Coming Events

25TH ANNUAL MEETING OF THE SOCIÉTÉ DE CHIMIE PHYSIQUE, FRANCE

Kinetics of Chemical Reactions in Heterogeneous Systems

9–12 July 1974, Dijon, France

The discussion will deal only with the chemical kinetics of systems in which at least one of the reactants or products does not belong to the same phase as the others.

The following subjects are outside the scope of the meeting:

- purely physical changes (melting, dissolution, crystallizations, etc. . . .)
- heterogeneous catalysis
- electrode processes
- physical adsorption and all processes related to chromatography and ion-exchange resins
- chemical adsorption unless directly related to reaction kinetics of heterogeneous systems
- diffusion as such; diffusion can be considered in transfer processes related to chemical changes
- polymerization kinetics.

However, kinetics of heterogeneous systems including organic solids are part of the discussion theme.

The following examples are only illustrative of the research fields to be included in the discussion:

- gas–solid reactions:
  - oxidation of metals and alloys (meaning any reaction resulting in an increase in the oxidation state)
  - oxidations in which the non metallic element dissolves in the metal and the protecting compound
  - reactions of oxides and salts with oxygen
  - carbide, silicide, nitride, boride etc. . . . formation
- reduction of solid state compounds by H_2, CO, CH_4, S, etc. . . .
- endo and exothermic decomposition of inorganic and organic solids
- gas + gas → solid reactions
- doping from a gaseous phase (e.g. of silicon by $POCl_3$, BH_3, AsH_3, etc. . . .)

- solid–liquid reactions:
  - hydration processes in solids
  - mechanisms of concrete and plaster setting
- gas–liquid reactions:
  - oxidation of liquid metals
  - reaction of molten salts with gases
- solid–solid reactions.

Classical aspects of solid-state chemistry will not be stressed. The emphasis will be on the kinetic aspects, especially the experimental and theoretical study of reaction mechanisms, the definition and localization of elementary reaction steps, the appearance and annihilation of defects, the dependence of new structures on primitive or intermediate structures. The effects of radiations and strains, transfer problems related to the changes in heterogeneous systems, the influence of Wadsley defects, dislocations and grain boundaries will also be discussed.

*

Proposals for contributions (title plus an abstract of at most 300 words) must be submitted before 15 October 1973 to:

Mr. C. TROYANOWSKY
General Secretary
Société de Chimie physique
10, rue Vauquelin
75231 PARIS CEDEX 05.

Working languages: English, French, German. Acceptance will be notified before the end of 1973.

Authors will be requested to send in their full manuscripts (at most 6 typewritten pages, size 21 × 29.7) *before 1st March 1974.*

The Proceedings, including plenary lectures and discussions, will be published in book form.

AMERICAN VACUUM SOCIETY
ANNOUNCEMENT OF SHORT COURSES

A four-day basic course in Vacuum Technology and six special subject one-day courses will be offered in conjunction with the 20th National Vacuum Society Symposium to be held at the Americana Hotel, New York City, New York, October 9th through 12th. The basic course will treat the field of Vacuum Technology from fundamental theory through state-of-the art concepts.

The special subject one-day courses are basic and cover equipment, theory and application. The course titles are: Freeze Drying (Oct. 9th), Partial Pressure Analysis (Oct. 10th), Vacuum Microbalance (Oct. 11th), Evaporation Methods (Oct. 11th), Surface Analysis (Oct. 12th), and Sputtering/Ion Plating (Oct. 12th).

For course outlines and/or application forms write Nancy HAMMOND, American Vacuum Society, 335 East 45th Street, New York City, 10017. For other information call Nancy HAMMOND at 212-MU5-1940 or call Vivienne J. HARWOOD 301-530-7745.

SHORT COURSE ON VACUUM MICROBALANCE TECHNIQUES

A brief historical introduction will be followed by a description of the various balances, the beam balance in a microweighing system, methods of calibration, the principles of operation and the selection of a balance. Instrumental and enviromental effects that produce errors, such as sorption, temperature, static charge, convection, buoyancy and thermomolecular flow effects will be discussed. The applications of microbalances for various measurements and special problems encountered will be covered. The principles of operation of the quartz crystal oscillator, sources of error, special problems and applications will be presented.

The course will be offered at the 20th American Vacuum Society Symposium at the Americana Hotel in New York City on October 11, 1973. For an application form write to Nancy HAMMOND, AVS, 335 East 45th Street, New York City 10017 (212-MU5-1940). For further information contact Dr. A. W. CZANDERNA, P. O. Box 551, Potsdam, New York 13676 (315-268-6605) or Vivienne HARWOOD (301-530-7745).