S-D

D_3S^+ 1984

Walters E. A., Blais N. C.

A. P. J. Chem. Phys., 1984, 80, N7, 3501 – 3502.

(см. M_2S; III)

SD_3^+

1998

130: 73154r **Microwave spectrum of the SD_3^+ ion: molecular structure.** Araki, Mitsunori; Ozeki, Hiroyuki; Saitô, Shuji (Inst. Mol. Sci., The Grad. Univ. Adv. Studies, Myodaiji, Okazaki, Japan 444-8585). *J. Mol. Spectrosc.* 1998, 192(1), 228-230 (Eng), Academic Press. The J = 1-0 to 4-3 spectral lines of SD_3^+ were measured in the 152-610 GHz region using a source-modulated microwave spectrometer. The SD_3^+ ion was generated in a free space absorption cell by a hollow-cathode discharge in a gas mixt. of D_2S and D_2. The rotational const. B_0 and the centrifugal distortion consts. D_J and D_{JK} were detd. from the measured frequencies. A vibration-rotation anal. was carried out and the r_z structures of SH_3^+ and SD_3^+ were derived from their zero point averaged rotational consts., expressed as SH_3^+: r_z = 1.36512(22) Å and θ_z = 94.098(26)°, and SD_3^+: r_z = 1.36086(16) Å and θ_z = 94.1211(195)°, where the difference between θ_z(HSH) and θ_z(DSD) was assumed to be the same as that between θ_z(HPH) of PH_3 and θ_z(DPD) of PD_3. From the shift between the r_z structures of SH_3^+ and SD_3^+, the r_s structure of SH_3^+ is r_s = 1.35001(113) Å, θ_s = 94.181(135)°. (c) 1998 Academic Press.

УБ спектр.

М.П.

С. А. 1999, 130, №6

SD_3^+ 1998

128: 328178e **Diode laser spectroscopy of the ν_1 and ν_3 bands of SD_3^+.** Xia, Changhong; Sanz, Maria M.; Foster, Stephen C. (Department of Chemistry, Mississippi State University, Mississippi State, MS 39762-9573 USA). *J. Mol. Spectrosc.* 1998, 188(2), 175-181 (Eng), Academic Press. The ν_1 and ν_3 bands of SD_3^+ were obsd. at 5.45 μm with a diode laser spectrometer. The ions were generated in a concn.-modulated, low-temp., hollow-cathode discharge of D_2 and COS gases. There were 192 lines measured and assigned to SD_3^+. The majority of these lines were assigned to the ν_3 perpendicular band with 49 lines assigned to the ν_1 parallel band. A simultaneous fit of these bands provided the 1st exptl. parameters for SD_3^+.

(ν_1, ν_3)

F: SD3+
P: 3

2000

133:326984 Rotational spectroscopy of species of astrophysical interest. Dore, Luca; Cazzoli, Gabriele Dipartimento di Chimica "Ciamician", Universita di Bologna Bologna I-40126, Italy Conf. Proc. - Ital. Phys. Soc., 67(Workshop - Molecules in Space and in the Laboratory), 91-94 (English) 2000. A review with 11 refs. is given on microwave spectroscopy of gas- phase mols. carried out in the lab. and leading to their detection in space. A block diagram of the frequency-modulated millimeter wave spectrometer is depicted together with its neg.-glow discharge cell and a no. of mol. ions detected in the lab. is listed. Emphasis was laid on the influence of the magnetic confinement in the d.c. glow discharge and on the spectroscopic identification of the 34SD3+ ion.