Molecular simulation of sound propagation TAKERU YANO, Osaka
University — Numerical simulation of molecular dynamics of sound propagation in
a gas is carried out to clarify the propagation property of sound waves with large
amplitude and very high frequency. Assuming the Lennard–Jones inter-molecular
potential, we calculate the motions of hundreds of thousand of monatomic molecules
excited by an oscillating plate in a gas phase. The result is compared with cor-
responding numerical solutions of model Boltzmann equation and Navier–Stokes
equations.

Takeru Yano
Osaka University