Tr10		Moskovskiy energeticheskiy institut. Trudy, no. 432, 1979.

Tr11		Gosudarstvennyy opticheskiy institut. Trudy, no. 178, 1979.
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Tr13		Institut okeanologii AN SSSR. Trudy, no. 90, 1980.
Tr14		Moskovskiy fiziko-tekhnicheskiy institut. Trudy. Seriya Aerofizicheskaya i prikladnaya matematika. Dolgoprudnyy, 1979.
Tr15		Moskovskiy energeticheskiy institut. Trudy, no. 451, 1980.
Tr16		Tashkentskiy gos pedagogicheskiy institut. Sbornik nauchnykh trudov, no. 22, 1978.
Tr17		Moskovskiy energeticheskiy institut. Trudy, no. 441, 1979.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
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
ZhFKh	(ZFKHA)	Zhurnal fizicheskoy khimii
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
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ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
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