Accepted Manuscript

The influence of vibrational state-resolved transport coefficients on the wave propagation in diatomic gases

Gilberto M. Kremer, Olga V. Kunova, Elena V. Kustova, George P. Oblapenko

PII: S0378-4371(17)30743-4
DOI: http://dx.doi.org/10.1016/j.physa.2017.08.019
Reference: PHYSA 18465

To appear in: *Physica A*

Received date : 9 June 2017
Revised date : 11 August 2017

Please cite this article as: G.M. Kremer, O.V. Kunova, E.V. Kustova, G.P. Oblapenko, The influence of vibrational state-resolved transport coefficients on the wave propagation in diatomic gases, *Physica A* (2017), http://dx.doi.org/10.1016/j.physa.2017.08.019

Highlights

1) Kinetic model for state-resolved transport coefficients.
2) Dependence of the molecular diameters on the vibrational state
3) Dependence of the transport coefficients on the vibrational stat
4) Wave propagation for gases with vibrational excitations.