THE STUDY OF INTRAMOLECULAR AND INTERMOLECULAR ENERGY TRANSFER PROCESSES IN INELASTIC SCATTERING OF ELECTRONICALLY EXCITED MOLECULAR NITROGEN AND MOLECULAR OXYGEN

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Two-state models of the strong non-adiabatic coupling are applied in the investigation of electron energy transfer in molecular collisions. The rate coefficients of inelastic scattering have been calculated for intramolecular and intermolecular processes with small energy resonance defect. The calculation has been made for singlet and triplet electronic states of molecular nitrogen and molecular oxygen. The calculated coefficients for electron energy transfers have been compared with experimental data. An agreement with experimental data shows the principal role of intramolecular or intermolecular processes in the quenching of electronically excited states of the components in molecular inelastic collisions.