

Editorial foreword

This collection of papers represents a selection of new results of mathematical chemistry topics presented at the 7th International Conference on Mathematical Chemistry and the 3rd Girona Seminar on Molecular Similarity, held in Girona, Catalonia, Spain, May 26–31, 1997, and organized by Professor Ramon Carbó-Dorca of the University of Girona.

Many of the accounts in this collection have a strong emphasis on molecular similarity and on the mathematical chemistry methods used in various innovative applications of similarity measures, including some practical problems of molecular modeling and biochemical design. Nevertheless, the selected papers represent a broad cross-section of current trends in contemporary mathematical chemistry, ranging from the fundamental questions of the quantum mechanical definition of a molecule and algebraic techniques of molecular structure research to the dynamic behavior of propagating fronts in reaction–diffusion systems. It is our hope that this selection of topics will provide new motivation for chemists as well as mathematicians, by facilitating novel mathematical formulations of chemical problems based on available but seldom-used mathematical techniques, and also by demonstrating the need for the development of new mathematical tools suitable to address some of the fundamental or applied problems of modern chemistry.

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