Selected Publications of REM SOLOUKHIN

1. **Soloukhin R.I.** *Measurement of finite-amplitude wave pressure in water by piezoelectric probes*. Proc. IV Conf. of Young Scientists. G.M. Krzhizhanovsky Power Institute of the Academy of Sciences of USSR, 1957. (in Russian)
2. **Zaitsev S.G., Soloukhin R. I.** *Shock tube study of spin detonation*. Ibid. (in Russian)
3. **Zaitsev S.G., Soloukhin R.I.** *Ignition of an adiabatically heated gas mixture*. DAN USSR, v. 122, No.6, 1958. (in Russian)
4. **Soloukhin R.I.** *On an expanding wave of spin detonation*. Ivz. AN SSSR (OTN), Mechanics, No.6, 1959. (in Russian)
5. **Soloukhin R.I.** *Physical studies of gases by shock tubes*. UFN, v. 68, No. 3, 1959. (in Russian)
6. **Bazhenova T.V., Soloukhin R.I**. *Gas ignition behind the shock waves*. Int. VII Symposium on Combustion, Butterworths, London, 1959.
7. **Soloukhin R.I., Topchiyan M.E.** *Study of a trace of spin detonation*. DAN SSSR, v. 127, No. 4, 1959. (in Russian)
8. **Bazhenova T.V., Soloukhin R.I.** *A pressure field formed at electric discharge in water.* Physical Gas Dynamics, 1959. (in Russian)
9. **Bazhenova T.V., Soloukhin R.I.**, *Shock waves formed by electric discharge in water.* Ibid. 1959. (in Russian)
10. **Mitrofanov V.V., Soloukhin R.I., Topchiyan M.E.** *Study of detonation of powders*. Proc. Scientific Council on Explosions, SB AN SSSR, No. 8, 1959. (in Russian)
11. **Soloukhin R.I.** *Acetylene detonation*. Zh.Prikl.Mekh. i Tekh.Fiz. No. 1, 1960. (in Russian)
12. **Soloukhin R.I.** *Ignition of gas flow behind the shock wave.* In Problems of Power Engineering, AN SSSR, 1960. (in Russian)
13. **Bazhenova T.V., Zaitsev S.G., Naboko I.M., Salamandra R.D., Sevastiyanova I.K., Soloukhin R.I.** *Various Methods of Studying Fast Processes*. Moscow: Izd. AN SSSR, 1960, 91p. (in Russian)
14. **Soloukhin R.I.** *Measurement of pressure behind the detonation wave*. Proc. V Scientific Conference of the Power Engineering Institute, 1960. (in Russian)
15. **Soloukhin R.I.** *On the bubbles mechanism of shock ignition in fluid*. DAN SSSR, v. 136, No. 2, 1960. (in Russian)
16. **Soloukhin R.I.** *Application of shock waves for studying gas ignition*. Zh.Prikl.Mekh. i Tekh.Fiz., No. 2, 1960. (in Russian)
17. **Soloukhin R.I., Topchiyan M.E.** *On the acoustic phenomena at spin detonation*. Proc. III All-Union Conf. on Combustion Theory, v. I, 1960. (in Russian)
18. **Kedrinskii V.K., Soloukhin R.I.** *Shock wave compression of a gas cavity in water.* Zh.Prikl. Mekh. i Tekh.Fiz., No. 1, 1961. (in Russian)
19. **Soloukhin R.I.** *Transition of combustion into detonation in gases*. Ibid., No. 4,1961. (in Russian)
20. **Soloukhin R.I.** *Pulsating combustion of a gas behind the shock wave in the supersonic flow.* Ibid., No. 5, 1961. (in Russian)

21. **Soloukhin R.I.** *A pulse pressure piezoindicator*. PTE (Pribory i Technika Experimenta), No. 3, 1961. (in Russian)
22. **Soloukhin R.I.** *On gas bubble pulsations in the incompressible fluid*. Proc. Scientific Council on Explosion, Novosibirsk, 1961 (in Russian)
23. **Soloukhin R.I., Zaytsev S.G.** *Study of combustion of adiabatically heated gas mixture*. Proc. Eight Int. Symposium on Combustion, 1962.
24. **Soloukhin R.I., Sharapova T.A**. *Spectroscopic study of the gas state behind the detonation front.* Zh.Prikl.Mekh. i Tekh.Fiz., No. 2, 1962. (in Russian)
25. **Soloukhin R.I.** *Detonation in gases*. UFN, v.80, No. 4, 1963. (in Russian)
26. **Soloukhin R.I.** *Shock Waves and Detonation in Gases*. Moscow: Fizmatgiz, 1963, 175 p. (in Russian)
27. **Soloukhin R.I.** *Shock wave refraction at the flame front*. Zh.Prikl.Mekh. i Tekh. Fiz., 1963. (in Russian)
28. **Soloukhin R.I.** *Some data on the non-equilibrium gas state behind the shock wave front*. Ibid., 1963. (in Russian)
29. **Vorotnikova I.I., Soloukhin R.I.** *Calculation of gas bubble pulsations under the action of periodically varying pressure.* Atlas of Charts. Institute of Hydrodynamics, SO AN SSSR, 1963. Acoustic Journal, 1964. (in Russian)
30. **Voevodsky V.V., Soloukhin R.I.** *On the mechanism and limits of hydrohen-oxygen chain self-ignition in shock waves*. DAN SSSR, v. 154, No. 6, 1964. (in Russian)
31. **Soloukhin R.I.** *On the detonation in the gas heated by the shock wave.* Zh.Prikl.Mekh. i Tekh.Fiz., No. 4, pp. 42-49, 1964. (in Russian)
32. **Vorotnikova M.I., Soloukhin R.I.** *On the flow structure in electric discharge shock tubes.* Ibid., No. 5, 1964. (in Russian)
33. **Mitrofanov V.V., Soloukhin R.I.** *On the diffraction of a multifront detonation wave in the gas*. DAN SSSR, v. 159, No. 5, 1964. (in Russian)
34. **Soloukhin R.I., Voevodsky V.V**. *On the mechanism and explosion limits of hydrogen-oxygen chain self-ignition in shock waves*. 10 Int. Symposium on Combustion, The Comb. Institute, Pittsburgh, pp. 279-283, 1965.
35. **Vorotnikova M.I., Kedrinskii V.K., Soloukhin R.I.** *Shock tube in studies of one-dimensional waves in fluids*. Physics of Combustion and Explosions (FGV), No. 1, 1965. (in Russian)
36. **Soloukhin R.I.** The schlieren method for measuring a shock compression wave in the shock wave. FGC, No. 1, 1965. (in Russian)
37. **Voevodsky V.V., Soloukhin R.I.** *On the mechanism of high-temperature oxidation of methane in shock tubes.* DAN SSSR, v. 161, No. 5, 1965. (in Russian)
38. **Soloukhin R.I.** *The structure of a multifront detonation wave in the gas*. FGV, No. 2, 1965. (in Russian)

39. **Soloukhin R.I., Toktomyshev S.Zh.** *On measurements of temperature behind the detonation front in the gas.* Zh.Prikl.Mat. i Tekh.Fiz., No. 5, 1965. (in Russian)
40. **Soloukhin R.I.** *The stream structure and bow waves in electromagnetic shock tubes.* Proc. 7th Int. Conf. on Phenomena in Ionized Gases, Belgrade, v. 1, 1966.
41. **Soloukhin R.I.** *Medium conduction and velocity behind the detonation front in the gas.* Teplofiz.Vyssok.Temp., v.4, No. 2, 1966. (in Russian)
42. **Soloukhin R.I.** *The exothermal reaction zone in a one-dimensional shock wave*. FGV, No. 3, 1966. (in Russian)
43. **Soloukhin R.I.** Shock Tubes for Physical and Chemical Studies. Novosibirsk: Nauka, 1966. 39 p.(in Russian)
44. **Soloukhin R.I.** Shock Waves and Detonation in Gases. Baltimore: Mono Book. Corp., (USA), 1966.
45. **Nesterikhin Yu.E., Soloukhin R.I.** *Methods of High-Speed Measurements in Gas Dynamics and Plasma Physics*. Moscow: Nauka, 1967. 172 p. (in Russian)
46. **Soloukhin R.I.** *Quasi-stationary reaction zone in gaseous detonation*. XI Intern. Symp. on Combustion, Pittsburgh, 1967.
47. **Soloukhin R.I.** *Nonstationary phenomena in gaseous detonation*. J. of the Industrial Explosives Society, Japan, v. 28, 1967.
48. **Soloukhin R.I.** *Direct shock tube measurements of oxygen atom recombination rates.* Combustion and Flame, Butterwoths, v. 1150., No. 6, 1967.
49. **Petchek Z.A., Soloukhin R.I., Toktomyshev S.Zh**. *The structure of electrode discharge-free shock waves in air and argon.* Zh.Prikl.Mekh. i Tekh.Fiz., No. 4, 1967. (in Russian)
50. **Meshcheryakov N.A., Soloukhin R.I., Sharapova T.A**. *Some properties of thin films made by a shock tube.* DAN SSSR, v. 177, No. 6, 1967. (in Russian)
51. **Soloukhin R.I.** *Shock tube measurements of an oxygen recombination rate*. FGV, No. 3, 1967. (in Russian)
52. **Soloukhin R.I.** *Multiheaded structure of gaseous detonation*. Combustion and Flame, v. l0, No. l, 1968.
53. **Lee J.H., Oppenheim A.K., Soloukhin R.I**. *Current views on gaseous detonation*. Astronautica Acta, v.14, 1969.
54. **Ragland K.W., Soloukhin R.I.** *Ignition processes in expanding detonations*. Combustion and Flame, v. 13, 1969.
55. **Soloukhin R.I., Van Tiggelen P.J.** *Shock tube study of the induction lag in nitrous oxide-hydrogen system*. Bull. Soc. Chimiques Beiges, v. 78, 1969.
56. **Kedrinskii V.K., Serdyuk N.K., Soloukhin R.I., Stebnovsky S.V**. *Study of fast reactions in the solution behind the front of strong shock waves.* DAN SSSR, v. 187, 1969. (in Russian)
57. **Soloukhin R.I.** *Nonstationary phenomena in gaseous detonation*. XII Intern. Symp. on Combustion, 1969.

58. **Kedrinskii V.K., Soloukhin R.I., Stebnovsky S.V.** *A semi-conductor pressure gauge for measurement of strong shock waves in the fluid*. Zh.Prikl.Mekh. i Tekh.Fiz., No. 4, 1969. (in Russian)
59. **Soloukhin R.I.** *Experimental studies of fast processes*. Fluid Dynamics Transactions, v.5, part 1, Polish Acad. Sci., Warszawa, 1970.
60. **Soloukhin R.I**. Shock Tube Diagnostics, Instrumentation and Fundamental Data. In Shock Tubes ed. I.I. Glass, Toronto: Toronto Univ. Press. 45 p.
61. **Soloukhin R.I.** *On the ignition kinetics at high-temperature nitrous oxide oxidation in shock waves.* DAN SSSR, v. 194, 1970. (in Russian)
62. **Alkhimov A.V., Vorobiev V.V., Klimkin V.F., Ponomarenko A.G., Soloukhin R.I.** *On the development of electric discharge in the air*. DAN SSSR, v. 194, 1970. (in Russian)
63. **Soloukhin R.I., Yacobi Yu.A.** *An infra-red laser-interferometer with the phase modulation of decay factor.* Optics and Spectroscopy, v. 29, No. 70, 1970. (in Russian)
64. **Soloukhin R.I., Yacobi Yu.A**. *CO_2-laser-schlieren studies of wave processes and electron concentrations in a pulse discharge*. Laser and Unconventional Optics Journal, No. 27, 1970.
65. **Soloukhin R.I.** *High-temperature oxidation of ammonia, carbon monoxide and methane by nitrous oxide in shock waves*. 13 Intern. Symp. on Combustion, The Comb. Institute, 1971.
66. **Soloukhin R.I., Yacobi Yu.A.** *Electron concentration distribution and wave processes in a pulse discharge from the data on laser-schlieren measurements*. Zh.Prikl.Mech. i Tekh.Fiz., No. 2, 1971. (in Russian)
67. **Soloukhin R.I., Yacobi Yu.A**. *Relaxation processes of the laser-interferometer of Michelson.* DAN SSSR, v. 198, No. 6, 1971. (in Russian)
68. **Soloukhin R.I.** *Shock waves and high temperature kinetics in gases*. American Scientist, v. 59, 1971.
69. **Alkhimov A.P., Klimkin V.F., Ponomarenko A.G., Soloukhin R.I.** *On the development of a discharge initiated by a laser spark.* Proc. X Intern. Conf. on Ionized Gases, 3.2, 6.8, London, 1971.
70. **Abramyan E.A., Lagunov V.M., Ponomarenko A.G., Soloukhin R.I.** *A charged particle accelerator*, Author's Certificate, Bull. No. 23, 1971.
71. **Abramyan E.A., Ponomarenko A.G., Soloukhin R.I**. *A megavolt seal of energy.* DAN SSSR, v. 201, No. 56, 1971. (in Russian)
72. **Emrich R.J., Soloukhin R.I**. *3.39 micron resonance line absorption in shocked methane.* Astronautica Acta, v. 17, No. 4, 1972.
73. **Brochet Ch., Soloukhin R.I**. *Developments of instabilities in a shocked exothermic gas flow.* Combustion and Flame, v. 18, No. 1, 1972,
74. **Soloukhin R.I., Emrich R.J.** *Resonance absorption of laser radiation in methane behind the shock wave front.* FGV, No. 1, 1972. (in Russian)
75. **Karnyushin V.N., Soloukhin R.I**. *Application of gas dynamic flows in laser technique*. Ibid., FGV, No. 2, 1972. (in Russian)

76. **Soloukhin R.I., Yacobi Yu.A.** *Hydrogen plasma absorption coefficients at laser frequencies.* J. Quant. Spectr. Rad. Transfer, v. 12, 1972.
77. **Soloukhin R.I.** *Some infrared diagnostic techniques in high-temperature gas dynamics*. Astronautica Acta, v. 17, No. 4, 1972.
78. **Croshko V.N., Soloukhin R.I., Wolansky P.** *Population Inversions by Mixing in a Shock Tube Flow.* Optics Communication, No. 6, 1972.
79. **Soloukhin R.I.** *On the kinetics of thermal decomposition of nitrous oxide in shock waves.* DAN SSSR, v. 207, No. 4, 1972. (in Russian)
80. **Soloukhin R.I., Yacobi Yu.A**. *Methods of IR diagnostics of plasma*. TVT, v. 10, No. 6, 1972. (in Russian)
81. **Komin A.V., Soloukhin R.I., Yacobi Yu.A**. Optical Characteristics of Hydrogen Plasma. Novosibitsk: Nauka, 1973. 224 p. (in Russian)
82. **Oppenheim A.K., Soloukhin R.I.** *Experiments in gasdynamics of explosions*. Annual Review of Fluid Mechanics, v. 5, 1973.
83. **Soloukhin R.I.** *High Temperature Oxidation of Hydrogen by Nitrous Oxide in Shock Waves*. XIV Intern. Symposium Combustion, 1973.
84. **Soloukhin R.I.** Diagnostic Techniques in High-Temperature Gas Dynamics. Gas Dynamics Series, v. 5, ed. P.P. Wegener, Marcel, 1973.
85. **Golovichev V.I., Dimitrov V.I., Soloukhin R.I**. *Numerical analysis of the kinetic models of hydrogen ignition.* FGV, No. 1, 1973, (in Russian)
86. **Croshko V.N., Soloukhin R.I., Fomin N.A**. Gas dynamic processes in shock tube under inversion production. FGZ, No. 3, 1973. (in Russian)
87. **Klimkin V.F., Soloukhin R.I.** *Initial stages of a spherical detonation directly initiated by a laser spark.* Combustion and Flame, v. 21, 1973.
88. **Afonin Yu.O., Ponomarenko A.G., Soloukhin R.I. Khapov Yu.I**. *A compact impulse electron accelerator.* Equipment and Experiment Technique. No. 5, 1973. (in Russian)
89. **Zharkova G.M., Irishin A.M., Ponomarenko A.G., Khapov Yu.I., Soloukhin R.I.,** *An infra-red optical converter*. PTE (Pribory i Technika Experimenta), No. 5, 1973. (in Russian)
90. **Wolanskii P., Croshko V.N., Soloukhin R.I., Fomin N.A**. Modelling of gas dynamic processes under inversion production. ITAM SB USSR Acad. Sciences Transaction, 1973 (in Russian)
91. **Soloukhin R.I.** *Development of methods of gas density measurement in shock waves*. In Studies of Physical-Chemical Processes in Sock Waves and Heated Gases, No. 20, 1973. (in Russian)
92. **Alkhimov A.P., Arbuzov V.A., Papyrin A.N., Soloukhin R.I.** *A laser Doppler velocity meter for studies of fast gasdynamic flows*. FGV, No. 4, 1973. (in Russian)
93. **Orishich A.M., Ponomarenko A.G., Soloukhin R.I**. *Energy characteristics and instability of a double transverse discharge in pumping a CO_2 laser*. DAN SSSR, v .212, No. 5, 1973. (in Russian)

94. **Belomestnov P.I., Vyazovich E.I., Soloukhin R.I., Yacobi Yu.A**. *A tuned cavity with a variable-curvature mirror.* Quant. Electr., No. 4(16), 1973. (in Russian)
95. **Baev V.K., Golovichev V.I., Dimitrov V.I., Soloukhin R.I.** *On the mechanism of the leading process at hydrogen ignition.* FGV, No. 6, 1973. (in Russian)
96. **Croshko V.N., Soloukhin R.I.** *Optimal inversion regimes at thermal excitation by mixing in the supersonic flow*. DAN SSSR, v. 211, No. 4, 1973. (in Russian)
97. **Croshko V.N., Volanski P., Soloukhin R.I**. *Population inversion by mixing in a shock tube flow.* Proc. IX Intern. Shock Tube Symp. eds. D. Bershader and W. Griffith, Stanford Univ. Press, 1973.
98. **Garanin A.F., Soloukhin R.I., Wojicicki St., Yasakov W.A**. *Flame Stabilization behind a Non-Streamlined Body in Supersonic Flow*. Archiwum Procesow Spalania, v. 5, No. 2, 1974.
99. **Afonin Yu.V., Byszewsky W., Ponomarenko A.G., Soloukhin R.I.** *Gain and Power Characteristics of an Electron-Beam Controlled Discharge TEA CO_2-Laser*. Optics Communications, v. 10, No. 1, 1974.
100. **Soloukhin R.I.** Diagnostic Techniques in High Temperature Gasdynamics. Chapter 4: Molecular Beams and Low Density Gasdynamics. ed. P.P. Wegener, MARCEL BEKKER INC., New-York, 1974. 93p.
101. **Soloukhin R.I., Yacobi Yu.A**. *On the problem of the amplification coefficient measurement*. Prikl.Mekh. i Tekh.Fiz., No. 3, 1974. (in Russian)
102. **Croshko V.N., Soloukhin R.I., Fomin N.A**. *The influence of medium composition and temperature on the efficiency of thermal excitation of inversion by mixing in the supersonic flow.* FGV, No. 4, 1974. (in Russian)
103. **Soloukhin R.I., Yacobi Yu.A., Yakovlev V.I**. *Studying Ionizing Shock Wave by IR Diagnostic Techniques.* Archiwum Mechamki Stosowanej, v. 26, no. 4, 1974.
104. **Belomestnov I.I., Ivanchenko A. I., Soloukhin R.I., Yacobi Yu. A.**, *Use of a long glow gas discharge in a closed convective cooling CO_2-laser.* Prikl.Mekh. i Tekh.Fiz., No. 1, 1974. (in Russian)
105. **Ponomarenko A.G., Soloukhin R.I.** *Development and Applications of High Voltage Accelerators in Space Experiments*. Acta Astronautica, v. l, No. 11/12, 1974.
106. **Soloukhin R.I.** *Ignition and Detonation Processes in the Interaction of Shock Waves with Perforated Plates*. Acta Astronautica, v. l, No. 3/4, 1974.
107. **Croshko V.N., Fomin N.A., Soloukhin R.I.** *Population Inversion and Gain Distribution in Supersonic Mixed Flow Systems*. Acta Astronautica, v. 2, No. 4-5, 1975.
108. **Orishich A.M., Ponomarenko A.G., Soloukhin R.I.** *On limiting energy characteristics of pulsed TEA CO_2-lasers*. Prikl.Mekh. i Tekh.Fiz., No. 1, 1975. (in Russian)
109. **Margulis D.I., Soloukhin R.I., Yacobi Yu. A**. *Visualization of pressure fields of gas flows by the holographic interferometry method.* Prikl.Mekh. i Tekh.Fiz., No. 3, 1975. (in Russian)
110. **Karnyushin V.N., Soloukhin R.I**. *On the quasi-steady operating regime of the CO_2-laser under pulse excitation.* DAN SSSR, v. 220, No. 3, 1975. (in Russian)

111. **Ivanchenko A.I., Soloukhin R.I., Yacobi Yu**. *A. Stabilization of a flow glow discharge for excitation of long objects of an active medium*. Quant. Electr., v. 2, No. 4, 1975. (in Russian)
112. **Vedernikov G.A., Karnyushin V.N., Soloukhin R.I**. *On the quasi-steady operating regime of generation of the CO_2-laser excited by a non-self-discharge*. Prikl.Mekh. i Tekh.Fiz., No. 2, 1975. (in Russian)
113. **Ponomarenko A.G., Soloukhin R.I., Khapov Yu.I**. *Energy characteristics of a chemical HF-laser induced by an electron beam.* DAN SSSR, v. 221, No. 4, 1975. (in Russian)
114. **Zamuraev V.P., Kovalskaya G.A., Soloukhin R.I.** *To the calculation of shock adiabats in nitrogen*. FGV, No. 3, 1975. (in Russian)
115. **Golovichev V.I., Soloukhin R.I.** *To the ignition kinetics of a mixture of hydrogen and nitrous oxide in shock waves*. FGV, No. 5, 1975. (in Russian)
116. **Karnyushin V.N., Malov A.N., Soloukhin R.I**. *An atmosphere pressure gas discharge pulsed CO_2-laser with a heated cathode*. Quant. Electr., v. 2, No. 8, 1975. (in Russian)
117. **Ponomarenko A.G., Soloukhin R.I., Tishchenko V.N**. *Optimization of limiting characteristics of CO_2-lasers*. Prikl.Mekh. i Tekh.Fiz., No. 5, 1975. (in Russian)
118. **Ivanchenko A.I., Soloukhin R.I., Fidelman G.N., Yacobi Yu. A.** *On the stability of an electric discharge plasma flat layer at convective cooling.* ZhTF, v. 45, No. 11, 1975. (in Russian)
119. **Khapov Yu. L, Ponomarenko A. G., Soloukhin R.I.** *Characteristics and Efficiency of a Compact NF Laser Initiated by Electron Beam*. Optics Communications, v. 18, No. 4, 1976.
120. **Soloukhin R.I., Fomin N.A.** *Inversion change in the flow with gasdynamic disturbances*. DAN SSSR, v. 228, No. 3, 1976. (in Russian)
121. **Krauklis A. V., Croshko V.N., Soloukhin R.I., Fomin N.A.** *Generation regimes in a gasdynamic laser with thermal excitation and mixing in the supersonic flow*. FGV, No. 5, 1976. (in Russian)
122. **Vaguin S.P., Soloukhin R.I., Yacobi Yu. A**. *Experiments on radiative cooling of a shock heat and gas.* 6th Intern. Colloquium on Gasdynamics of Explosives and Reactive Systems, Stockholm, 1977.
123. **Soloukhin R.I., Fomin N.A.** *Resonance (10,6 μm) absorption of CO_2 behind the shock wave front.* Prikl.Mekh. i Tekh.Fiz., No. 1, 1977. (in Russian)
124. **Soloukhin R.I., Yacobi Yu. A., Yakovlev V.I.** *Study of the equilibrium zone behind the front of an ionizing shock wave.* FGV, No. 3, 1977. (in Russian)
125. **Klimkin V.F., Soloukhin R.I.** *On the initiation of spherical detonation by a powerful laser spark in gas mixtures.* In Mechanics of Explosive Processes, No. 29, IG SO AN SSSR, 1977.
126. **Zamuraev V.P., Maslennikova I.I., Soloukhin R.I.** *Study of radiative heat transfer behind shock waves in air using the multigroup averaging method*. In Heat and Mass Transfer at Intense Radiative and Convective Heating, Minsk: HMTI Press, 1977.
127. **Karnyushin V.N., Soloukhin R.I.** *The influence of the initial conditions on the development of a homogeneous discharge in gases*. DAN SSSR, v. 236, No. 2, 1977. (in Russian)

128. **Karnyushin V.N., Malov A.N., Soloukhin R.I.** *The influence of easily ionizing admixtures in the cathode layer on the discharge development in gases*. Plasma Physics, v. 3, No. 5, 1977. (in Russian)
129. **Alkhimov A.P., Panyrin A.N., Predein A.L., Soloukhin R.I**. *Experimental study of the effect of the velocity delay of particles in the supersonic gas flow*. Prikl.Mekh. i Tekh.Fiz., No. 4, 1977. (in Russian)
130. **Croshko V.N., Soloukhin R.I., Fomin N.A.** *A gasdynamic laser with mixing in the supersonic flow.* In Gas Lasers, Novosibirsk: Nauka, 1977. (in Russian)
131. **Ponomarenko A.G., Soloukhin R.I., Khapov Yu.I.** *Energy characteristics of a chemical HF-laser induced by an electron beam.* In Gas Lasers, Novosibirsk: Nauka, 1977. (in Russian)
132. **Ivanchenko A.I., Soloukhin R.I., Fidelman G.N., Yacobi Yu. A**. *On the stability of a long glow discharge for excitation of large volumes of a fast flowing laser gas mixture*. In Gas Lasers, Novosibirsk: Nauka, 1977. (in Russian)
133. **Belomestnov P.I., Ivanchenko A.I., Soloukhin R.I., Yacobi Yu. A**. *An electric discharge closed continuous CO_2 laser.* In Gas Lasers, Novosibirsk: Nauka, 1977. (in Russian)
134. **Blinov V.V., Druker I.G., Zhak V.D., Karnyushin V.N., Kiselev V.Ya., Sapogov B.A., Safronov Yu.A., Smolentsev I.V., Soloukhin R.I., Fomin N.A**. *A gasdynamic CO_2 laser with two-step expansion of nitrogen.* Quant. Electr., v. 4, No. 11, 1977. (in Russian)
135. **Orishich A.M., Ponomarenko A.G., Soloukhin R.I.** *On efficiency of electric discharge CO_2-laser systems.* In Gas Lasers, Novosibirsk: Nauka, 1977. (in Russian)
136. **Afonin Yu.V., Ponomarenko A.G., Soloukhin R.I**. *Limiting energy characteristics of an electric-ionization CO_2-laser*. Ibid. (in Russian)
137. **Afonin Yu.V., Zimin Yu.S., Ponomarenko A.G., Soloukhin R.I.** *A pulse electric-ionization CO_2-laser with autonomous power supply*. Ibid. (in Russian)
138. **Krauklis A. V., Croshko V.N., Soloukhin R.I., Fomin N.A**. *Generation regimes in a gasdynamic mixing laser.* In Chemical Physics of Combustion and Explosion Processes, Kinetics of Chemical Reactions, IKhF AN SSSR, Chernogolovka, 1977. (in Russian)
139. **Ponomarenko A.G., Soloukhin R.I., Khapov Yu.I.** *On the kinetic mechanism of the reaction in the H_2+SF_6 laser induced by an electron beam.* Ibid. (in Russian)
140. **Karnyushin V.N., Soloukhin R.I.** *Formation of a volumetric glow discharge at atmospheric pressure*. Proc. XIII Intern. Conference on Phenomena in Ionized Gases. V. 2, Berlin, 1977.
141. **Soloukhin R.I.** *Shock tubes in flow laser research, modeling and application*. In Shock Wave Research, University of Washington Press, Seattle and London, 1978.
142. **Karnyushin V.N., Malov A.N., Soloukhin R.I**. *A distributed spark discharge for volumetric gas photoionization.* ZhTF, v. 48, No. 3, 1978. (in Russian)
143. **Karnyushin V.N., Malov A.N., Soloukhin R.I.** *On the influence of the pre-ionization conditions on the development of a homogeneous discharge*. Quant. Electr., No. 3, 1978. (in Russian)
144. **Karnyushin V.N., Knyazev B.A., Malov A.N., Soloukhin R.I.** *A pulse electric discharge in the presence of temperature and density gradients in the cathode layer.* ZhTF, v. 48, No. 6, 1978. (in Russian)

145. **Achasov O.V., Soloukhin R.I., Fomin N.A.,** *Resonance (10,6 μm) absorption of propane heated in the shock wave.* ZhPS, v. 28, No. 4, 1978. (in Russian)
146. **Martynenko O.G., Soloukhin R.I**. *Thermodynamic Control in Laser Beam Guidance*. Revue de Physique Appliquee, tome 13, 1978.
147. **Soloukhin R.I., Vaguin S.P., Yacobi Yu.A., Yakovlev V.V**. *Experiments on Radiative Cooling of a Shock-Heated Gas*. Revue de Physique Appliquee, tome 13, 1978.
148. **Alkhimov L.P., Boiko V.M., Papyrin A.H., Soloukhin R.I.** *On the scattered laser radiation diagnostics of supersonic two-phase flows*, Prikl.Mekh. i Tekh.Fiz., No. 2. 1978. (in Russian)
149. **Papyrin A.N., Soloukhin R.I.** *Development of the methods of laser Doppler measurements of the velocity involving direct spectral analysis*. In Methods of Laser Diagnostics of Single- and Multiphase Flows. Minsk: HMTI Press, 1978. (in Russian)
150. **Wolanski P., Klimkin V.F., Soloukhin R.I.** *Application of the laser method for optical diagnostics of unsteady processes.* In Methods of Laser Diagnostics of Single- and Multiphase Flows. Minsk: HMTI Press, 1978. (in Russian)
151. **Klimkin V.F., Soloukhin R.I.** *High-speed optical registration of unsteady processes. In Laser Diagnostics of Plasma*. Minsk: HMTI Press, 1978. (in Russian)
152. **Achasov O.V., Soloukhin R.I., Fomin N.A**. *Numerical analysis of the characteristics of a gasdynamic laser with selective thermal excitation and mixing in the supersonic flow.* Quant. Electr., v. 5, No. 11, 1978. (in Russian)
153. **Soloukhin R.I., Fomin N.A.** *Relaxation in the flow of inverse medium at supersonic mixing of components.* DAN BSSR, v. 22, No. 12, 1978. (in Russian)
154. **Kolpashchikov V.L., Soloukhin R.I., Syroezhko T.A.** *Spectral characteristics of a thermally inhomogeneous resonance-gain medium*. ZhPS, v. 29, No. 6, 1978. (in Russian)
155. **Soloukhin R.I., Fomin N.A.** *Relaxation in the flow of inverse medium at supersonic mixing of components*. Proc. HMTI, 1978. (in Russian)
156. **Fomin N.A., Soloukhin R.I.** *Gasdynamic Problems for Optically Inverse Media*. Revue do Physique Appliquee, tome 14, 1979.
157. **Achasov O.V., Labuda S.A., Soloukhin R.I., Fomin N.A.** *Determination of rotational and vibrational temperatures using a tuned CO_2-laser*. FGV, No. 6, 1979. (in Russian)
158. **Brossard J., Fomin N.A., Soloukhin R.I.** *Shock tube ignition and detonation studies by resonance absorption in propane.* Acta Astronautica, v. 6, 1979.
159. **Vagin S.P., Vyazovich E.I., Soloukhin R.I., Yacobi Yu.A**. *Use of a diametric fan in a flowing laser with a closed gas recirculation system.* IFZh, v. 36, No. 1, 1979. (in Russian)
160. **Fomin N.A., Golovichev V.I., Munjee S.A., Soloukhin R.I.** *Modeling of Gasdynamic and Relaxation Phenomena in Mixed Flow Lasers*. Minsk: HMTI Press, 1979. (in Russian)
161. **Achasov O.V., Zhdanok S.A., Krauklis A.V., Soloukhin R.I., Fomin N.A**. *Efficiency of gasdynamics ways of inversion production*. - Minsk: HMTI Press, 1979. (in Russian)

162. **Achasov O.V., Labuda S.A., Soloukhin R.I., Fomin N.A.** *On the diagnostics of the carbon dioxide molecular states in terms of resonance absorption of CO_2-laser radiation*. DAN SSSR, v. 249, No. 6, 1979.

163. **Golovnev I.F., Sevastiyanenko V.G., Soloukhin R.I.** *Mathematical modeling of the optical characteristics of a carbon dioxide gas.* v. 36, No. 2, 1979. (in Russian)

164. **Klimkin V.F., Papyrin A.N., Soloukhin R.I**. Optical Methods of Registering Fast Processes. Moscow: Nauka, 1980. (in Russian)

165. **Papyrin A.N., Soloukhin R.I., Fomin V.M., Yanenko N.N.** Supersonic Flows under the Conditions of Velocity Non-Equilibrium of Particles. Moscow: Nauka, 1980. (in Russian)

166. **Soloukhin R.I., Fomin N.A**. *Resonance absorption of 9.6 μm radiation by carbon dioxide at high temperature.* Prikl.Mekh. i Tekh.Fiz., No. 3, 1980. (in Russian)

167. **Achasov O.V., Zhdanok S.A., Soloukhin R.I., Fomin N.A**. *Super equilibrium ionization at adiabatic expansion of a relaxing gas*. DAN SSSR, v.253, No. 6, 1980. (in Russian)

168. **Rolin M.N., Soloukhin R.I., Yurevich F.B.** *The influence of radiation reflection on radiative-convective heat transfer in hypersonic flow past blunt bodies*. Prikl.Mekh. i Tekh.Fiz., No. 2, 1980. (in Russian)

169. **Galich N.E., Martynenko O.G., Soloukhin R.I.** *Thermal interaction of high-power laser radiation with gases.* Int. J. Heat Mass Transfer, v. 23, 1980.

170. **Karnyushin V.N., Soloukhin R.I**. Macroscopic and Molecular Processes in Gas Lasers. Moscow: Atomizdat, 1981. (in Russian)

171. **Achasov O.V., Zhdanok S.A., Ragozin D.S., Soloukhin R.I., Fomin N.A**. *Associative ionization of atomic molecules at adiabatic expansion in the supersonic flow*. ZhETF, v.81, No. 2, 1981. (in Russian)

172. **Fomin N.A., Golovichev V.I., Munjee S.A., Soloukhin R.I**. Modeling of *Gasdynamic and Relaxation Phenomena in Mixed Flow Lasers*. Progress in Astronautics and Aeronautics. v. 76, Princeton, USA, 1981.

173. **Zhdanok S.A., Soloukhin R.I.** *The specific features of vibrational relaxation of diatomic gases under adiabatic expansion in a supersonic nozzle*. Letters in ZhTF, v. 7, No. 10, 1981. (in Russian)

174. **Rolin M.N., Soloukhin R.I., Yurevich F.B**. *Heat and mass transfer in an emitting compressed layer with reflection from the body surface and infection of ablation products*. Int. J. Heat Mass Transfer, v. 24, No. 11, 1981.

175. **Papyrin A.N. Soloukhin R.I**. Laser Doppler Velocimeter, part of "Methods of I Experimental Physics". Fluid Dynamics, part A, ed. R. Emrich, Academic Press, N.Y., v. 18. 1981.

176. **Curtis C.W., Emrich R.J., Soloukhin R.I.** Measurement of Pressure, part of "Methods of Experimental Physics". Fluid Dynamics, part A, ed. R. Emrich, Academic Press, N.Y., v. 18, 1981.

177. **Fomin N.A., Soloukhin R.I.**, *Laser diagnostics of molecular states in vibrationally excited gas flow systems,*- Proc. of the 1st Specialists Meeting (International) of the Combustion Institute. Book of Proceedings. Univ. Bordeaux, France, 1981

178. **Achasov O.V., Fomin N.A., Ragozin D.S., Soloukhin R.I., Zhdanok S.A.** *Plasma Generation in Vibrationally Nonequilibrium Molecular Gas Flows*. in Book "Phenomena in Ionized Gases 1981" (Proc. of the XV Intern. Conference). Contributed Papers, Part II, Minsk, 1981, Paper 1401

179. **Achasov O.V., Fomin N.A., Ragozin D.S., Soloukhin R.I., Zhdanok S.A.** *Plasma Generation in Vibrationally Nonequilibrium Molecular Gas Flows*. Revue Phys. Appl., v. 17, N1. 1982.

180. **Dupre G., Fomin N.A., Combourieu J., Paillart C., Soloukhin R.I.** *Decomposition of Hydrogen Azide in Shock Waves*. In Book "Shock Tubes and Waves" Eds. C.Treanor and C.Hall, State Univ. of N.Y. Press, N.Y., 1982.

181. **Emrich R., Fomin N.A., Lysenko O.G., Labuda S.A. Soloukhin R.I**. *Transition of Liquid Carbon Dioxide to Gas-Solid Mixture*. in Book "**Flow Visualization II**" Ed. by W.Merzkirch, Hemisphere Publ. Corp., N.Y., **1982**, p.503-508

182. **Grigoriev P.V., Murikov S.A., Soloukhin R.I., Yacobi Yu.A.** *Determination of the temperatures of the rotational states of CO_2 molecules in gasdynamic laser*. Chem. Phys., No. 2, 1982. (in Russian)

183. **Fomin N.A., Labuda S.A. Soloukhin R.I., Zhdanok S.A.** *Nitrogen Oxidation in the Non-Equilibrium Supersonic N_2-O_2 Flow*. 13th Intern. Symp. on Rarefied Gas Dynamics, v.II, Institute of Thermophysics, Novosibirsk, 1982.

184. **Zhdanok S.A., Soloukhin R.I.** *Nitrogen oxidation in the adiabatically expanding air flow*. Letters in ZhTF, v. 9, No. 5, 1982. (in Russian)

185. **ArbuzovV.A., Zakharova E.I., Smirnykh V.A., Ukolov A.I.** Optics and Atomic Physics: 2nd revised and supplemented edition. **Ed. Soloukhin R.I**., Novosibirsk: Nauka 1983. (in Russian)

186. **Kovalskaya G.A., Sevastiyanenko V.G., Soloukhin R.I**. *Radiative transfer in hydrogen plasma*. IFZh, No. 6, 1983. (in Russian)

187. **Achasov O.V., Boreisho A.S., Bykov A.M., Fomin N.A., Lebedev V.F. Morozov A.V., Ragozin D.S., Soloukhin R.I.** *New honeycomb nozzle for gasdynamic lasers*. ZTF, v. 54, N9. 1984.

188. **Soloukhin R.I., Fomin N.A.** Gasdynamic Mixing Lasers. Minsk: Nauka i Tekhnika, 1984. (in Russian)

189. **Golovnev I.F., Zamuraev V.P., Kaznelson S.S., Kovalskaya G.A., Sevastiyanenko V.G.** Radiative Heat Transfer in High Temperature Gases. **Ed. Soloukhin R.I.,** Moscow: Energoatomizdat, 1984. (in Russian)

190. **Sevastiyanenko V.G., Soloukhin R.I., Kaznelson S.S**. *Radiative transfer in argon plasma*. IFZh, v. 46, No. 2, 1984. (in Russian)

191. **Achasov O.V., Kudryavtsev N.N., Novikov S.S., Soloukhin R.I., Fomin N.A.** Diagnostics of Non-Equilibrium States in Molecular Lasers. Minsk: Nauka i Tekhnika, 1985. (in Russian)

192. **Achasov O.V., Fomin N.A., Labuda S.A., Ragosin D.S., Soloukhin R.I.** *Laser diagnostics of molecular states in non-equilibrium flows*. In Book "**Optical Methods in Dynamic of Fluids and Solids**", Ed. M.Pichal, Springer-Verlag, Berlin, Heidelberg, 1985.

193. **Achasov O.V., Fomin N.A., Labuda S.A., Ragosin D.S., Soloukhin R.I.** *Laser diagnostics of molecular states in non-equilibrium flows*. Journal Experiments in Fluids, v.3, N4, 1985.

194. **Krauklis A.V., Samtsov P.P., Soloukhin R.I., Fomin N.A.** *Electron density measurements in the supersonic flow of non-equilibrium-ionized air*. ZhTF, v.56, No. 2, 1985. (in Russian)
195. **Garrido H.D., Zhdanok S.A., Soloukhin R.I.** *Vibrational relaxation of anharmonic oscillators in distributed drain of excited particles.* ZhETF, v. 89, No. 11, 1985. (in Russian)
196. **Grigoriev P.V., Malov A.N., Rudnitsky A.L., Soloukhin R.I., Studenkin Yu.E., Fedorov S.Yu., Yacobi Yu**. **A**. *Tuned lasers with the spatial distribution of generation lines inside laser cavities*. Quant. Electr., v. 12, No. 2, 1985. (in Russian)
197. **Afgan N.H., Soloukhin R.I.** Measurement Techniques in Heat and Transfer. Springer-Verlag, Berlin-N.Y.-Tokyo, 1985.
198. **Golovnev I.V., Kovalevskaya G.A., Kaznelson S.S., Sevastianenko V.G., Soloukhin R.I., Zamuraev V.P.** Radiative Heat Transfer in High-Temperature Gases. Hemi-Sphere Publ. Corp, Washington, New York, 1986.
199. **Krivoruchko K.A., Reshetin V.P., Soloukhin R.I.** *IR-radiation absorption in metal capillaries*. DAN BSSR, No. 2,1986. (in Russian)
200. **Fomin N.A.. Samtsov P.P., Soloukhin R.I.** *Effect of the State of the Cathode Surface on its Photoemission Properties.* Plasma Phys., v. 26, No. 2, 1986.
201. **Krauklis A.V., Samtsov P.P., Soloukhin R.I., Fomin N.A.** *Volume discharge in the supersonic non-equilibrium-ionized gas flow.* VI All-Union Congress on Theoretical and Applied Mechanics, Tashkent, 1986. (in Russian)
202. **Krauklis A.V., Samtsov P.P., Soloukhin R.I., Fomin N.A.** *Volume discharge in the supersonic non-equilibrium-ionized gas flow.* ZhTF, v. 56, No. 10, 1986. (in Russian)
203. **Anisimov V.N., Krivoruchko K.A., Malyuta D.D., Reshetin V.P., Sebrint A. Yu., Soloukhin R.I.** *IR-radiation absorption in metal capillaries*. Quant. Electr., v. 13, No. 12,1986. (in Russian)
204. **Krauklis A.V., Samtsov P.P., Soloukhin R.I., Fomin N.A.** *Influence of cardon dioxide on non-equilibrium ionization.* ZhTF, v. 56, No. 11, 1986. (in Russian)
205. **Krauklis A.V., Samtsov P.P., Soloukhin R.I., Fomin N.A.** *Non-Equilibrium ionization in the supersonic flow.* In Book Chemical Physics of Combustion and Explosion, Chernogolovka, 1986. (in Russian)
206. **Blinkov G.N., Vitkin D.E., Soloukhin R.I., Fomin N.A.** *Speckle photography of symmetrical flows.* DAN BSSR, v. 31, No. 10, 1987. (in Russian)
207. **Krauklis A.V., Samtsov P.P., Soloukhin R.I., Fomin N.A.** *Thermally non-equilibrium ionization in mixture of carbon dioxide with helium.* IFJ, v. 53, No. 3, 1987. (in Russian)
208. **Blinkov G.N., Vitkin D.E., Soloukhin R.I., Fomin N.A.** *Speckle photography of density gradients in an open flame.* FGV, v. 23, No. 6, 1987. (in Russian)
209. **Blinkov G.N., Fomin N.A., Soloukhin R.I.** *Multidirectional speckle photography of density gradients in a flame.* In Dynamics of Reactive Systems. Part 1: Flames, volume 113 of Progress in Astronautics and Aeronautics, pages 403-416. AIAA - Press, Washington, 1988.
210. **Fomin N.A., Soloukhin R.I.,** *Speckle photography of density gradients in reacting flows*. Proc. of International Workshop on Flame Structure, Part I, Novosibirsk, 1988