

NOVEL OBSERVATIONS ON RACEMIZATION

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The well studied process of racemization of chiral molecules has been, both historically and currently, an attractive subject with a tight connection to the meaning of life. The present racemization theories, which are strongly supported by numerous experiments, are thenno-dynamical with a classically associated activation energy barrier E_a . There are fewer experiments in gas phase racemization, though similar phenomena had been observed. In contrast, the academically correct statement that the quantum, parity conserving, stationary states of isolated molecules are achiral, seems to be practically irrelevant for the interpretation of racemization processes. Combining these two different scientific hierarchies under a single acceptable theoretical frame had been attempted before and two basically distinct physical pictures emerged. The aim of this note is to reexamine these two approaches in terms of possible future experiments.