





an Open Access Journal by MDPI

Theoretical Investigations of Reaction Mechanisms II

Guest Editor:

Dr. Maxim L. Kuznetsov

Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Avenue Rovisco Pais, 1049-001 Lisbon, Portugal

Deadline for manuscript submissions:

closed (30 June 2023)

Message from the Guest Editor

Molecular design, optimization of reaction conditions, and the planning of a chemical synthesis cannot be achieved without knowledge of reaction mechanisms and driving forces of chemical processes. Computational methods of quantum chemistry represent a powerful tool for the understanding of the reaction mechanisms and key factors governing chemical reactions. Such methods are indispensable for the interpretation and analysis of experimental results and provide invaluable information, complementary to the experimental data, about molecular systems and processes. Computational methods are extremely valuable for mechanistic studies of reactions proceeding via formation of short-lived intermediates that cannot be detected experimentally, being the only possibility to obtain information about intimate details of the chemical processes when experimental methods cannot help in the understanding of the reaction mechanisms. Manuscripts that report mechanistic studies of any organic, inorganic or organometallic reactions with help of computational methods or deal with understanding of the key factors and driving forces governing chemical processes are welcome for this Special Issue











an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Igor Alabugin

Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL 32306, USA

Message from the Editor-in-Chief

Chemistry is a broad science and in *Chemistry* we hope to showcase the excellence of this fundamental discipline. Open Access publishing allows scientists to publish their research in a way that reaches the widest possible audience. In *Chemistry* we aspire to build a genuinely transdisciplinary culture in which communication of results between scientists active in different areas and between scientists and the broader public highlights the benefits that chemistry can bring to society. We encourage papers on all aspects of chemistry ranging from astrochemistry to zoochemistry, with everything in between. We also very strongly welcome inter- and multidisciplinary papers which expand the subject beyond its present horizons. We also welcome themed issues collecting reviews and state-of-the-art papers in topical areas of chemical science.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, ESCI (Web of Science), CAPlus / SciFinder, and other databases.

Reliable service: rigorous peer review and professional production.

Contact Us