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- NASA's Upper Atmosphere Research Program

6th International Conference on Chemical Kinetics

25 - 29 July 2005

National Institute of Standards and Technology (Gaithersburg, MD)

<http://www.nist.gov/kinetics2005>

About This Conference

● This conference series, inaugurated in 1978, brings scientists together to discuss fundamental issues associated with experimental and theoretical methodologies of chemical kinetics in all physical phases. To accelerate the inclusion of chemical kinetics data into computational simulations (e.g., of flames, atmospheres, and semiconductor processing), the conference will encourage dialogue between the producers and consumers of these data. Topics will include state-of-the-art laboratory rate measurements, computational studies of chemical reactions, and process simulations that incorporate detailed rate data.

● Abstracts are due 3 June 2005 (See website for instructions.)

● Register for this meeting now at the web-based registration desk.

● Subject areas of interest include:

- **experimental measurements** of the rates and mechanisms of gas, liquid, and heterogeneous reactions involving atomic and polyatomic free radicals and molecules.
- **modeling** of real world systems with fundamental chemical kinetic rate data, e.g., combustion, atmospheric chemistry, semiconductor processing, plasma chemistry, and chemical vapor deposition.
- **applications of theory** to kinetics including:
 - tunneling corrections
 - calculation of reaction mechanisms
 - development of estimation schemes
 - validation of computational uncertainties.
- **thermochemistry and reactivity patterns** of free radicals, ions, and electronically excited species.
- **intramolecular and intermolecular energy transfer.**
- **chemistry** in exotic and extreme environments.

Sessions:

The Conference will feature nine oral presentation sessions at NIST comprised of plenary and contributed lectures. Three poster sessions will be convened in a local hotel.

Organizing Committee:

Jeffrey W. Hudgens, Chair
Jeffrey A. Manion, Chair
Wing Tsang
Thomas Allison
Donald Burgess

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Plenary Speakers

- **Prof. Michael Frenklach** (U. of California, Berkeley) "*Development of Predictive Models for Complex Reaction Systems*"
- **Dr. Carlos Gonzalez** (NIST) "*On the Possibility of Validation of Quantum Chemistry Methodologies for Computational Kinetics*"
- **Prof. John H. Kiefer** (U. of Illinois, Chicago) "*Some observations of vibrational relaxation, unimolecular dissociation, and unimolecular incubation at high temperatures*"
- **Dr. Stephen Klippenstein** (Combustion Research Facility) "*Predictive Theory for Radical-Radical Kinetics*"
- **Dr. John Orlando** (National Center for Atmospheric Research) "*The Atmospheric Chemistry of Alkoxy Radicals*"
- **Dr. William J. Pitz** (Lawrence-Livermore National Laboratory) "*Challenges in the Development of Detailed Chemical Kinetic Mechanisms for Practical Fuels*"
- **Dr. Ross J. Salawitch** (Jet Propulsion Laboratory and California Institute of Technology) "*Atmospheric Modeling and Measurements: Reducing Uncertainties through Improved Kinetics and Spectroscopic Data*"