



enimine on an epoxy ether, 2-methoxy-2-phenyl-1-oxaspiro[2.5]octane,⁶ in 84% yield (bp 102–105° (0.01 mm), n_D^{25} , 1.5502). After 7 was subjected to the same rearrangement conditions, most of the starting material (55%) was recovered unchanged and an examination of the infrared spectrum of the crude reaction mixture provided evidence that no detectable amount of 6 was formed.

Upon hydrogenation in ethyl acetate at atmospheric pressure in the presence of 10% palladium on carbon, 6 was selectively reduced to 2-N-ethylamino-2-phenylcycloheptanone (8), characterized as its hydrochloride (85%), mp 233–235° dec, $pK_a' = 7.70$ (50% methanol). Ketone 8 was converted to the corresponding oxime 9 (64%), mp 105–106°, $pK_a' = 8.75$ (50% methanol). Synthesis of 9 was also achieved by the action of ethylamine on the known 2-chloro-2-phenylcycloheptanone oxime⁹ (12). Structure 9 was further confirmed by the formation of 6-benzoylhexanamide (10) (60%), mp 107–108°, when the oxime was subjected to Beckmann degradation conditions using polyphosphoric acid. On treatment with aqueous alcoholic sodium hydroxide 10 was hydrolyzed to the known 6-benzoylhexanoic acid (11) (90%), mp 82–83°. The identity of 11 was established by mixture melting point determination with an authentic sample.

All new numbered compounds have analyses and spectral data consistent with their structures.

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(9) D. Ginsberg and R. Pappo, *J. Am. Chem. Soc.*, **75**, 1098 (1953).

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Additions and Corrections

Catalysis of α -Hydrogen Exchange. I. The Reaction of Isobutyraldehyde-2-*d* with Tertiary Amines and Oxygen Bases [*J. Am. Chem. Soc.*, **87**, 5050 (1965)]. By JACK HINE, JAMES G. HOUSTON, JAMES H. JENSEN, and JULIEN MULDER, School of Chemistry, Georgia Institute of Technology, Atlanta, Georgia.

In this paper an incorrect value for the van der Waals radius of argon was used. The distance 2.45 Å, at which the energy of repulsion is 11.2 kcal/mole, is 64% of 2 times 1.91 Å, the atomic radius for argon listed by G. Pannetier, "Nouveau Traité de Chimie Minérale," P. Pascal, Ed., Vol. 1, Masson et Cie., Paris, 1956, p 941. With this change, eq 2 becomes

$$E_r = 0.112 \left(\frac{d_0}{d}\right)^{11} - 0.175 \left(\frac{d_0}{d}\right)^7 + 0.06 \quad (2)$$

The energies of repulsion (calculated without allowance for molecular distortion) are only 32% as large as

those calculated originally, but they are still considerably larger than the experimental values. None of the qualitative conclusions is affected by this change.

A Molecular Orbital Theory of Optical Rotatory Strengths of Molecules [*J. Am. Chem. Soc.*, **88**, 4157 (1966)]. By YOH-HAN PAO and D. P. SANTRY, Bell Telephone Laboratories, Inc., Murray Hill, New Jersey, and Carnegie Institute of Technology, Pittsburgh, Pennsylvania.

On page 4158, eq 1.2 should read

$$\psi_i = \sum_{\mu} \chi_{\mu} C_{\mu i} \quad (1.2)$$

On page 4159, line 10 of column 1 should read M is the magnetic moment operator. Equation 2.9 should read