

Окислы
щелочных
элементов

1969

Окислы
целочных
элементов

Расшифровка Н.Ф.

Ж. ступень. Массы,
10, n 1, 131.
—, —, —

(Ступень)

III
Сл. галогенов
(цел. - зл.
мет.)

О строении мас-
ки галогенов
целочных элементов
и окислов целоч-
ных элементов.

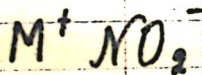
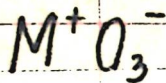
Okunishi, Y. H. et al.
Atmospheric

1972

Gaughan R. A. R.

v: Diss. Abstr. Int. 1972, 32, 6948.

(Cu SO₂) III



образование
в матрицах

М - переходный

состояние

1975

178134c Mechanism of $M^+O_3^-$ and $M^+NO_2^-$ formation by photolysis of matrix samples at 15°K., Andrews, Lester; Fevaut, David E. (Chem. Dept., Univ. Virginia, Charlottesville, Va.). *J. Mol. Spectr.* 1975, 75(1-3), 452-8. 15 refs. The species $M^+O_3^-$ and $M^+NO_2^-$ are produced in matrix samples of alkali metal atoms, NO and O_2 + NO by Hg arc photolysis. In similar studies, Milligan and Cox (1971) proposed mechanism involving the diffusion and reaction of O^- anion. The observations are better explained by photolysis of N_2O in the presence of $M^+O_2^-$ with O atom transfer to give $M^+O_3^-$ and by analogous reaction with M^+NO to give $M^+NO_2^-$.

(+1) кнтр. $M^+NO_2^-$



С.А. 1975. 82 N26

Memorable Record

1977

recept.
papers

S9: 33394x Electron-gas model for open shell-closed shell interactions. II. Application to the alkali monoxides. Clugston, Michael J.; Gordon, Roy G. (Dep. Chem., Harvard Univ., Cambridge, Mass.). *J. Chem. Phys.* 1977, 66(1), 244-7 (Eng). In the preceding paper, the electron-gas method of calcg. interat. forces was extended to the case of an open shell atom interacting with a closed shell atom. This theory is applied to the calcn. of the bond distance, disson. energy, and vibrational frequency for the II states of the alkali monoxides. Better than 10% agreement was attained with the data, which is either from expt. or from other a priori calcns. The electronic reasons behind the calcd. decreased sepn. in total energy between the Σ and II states is lower for RbO. One does not predict this change because the Σ states are inaccurate by a few tenths of an eV, owing to a small degree of covalent bonding not calculable using electron-gas methods. As in the preceding paper, in these systems the electron-gas method will be useful for the calcn. of II states but will not be reliable for Σ states. The II states involve mainly closed shells in the region of overlap, and this explains the success of the closed shell model in describing these states.

C.A., 1978, 29, N4

MO₂

1982

М-излучающий
металл

Do;

19 B800. Хемилюминесцентная реакция между димерами щелочных металлов и молекулами кислорода. Figger H., Kowalski A., Zhu X. H. Chemiluminescent reaction between alkali dimers and oxygen molecules. «Ber. Bunsenges. phys. Chem.», 1982, 86, № 5, 470 (англ.)

Изучена хемилюминесценция (ХЛ), возникающая при пересечении сверхзвукового пучка димеров щел. металлов (ДЩМ) с тепловым пучком молекул кислорода. На основании данных спектрального анализа ХЛ сделан вывод о протекании четырехцентральной р-ции $M_2 + O_2 \rightarrow MO_2^* + M$; $\rightarrow MO_2 + M^*$, где М — атом щел. металла. Получен более низкий (по сравнению с лит. данными) предел значения энергии связи MO₂. Высказаны соображения в пользу гарпунного механизма р-ции. Предлагается аналогичное объяснение экспериментов по наблюдению ХЛ в скрещенных молек. пучках между ДЩМ и молекулами хлора.

А. А. Иогансен

Х. 1982, 19, № 19



1983

M-исполн.
Метан

Figger H., Schrepp W.,
et al.,

Химико-
миссия.

J. Chem. Phys., 1983,
79, N3, 1320-1325

MO_2

(Om. 17410)

1983

M-ислов.
мемал

чекмр
хеместомм -
хеместомм

99: 79468j Chemiluminescent reaction between alkali dimers and oxygen molecules. Figger, H.; Schrepp, W.; Zhu, Xu Hui (Max-Planck-Inst. Quantenopt., D-8046 Garching, Fed. Rep. Ger.). *J. Chem. Phys.* 1983, 79(3), 1320-5 (Eng). The reaction of alkali dimers with O mols. was studied in a crossed-beam expt. Weak luminescence from the crossing zone was obsd. It was predominantly emitted by the electronically excited products of the reactions $\text{M}_2 + \text{O}_2 \rightarrow \text{MO}_2 + \text{M}^*$ and $\text{M}_2 + \text{O}_2 \rightarrow \text{MO}_2^- + \text{M}$ (* = electronic excitation). Lower limits for the dissocn. energies between M and O_2 in the product mols. were derived from the cut-off wavelengths of the continuous chemiluminescence spectra obsd. They are consistent with the values calcd. using an ionic model for the product mol. MO_2 .

C.A. 1983, 99, N10

MO

1985

Larghoff S. R.,

Bauschlicher Ch. W., Jr.,
et al.

Comp. AB Initio Quan-
tum Chem. Exp. Small
Mol., Proc. Symp. 1984
(pub. 1985), 357-407.

(cer. MX; III)

M-geleerd
nem.

(De, Ze, We,
meop.
paerem)

MO

1986

Langhoff S.R., Dauschli-
cher Ch. W., Jr.,

(De, Ze, We
теор. расч.)

J. Chem. Phys. 1986,

84 (8), 4474-80.

М-изложной

тема. Theoretical study of the
diatomic alkali and alka-

C.A. 1986, 104, N 22, 195684 line earth
oxides.