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Erratum

# Erratum to "Photochemistry of the gaseous hydrogen peroxide–carbon monoxide system. III. Calculated energetics for possible $HO_2$–CO complexes" [J. Photochem. Photobiol. A: Chem. 85 (1995) 201–205] ☆

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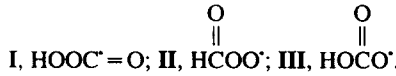
The publisher regrets that structures **II** and **III** were omitted from the Abstract. It is reprinted here in full.

**Abstract**

At 298 K, $HO_2$ radicals formed by secondary reactions in the photochemistry of the $H_2O_2$–CO system do not react with CO, whereas OH radicals formed in the primary process do. To explain the non-reactivity of $HO_2$, we made Hartree-Fock calculations of the energies needed to form three probable $HO_2$–CO intermediate radical complexes:



**I**, $HOOC^{\bullet}=O$; **II**, $HCOO^{\bullet}$; **III**, $HOCO^{\bullet}$.

The values of $\Delta E$ for the reaction $HO_2 + CO \rightarrow R$ and $\Delta H_f^\circ$ for R obtained at 298 K are as follows:

| | R | | | | |
|---|---|---|---|---|---|
| | **I** | **II** (sym) | **II** (anti) | **III** (sym) | **III** (anti) |
| $\Delta E$ (kJ) | 89 | 6 | 9 | −280 | −259 |
| $\Delta H_f^\circ$ (kJ mol$^{-1}$) | −22 | −105 | −102 | −391 | −370 |

From the high-temperature rate data, we conclude that the first stage of the reaction is the formation of complex **I** with $\Delta E$ the same or almost the same as the activation energy for the reaction to yield products $CO_2$ and OH, and that every collision of the reactants with sufficient energy yields the complex.

*Keywords:* Hydrogen peroxide–carbon monoxide; Energetics; $HO_2$–CO complexes

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