



# Collision-induced Raman scattering by rare-gas atoms: The isotropic spectrum of Ne-Ne and its mean polarizability

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Titre Collision-induced Raman scattering by rare-gas atoms: The isotropic spectrum of Ne-Ne and its mean polarizability

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Auteur Rachet, Florent [1], Dixneuf, Sophie [2], Chrysos, Michel [3]

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Résumé en anglais We report the room-temperature isotropic collision-induced light scattering spectrum of Ne-Ne over a wide interval of Raman shifts, and we compare it with the only available experimental spectrum for that system as well as with spectra calculated quantum-mechanically with the employ of advanced ab initio - computed data for the incremental mean polarizability. The spectral range previously limited to  $170 \text{ cm}^{-1}$  is now extended to  $485 \text{ cm}^{-1}$  allowing us to successfully solve the inverse-scattering problem toward an analytic model for the mean polarizability that perfectly matches our measurements. We also report the depolarization ratio of the scattering process, lingering over the usefulness of this property for more stringent checks between the various polarizability models.

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## Liens

[1] <http://okina.univ-angers.fr/florent.rachet/publications>

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