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20. Additional remarks on describing intramolecular dynamics -- Conclusion -- Appendices -- Bibliography -- Index

Sommario/riassunto

The main goal of this book is to give a systematic description of intramolecular quantum dynamics on the basis of only the symmetry principles. In this respect, the book has no analogs in the world literature. This approach does not introduce a configuration space of the molecular system in explicit form at all and, consequently, does not consider in explicit form the wave functions of the coordinates of this space. However, precisely because of its deep philosophical and technical difference this approach is the only possible for the solution of many topical problems of the internal dynamics of molecules. The obtained models lead to a simple, purely algebraic, scheme of calculation and are rigorous in the sense that their correctness is limited only to the correct choice of symmetry of the internal dynamics. The book is basically intended for scientists working in the field of molecular spectroscopy, quantum and structural chemistry. The reader is not supposed to know the apparatus of group representation theory needed for application of symmetry methods in quantum intramolecular dynamics since the first part of the book is dedicated to it.