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# EDITORIAL AND REVIEW

## Theoretical Chemistry: Molecular Spectroscopy and Dynamics

39th Symposium on Theoretical Chemistry 2003 (STC 2003)  
28 September to 2 October 2003, Gwatt, Lake Thun, Switzerland<sup>#</sup>

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*Abstract:* We provide a short review of the scientific meeting defined by the title of this article, which may at the same time serve as a compact review of the field with a substantial number of references to recent work. Exciting new developments in experiments on high-resolution molecular spectra and their analysis as well as new theoretical developments in the calculations of such spectra and the related time-independent and time-dependent quantum dynamics of molecules have led to new answers but also to new questions in the fields of molecular kinetics, molecular reaction dynamics, molecular chaos and statistical mechanics as well as fundamental symmetries in molecular processes. Particular stress is placed on fundamental aspects and new directions.

**Keywords:** Chemical reaction kinetics · Molecular dynamics · Molecular spectroscopy · Quantum chemistry · Theoretical chemistry