

Vladimir M. Zhdanov

I. Books and Textbooks

1. V.M. Zhdanov
Transport phenomena in multicomponent plasma. Moscow, Energoizdat (1982), 177 pp. (in Russian)
2. V.M. Zhdanov, M. Ya. Alievskii
Transport and relaxation processes in molecular gases, Moscow, Nauka, Fizmatlit (1989), 336 pp. (in Russian)
3. V.M. Zhdanov
Transport processes in multicomponent plasma. London and New York, Taylor & Francis (2002), 277 pp.
4. V.M. Zhdanov
Transport processes in multicomponent plasma, Moscow, Fizmatlit (2009), 279 pp. (in Russian)
5. V.M. Zhdanov, V.S. Galkin, O.A. Gordeev, I.A. Sokolova
Models of molecular transport processes in physics-chemical gas dynamics. Reference book : **Physics-chemical processes in gas dynamics,** vol.3, ed. by S.A. Losev, Moscow, Fizmatlit (2013), 283 pp. (in Russian)
6. V.M. Zhdanov
Isotopes separation secrets. Popular-scientific publication/ Moscow, National Research Nuclear University MEPhI (2004), 140 pp. (in Russian)
7. V.M. Zhdanov
Transport phenomena in gases and plasmas. Textbook for physics engineers, Moscow, National Research Nuclear University MEPhI (2004), 240 pp. (in Russian)
8. V.M. Zhdanov
Isotopes separation secrets. Textbook for physics engineers, second edition, Moscow, National Research Nuclear University MEPhI (2011), 224 pp. (in Russian)

II. Papers in journals

1. Zhdanov V., Kagan Yu., Sazykin A. **Effect of viscous transfer of momentum on diffusion in a gas mixture.** Soviet Physics JETP, v.15, pp.596-601 (1962) - Translated from Zh. Exp. Teor. Fiz., **42**, 857-867 (1962)
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5. Alievskii M. Ya., Zhdanov V.M., Poljanskii V.A. **Viscous - stress tensor and heat flux in two-temperature partially ionized gas.** Zh. Prikl. Mekh. Tekhn. Fiz., **№ 3**, 32 - 42 (1964) - (in Russian)

6. Zhdanov V.M. **Electrical conductivity of a partially ionized gas mixture in a magnetic field.** Journal of Applied Mechanics and Technical Physics, v. **6** , № 4, pp. 41-43 (1965) - Translated from Zh. Prikl. Mekh. Tekhn. Fiz., № **4**, 66-70 (1965)
7. Zhdanov V.M. **Theory of slip at the boundary of a gaseous mixture,** Technical Physics. The Russian Journal of Applied Physics, v.**12**, pp. 134-136 (1967) - Translated from Zh. Tekhn.Fiz., **37**,1 92-197 (1967)
8. Zhdanov V.M. **The kinetic theory of a polyatomic gas.** Soviet Physics JETP, v.**26**, pp.1187-1191(1968) - Translated from Zh.Exp.Teor Fiz., **53**, 2099-2108 (1967)
9. Alievskii M.Ya. , Zhdanov V.M. **Transport and relaxation phenomena in polyatomic gas mixtures.** Soviet Physics JETP, v.**28**, p.116-121 (1969) - Translated from Zh.Exp.Teor. Fiz, **55**, 221 – 232 (1968))
10. Zhdanov V.M., Skachkov P.P. **Transport equations for chemical reactions in an inhomogeneous gas phase .** Fluid Dynamics, v.**7** (3), pp.473-483 (1974) - Translated from Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, № **3**, 124-136 (1972)
11. Zhdanov V.M., Skachkov P.P. **On the theory of nonequilibrium phenomena in chemical reacting gas mixture.** Soviet Physics Doklady, Vol. 18, pp.449-451 (1973) - Translated from Doklady Akademii Nauk,**211**, № 3 , 555 - 558 (1973)
12. Abramov A.A., Zhdanov V.M. **On the calculation of reacting rate in a volume of porous media.** Teor. osnovy khim. tekhnologii,**7**, № 3, 365 - 372 (1973) (in Russian)
- 13.Zhdanov V.M., Skachkov P.P. **Transport equations for chemical reacting inhomogeneous gases. Consideration of internal degrees of freedom.** Fluid Dynamics. v. **9** (4), pp.603-609, (1976) - Translated from Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, № **4**, 125-132 (1974)
14. Zhdanov V.M.,Shulepov L.N. **Kinetic theory of recondensation in a binary gas mixture with arbitrary Knudsen Numbers,** Fluid Dynamics, v. **10** (4), pp. 664-668 (1975) - Translated from Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, № **4**, 150-165 (1975)
15. Zhdanov V.M. **Calculation of the kinetic coefficients of molecular gases in terms of data from ultraacoustical measurements.** High Temperature, v. **15** (2), pp. 244 -248 (1977) – Translated from Teplofizika Vysokih Temperatur, **15**, 286 -290 (1977)
16. Zhdanov V.M. Yushmanov P.N. **Pfirsh- Schluter impurity diffusion.** Soviet Journal of Plasma Physics, **3** (6), pp. 662-667 (1977) - Translated from Fizika plasmy,**3**, 1193-1202, (1977)
17. Zhdanov V.M., Smirnova R.V. **Diffusion slip and barodiffusion of a gaseous mixture in plane and cylindrical channels.** Journal of Applied Mechanics and Technical Physics, v.**19**, №5, pp. 656-665 (1978)-- Translated from Zh. Prikl. Mekh. Tekhn. Fiz., № **5**, 103- 115 (1978)
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20. Zhdanov V.M. Yushmanov P.N. **Diffusion and heat transfer in a multicomponent completely ionized plasma.** Journal of Applied Mechanics and Technical Physics, v.**21**, №4, pp. 453-461 (1980) - Translated from Zh. Prikl. Mekh. Tekhn. Fiz., № **4**,24 -35 (1980)
21. Zhdanov V.M. , Zaznoba V.A. **Nonisothermic flow of gas mixture in a channel at intermediate Knudsen numbers.** PMM Journal of Applied Mathematics and Mechanics, v. **45**, № 6, pp. 801-808 (1981) – Translated from Prikl. Math. Mekh., **45**, 1063 – 1072 (1981)
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24. Zhdanov V.M., Karchevskii A.L., Lukovnicov A.I., Potanin E.P. **Isotopic cataphoresis in a crossed-field plasma centrifuge**. Soviet physics. Technical physics, v. **28**, № 9, pp. 1053 -1054 (1983) - Translated from Zh. Tekhn.Fiz., **53**, 1710 - 1713 (1983)
25. Zhdanov V.M. , Zaznoba V.A. **Nonisothermal flow of a rarefied gas in a circular cylindrical channel**. Journal of Engineering Physics and Thermophysics v.**44**, № 5, pp. 524-529 (1983) - Translated from Inzhenerno -Fizicheskii Zhurnal, **44**, 772 -778 (1983)
26. Zhdanov V.M. , Zaznoba V.A. **Gas mixture flow in a cylindrical channel at intermediate Knudsen numbers**. Journal of Engineering Physics and Thermophysics v.**45**, № 3, pp. 998-1003 (1983) - Translated from Inzhenerno - Fizicheskii Zhurnal, **45**, № 3, 403-410 (1983)
27. Zhdanov V.M. , Zaznoba V.A. **Nonisothermal flow of a rarefied multiatomic gas in a channel**. Journal of Applied Mechanics and Technical Physics, v.**26** , № 3, pp. 333-338 (1985).- Translated from Zh. Prikl. Mekh. Tekhn. Fiz., № 3, p.36-32 (1985)
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33. Zhdanov V.M., Krylov A.A., Roldughin V.I. **Kinetic theory of light-induced drift in a channel**. JETP, v.**78** (1), pp. 49-55 (1994) - Translated from Zh. Exp.Teor Fiz., **105**, 94-105 (1994)
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37. Lazarev A.V., Zhdanov V.M., Zastenker N.N., Trubnikov D.N. **Relaxation of rotational energy in supersonic gas-dynamic jet expansion into vacuum**. Journal of Applied Mechanics and Technical Physics, v. **38**(5), pp. 711 – 717 (1997) – Translated from Zh. Prikl. Mekh. Tekhn. Fiz., v. **38**, № 3, pp. 65 – 72 (1997)
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47. Zhdanov V.M., Tirskaa G.A. **A phenomenological and kinetic description of diffusion and heat transport in multicomponent gas mixture and plasma.** Journal of Applied Mathematics and Mechanics, v. **71**, №5, pp. 718 - 736 (2007) – Translated from Prikl. Math. Mekh., **71**, №5, 864 - 884 (2007)
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54. Roldughin V.I., Zhdanov V.M., Sherysheva E.E. **The effect of gas surface diffusion on the asymmetric permeability of two-layer porous membranes.** Colloid Journal. **74**, № 6, pp. 717-720 (2012) - Translated from Kolloidnyi Zhurnal, **74**, № 6, 754-759 (2012)
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III . Preprints

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2. Zhdanov V.M., Valiev S.Kh. **Effects of sound amplification and absorption in vibrationally nonequilibrium relaxing gas.** Preprint MEPhI 062-88 (1988) (in Russian)

IV . Papers in Encyclopaedia

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Y. Papers in Proceedings

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12. Zhdanov V.M. **On the theory of separation effect in the flow of gas mixture through multi-layer porous membranes.** Proceedings of the 25th International Symposium on Physics-chemical methods of separation, “Ars Separatoria 2010, pp. 39 - 42 (2010)
13. Zhdanov V.M., Roldughin V.I. **The moment method and non-equilibrium thermodynamics of rarefied gas mixture.** AIP Conference Proceedings of the 28th International Symposium on Rarefied Gas Dynamics, v. **1501**, pp. 43-52 (2012)
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