

## Preface

### XVII Russian international conference on chemical thermodynamics in Russia (RCCT2009)

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Biennial XVII Russian International Conference on Chemical Thermodynamics in Russia (RCCT2009) was held in Kazan, the capital of Tatarstan Federative Republic, a thousand-year-old city on the Volga river, the city of the first president of ICTA Lev G. Berg.

RCCT2009 was organized by the Russian Academy of Sciences (RAS), Ministries of Education and Science of the Russian Federation and Tatarstan, Russian Foundation for Basic Research (RFBR), Mendeleev Russian Chemical Society, IUPAC, IACT, Kazan State Technological University, and Arbuzov Institute of Organic and Physical Chemistry of RAS.

More than 400 researchers from Russia, former SU countries and from Europe, Asia, and America presented their reports in plenary, oral, and poster sessions. 15 plenary lectures, 170 oral, and more than 300 poster presentations were reported in five conference sessions:

- General problems of chemical thermodynamics.
- Thermodynamics of individual substances.
- Thermodynamics of multi-component systems.
- Applied aspects of chemical thermodynamics.
- Thermodynamics of supercritical fluids.

Actual problems of thermodynamics were discussed in round tables: “Properties of substances and materials assessed based on the computer simulation,” “Thermodynamics of nanosystems,” “Thermodynamics of geochemical

processes,” “Problems of chemical thermodynamics education,” and “To the 100th anniversary of F. Haber and C. Bosch preparation of ammonia by the contact method.”

Participants of the Conference have had the ability to acquaint with the new research techniques of different companies.

The special attention of Conference organizers was given to the presentation of young researchers whose best reports were awarded by the awards from the Organizing Committee, Tatarstan Chemical Society and Netzsch Gerätebau GmbH.

During the Conference, participants have seen the sights of Kazan Kremlin, visited the famous Virgin Monastery of Raifa and enjoyed the view of Volga banks during the short boat trip.

In this special chapter, we present the selected papers of RCCT2009 devoted to different aspects of chemical thermodynamics.

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