

Multi-property isotropic intermolecular potentials and predicted spectral lineshapes of collision-induced absorption (CIA), collision-induced light scattering (CILS) and collision-induced hyper-Rayleigh scattering (CIHR) for H₂ -Ne, -Kr and -Xe

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Mots-cl�s	CIA [5], CIHR [6], CILS [7], induced dipole moment [8], intermolecular potential [9] Quantum mechanical lineshapes of collision-induced absorption (CIA), collision-induced light scattering (CILS) and collision-induced hyper-Rayleigh scattering (CIHR) at room temperature (295 K) are computed for gaseous mixtures of molecular hydrogen with neon, krypton and xenon. The induced spectra are detected using theoretical values for induced dipole moment, pair-polarizability trace and anisotropy, hyper-polarizability and updated intermolecular potentials. Good agreement is observed for all spectra when the literature and the present potentials which are constructed from the transport and thermo-physical properties are used.
R�sum� en anglais	
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[1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26902>

[2] <http://okina.univ-angers.fr/jl.godet/publications>

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- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=23830>
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