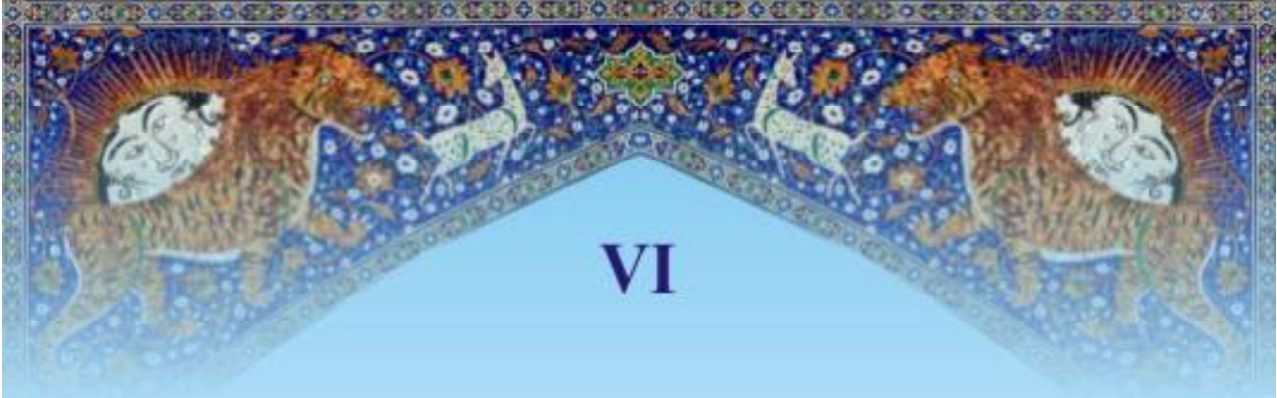




VI

**МЕЖДУНАРОДНАЯ
КОНФЕРЕНЦИЯ**

(Самарканд, 24-26 сентября 2026 года)

**АКТУАЛЬНЫЕ ПРОБЛЕМЫ
МОЛЕКУЛЯРНОЙ СПЕКТРОСКОПИИ
КОНДЕНСИРОВАННЫХ СРЕД**



I СЕКЦИЯ

СПЕКТРОСКОПИЯ МЕЖМОЛЕКУЛЯРНЫХ ВЗАИМОДЕЙСТВИЙ И ТЕПЛОВОГО ДВИЖЕНИЯ МОЛЕКУЛ В КОНДЕНСИРОВАННЫХ СРЕДАХ

THE LINE BROADENING IN THE FUNDAMENTAL AND THE FIRST OVERTONE ROVIBRATIONAL BAND OF HF AND HCl PERTURBED BY He

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Infrared spectra of HF and HCl in helium mixtures (1–10 atm) were recorded in the fundamental and first overtone regions using a Bruker IFS-125 HR spectrometer (0.005 cm⁻¹ resolution) and stainless steel cells with sapphire windows. Individual lines were fitted with Voigt profiles. This yielded collisional broadening and shifting coefficients.

Collisional parameters for H³⁵Cl and H³⁷Cl isotopologues were identical for the lines for a given line index m within the experimental error [1]. HF lines required more sophisticated modeling; the Rautian profile provided the best fit [2].

The helium broadening coefficients have a weak dependence on the vibrational excitation, whereas the shifting coefficients are highly sensitive to it. The current results are compared with the data for other hydrogen halides [3,4].

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