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**РАСЧЕТ ВЯЗКОСТИ ЖИДКОГО АЛЮМИНИЯ МЕТОДОМ КЛАССИЧЕСКОЙ
МОЛЕКУЛЯРНОЙ ДИНАМИКИ И КОРРЕЛЯЦИОННОЙ ФУНКЦИИ ПОПЕРЕЧНОГО ТОКА:
ИССЛЕДОВАНИЕ СХОДИМОСТИ ПО ЧИСЛУ ЧАСТИЦ**

- [1] Кондратюк Н Д, Писарев В В. Теоретические и вычислительные подходы к предсказанию вязкости жидкостей // УФН. — 2023. — Т. 193, № 4. — С. 437–461.
- [2] Assael Marc J et al. Reference data for the density and viscosity of liquid aluminum and liquid iron // J. Phys. Chem. Ref. Data. — 2006. — Vol. 35, no. 1. — P. 285–300.
- [3] Battezzati L. The viscosity of liquid metals and alloys // Acta Metallurgica. — 1989. — Vol. 37, no. 7. — P. 1791–1802.
- [4] Dinsdale A. T., Quesada P. N. The Viscosity of Aluminium and its Alloys—A Review of Data and Models // J. Mater. Sci. — 2004. — Vol. 39. — P. 7221–7228.
- [5] Jakse Noel, Pasturel Alain. Liquid Aluminum: Atomic diffusion and viscosity from ab initio molecular dynamics // Scientific reports. — 2013. — Vol. 3, no. 1. — P. 3135.
- [6] Palmer Bruce J. Transverse-current autocorrelation-function calculations of the shear viscosity for molecular liquids // Phys. Rev. E. — 1994. — Vol. 49, no. 1. — P. 359.
- [7] Dynamical properties of liquid Al near melting: An orbital-free molecular dynamics study / González David J, González Luis Enrique, López José Manuel, and Stott Malcolm J // Phys. Rev. B. — 2002. — Vol. 65, no. 18. — P. 184201.
- [8] Ropo Matti, Akola Jaakko, Jones Robert O. Collective excitations and viscosity in liquid Bi // J. Chem. Phys. — 2016. — Vol. 145, no. 18. — P. 184502.
- [9] Hess Berk. Determining the shear viscosity of model liquids from molecular dynamics simulations // J. Chem. Phys. — 2002. — 01. — Vol. 116, no. 1. — P. 209–217.
- [10] Thompson et al. LAMMPS—a flexible simulation tool for particle-based materials modeling at the atomic, meso, and continuum scales // Comput. Phys. Commun. — 2022. — Vol. 271. — P. 108171.
- [11] Molecular dynamics simulation of femtosecond ablation and spallation with different interatomic potentials / Zhakhovskii V V, Inogamov N A, Petrov Yu V, Ashitkov S I, and Nishihara K // Appl. Surf. Sci. — 2009. — Vol. 255, no. 24. — P. 9592–9596.
- [12] Alley W. Edward, Alder Berni J. Generalized transport coefficients for hard spheres // Phys. Rev. A. — 1983. — Jun. — Vol. 27, no. 6. — P. 3158–3173. — Access mode: <https://link.aps.org/doi/10.1103/PhysRevA.27.3158>.