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20. ABSTRACT

This is the Soviet Laser Bibliography for May-June 1979 and is no. 41 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; 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 1979, 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.

Section II H, Laser Measurement Applications, has a new subsection, Laser Spectroscopy.

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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## IV. SOURCE ABBREVIATIONS

| | (CIRC Codens) | |
|---|---|---|
| BAPS | (BAPTA) | Bulletin 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 Uz | (DANUA) | Akademiya nauk Uzbekskoy SSR. Doklady |
| DBAN | (CRABA) | Bulgarska akademiya na naukite. Doklady |
| Elek | (EKNTB) | Elektronika [Poland] |
| EOM | (EOBMA) | Elektronnaya obrabotka materialov |
| FAiO | (IFAOA) | Akademiya nauk SSSR. 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 B | (VABFA) | Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk |
| IAN Fiz | (IANFA) | Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya |
| IAN Khim | (IASKA) | Akademiya nauk SSSR. Izvestiya. Seriya khimicheskaya |
| IAN Lat | (LZFTA) | Akademiya nauk Latviyskoy SSR. Izvestiya |
| IT | (IZTEA) | Izmeritel'naya tekhnika |
| IVUZ Fiz | (IVUFA) | Izvestiya vysshikh uchebnykh zavedeniy. Fizika |
| IVUZ Priboro | (IVUBA) | Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye |
| IVUZ Radioelektr | (IVUZB) | Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika |
| IVUZ Radiofiz | (IVYRA) | Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika |

| | | |
|---|---|---|
| JTP | (JTPHD) | Journal of Technical Physics [Poland] |
| KE | (KVEKA) | Kvantovaya elektronika |
| KhVE | (KHVKA) | Khimiya vysokikh energiy |
| KL | (KNLTA) | Knizhnaya letopis' |
| KLDV | (KLDVA) | Knizhnaya letopis'. Dopolnitel'nyy vypusk |
| Kristal | (KRISA) | Kristallografiya |
| KSpF | (KRSFA) | Kratkiye soobshcheniya po fizike |
| MiTOM | (MTOMA) | Metallovedeniye i termicheskaya obrabotka materialov |
| 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 | (OIPOV) | Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki |
| Opt app | (OPAPB) | Optica applicata [Poland] |
| PTE | (PRTEA) | Pribory i tekhnika eksperimenta |
| RiE | (RAELA) | Radiotekhnika i elektronika |
| RZhF | (RZFZA) | Referativnyy zhurnal. Fizika |
| RZhGeofiz | (GZGFA) | Referativnyy zhurnal. Geofizika |
| RZhMekh | (RZMKA) | Referativnyy zhurnal. Mekhanika |
| RZhRadiot | (RZRAB) | Referativnyy zhurnal. Radiotekhnika |
| Sb1 | Sbornik | Issledovaniya po matimatike i fizike. Grodno, 1978. |
| Sb2 | | Fizicheskiye svoystva gazov i tverdykh tel. Minsk, 1978. |
| Sb3 | | Kvantovaya elektronika, no. 16, Kiyev, 1979. |
| Sb4 | | Neravnovesnyye techeniya gaza i optimal'nyye formy tel v sverkhzvukovom potoke. Moskva, 1978. |

Sb5 Issledovaniya slozhnogo teploobmena. Nauchnaya konferentsiya molodykh issledovateley. 12th, Novosibirsk, April 1978. Materialy. Novosibirsk, 1978.

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Sb8 Nelineynyye volny. Moskva, 1979.

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Sb10 Metody kachestvennoy teorii differentsionnykh uravneniy. Gor'kiy, 1978.

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Sb14 Opticheskaya gologrefiya. Leningrad, Nauka, 1979.

Sb15 Radioelektronika. Tezisy konferentsii. Razvitiye tekhnicheskikh nauk v Litovskoy respublike i ispol'zovaniye ikh rezul'tatov, 1979. Vil'nyus, 1979.

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Sb17 Uluchsheniye svoystv materialov, ikh obrabotka i metody kontrolya. Vladimirskiy politekhnicheskiy institut. Vladimir, 1978.

Sb18 Effektivnost' kapital'nykh vlozheniy i novoy tekhniki, no. 3, Cheboksary, 1978.

Sb19 Izmeritel'nyye generatory i priyemniki v etalonakh i obraztsov sredstvakh izmereniya. Moskva, 1978.

Sb20 Rabochiye etalony i obraztsovyye sredstva izmereniy v energeticheskoy fotometrii lazernogo izlucheniya. Moskva, 1978.

Sb21 Radiofizika i issledovaniye svoystv veshchestva, no. 3, Omsk, 1978.

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|---|---|---|
| Sb22 | | Problemy golografii, no. 9, 1977. |
| Sb23 | | Magnitnyye poluprovodnikovyye shpineli tipa $CdCr_2Se_4$. Kishinev, 1978. |
| Sb24 | | Inversiya Abelya i yeye obobshcheniya. Novosibirsk, 1978. |
| TKiT | (TKTEA) | Tekhnika kino i televedeniya |
| Tr1 | Trudy | Fizicheskiy institut AN SSSR. Trudy, no. 113, 1979. |
| Tr2 | | VNII televideniya i radioveshchaniya. Trudy, no. 10(29), 1978. |
| Tr3 | | Moskovskiy energeticheskiy institut. Trudy, no. 379, 1978. |
| Tr4 | | Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 229, 1978. |
| Tr5 | | Fizicheskiy institut AN SSSR. Trudy, no. 111, 1979. |
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