

## LIST OF ORIGINAL PAPERS

### SESSION I

- A. F. Bedford, A. E. Beezer, C. T. Mortimer, and H. D. Springall: The heats of formation of some bicycloheptane derivatives (*University of Keele, Keele, England*)
- E. Calvet and H. Tachoire: Bomb microcalorimeter. Use of a glass bomb, application (*Institut de Microcalorimétrie et Thermogénèse, Marseille, France*)
- M. Colomina, R. Pérez-Ossorio, M. L. Boned, and C. Turrión: Thermochemical investigations on alkylsubstituted benzoic acids (*Instituto de Química Física, Madrid, Spain*)
- J. D. Cox, H. A. Gundry, and A. J. Head: The heats of combustion of some organo-fluorine compounds by rotating-bomb calorimetry (*National Chemical Laboratory, Teddington, England*)
- J. V. Davies, A. E. Pope, and H. A. Skinner: The heats of combustion of some tetra-alkyls of tin (*Department of Chemistry, University of Manchester, Manchester, England*)
- W. D. Good, M. Månsson, and J. P. McCullough: Thermochemistry of boron and some of its compounds. The heats of formation of trimethylamineborane and orthoboric acid (*Bartlesville Petroleum Research Center, Bureau of Mines, Bartlesville, Okla., U.S.A.*)
- P. Gross and C. Hayman: Heats of formation of the tetrachlorides of vanadium and hafnium (*Fulmer Research Institute Ltd., Stoke Poges, Bucks., England*)
- W. N. Hubbard, H. M. Feder, E. Greenberg, J. L. Margrave, E. Rudzitis, and S. S. Wise: The application of fluorine bomb calorimetry to the solution of some persistent problems in light element thermochemistry (*Argonne National Laboratory, Argonne, Illinois, U.S.A.*)
- H. Mackle and P. A. G. O'Hare: A high-precision aneroid semi-micro combustion calorimeter (*Department of Chemistry, The Queen's University of Belfast, Belfast, N. Ireland*)
- C. T. Mortimer and P. W. Sellers: Determination of the heats of formation of triphenylarsine and trimethylaluminium using a rotating-bomb calorimeter (*University of Keele, Keele, England*)
- M. Månsson and S. Sunner: The heat of formation of sulphuric acid (*Thermochemistry Laboratory, University of Lund, Lund, Sweden*)
- G. Pilcher, A. S. Pell, and D. J. Coleman: The heats of formation of alkyl ethers (*Chemistry Department, University of Manchester, Manchester, England*)

### SESSION II

- I. Danielsson, B. Nelander, and S. Sunner: An isothermal jacket titration calorimeter (*Thermochemistry Laboratory, University of Lund, Lund, Sweden, and Department of Physical Chemistry, Åbo Akademi, Åbo, Finland*)

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- H. C. Duus and D. P. Mykytiuk: Thermochemistry of phosphorous trifluoride (*Plastics Department, E. I. du Pont de Nemours & Co., Wilmington, Delaware, and Chemical Engineering Dept., University of Massachusetts, Amherst, Massachusetts, U.S.A.*)
- A. Ferrier: Un calorimètre a dissolution adiabatique realise en graphite. L'enthalpie de deshydratation de la goethite (*Institut de Recherches de la Sidérurgie, Saint-Germain-en-Laye, France*)
- M. A. Frisch and H. Mackle: A high-precision semi-micro aneroid isothermal reaction calorimeter (*Department of Chemistry, The Queen's University of Belfast, Belfast, N. Ireland*)
- P. G. Gerding, I. Leden, and S. Sunner: The design and testing of a reaction calorimeter for enthalpy studies on complex formation (*Department of Physical Chemistry and the Thermochemistry Laboratory, Lund University, Lund, Sweden*)
- S. R. Gunn: Heats of explosion of unstable gaseous hydrides (*University of California, Lawrence Radiation Laboratory, Livermore, California, U.S.A.*)
- S. R. Gunn: Comparison standards for solution calorimetry (*University of California, Lawrence Radiation Laboratory, Livermore, California, U.S.A.*)
- R. J. Irving and I. Wadsö: Use of tris(hydroxy methyl)aminomethane as a standard substance in reaction calorimetry (*Battersea College of Technology, London, S.W.11, England and Thermochemistry Laboratory, University of Lund, Lund, Sweden*)
- S. Johansson: A sensitive, automatically recording calorimeter for enthalpy titrations (*Department of Inorganic Chemistry, Royal Institute of Technology, Stockholm, Sweden*)
- W. H. Johnson and J. R. Ambrose: The heat of oxidation of aqueous sulphur dioxide with gaseous chlorine (*National Bureau of Standards, Washington, D.C., U.S.A.*)
- W. J. Johnson and S. Sunner: The heats of solution and oxidation of sulphur dioxide (*National Bureau of Standards, Washington, D.C., U.S.A., and Thermochemistry Laboratory, University of Lund, Lund, Sweden*)
- J. R. Lacher, P. A. Fowell, and J. D. Park: Reaction calorimetry (*University of Colorado, Boulder, Colorado, U.S.A.*)
- A. E. Pope and H. A. Skinner: The heats of reaction of diborane with ethylene and isobutene (*University of Manchester, Manchester, England*)
- P. Sellers, S. Sunner, and I. Wadsö: Heats of ionization of arsenious and arsenic acids (*Thermochemistry Laboratory, Lund University, Lund, Sweden*)
- S. Sunner and S. Thorén: The heat of oxidation of aqueous arsenious oxide with chlorine (*Thermochemistry Laboratory, University of Lund, Lund, Sweden*)

## SESSION III

- C. G. V. Burgess, R. H. E. Duffett, and G. J. Minkoff: Molecular sieves: Unusual temperature effects on the sorption of long chain normal paraffins (*Chemicals Division, BP Chemical Co. Ltd., Sunbury-on-Thames, England*)
- M. Diaz Peña and F. F. Martin: Thermodynamics of mixtures of n-alcohols (*Instituto de Quimica Fisica "Rocasolano", Madrid, Spain*)

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- P. G. Francis, M. L. McGlashan, and C. J. Wormald: Isothermal Joule-Thomson coefficients of vapours (*Department of Chemistry, The University, Reading, England*)
- S. J. Gregg: The heat of immersion of some inorganic solids (*Department of Chemistry, University of Exeter, Exeter, England*)
- Th. Holleman: A calorimeter for measuring heats of mixing of binary liquid mixtures in the range between 20 and 150°C (*Koninklijke/Shell-Laboratorium, Amsterdam, Holland*)
- O. J. Kleppa, L. S. Hersh, and J. M. Toguri: Thermochemistry of simple fused salt mixtures (*Institute for the Study of Metals and Department of Chemistry, University of Chicago, Chicago 37, Illinois, U.S.A.*)
- I. G. Murgulescu and D. I. Marchidan: Chaleur de mélange des systèmes  $\text{PbBr}_2 + \text{PbCl}_2$  et  $\text{KBr} + \text{KCl}$  à l'état fondu (*Physical-Chemistry Laboratorium, Bucarest University, Bucarest, Rumania*)
- I. G. Murgulescu and E. Tomus: Heat of solution of anhydrous and hydrated barium bromate (*Physical-Chemistry Laboratorium, Bucarest University, Bucarest, Rumania*)
- I. G. Murgulescu and R. Vilcu: Ebulliometrie bei Überdruck (*Physical-Chemistry Laboratorium, Bucarest University, Bucarest, Rumania*)
- Ch. G. Savini and H. C. Van Ness: An isothermal calorimeter for endothermic heats of mixing (*Department of Chemical Engineering, Rensselaer Polytechnic Institute, Troy, New York, U.S.A.*)
- K. Schäfer: Mischenthalpien in Mischungen von n-Paraffinen und Aceton und ihr Zusammenhang mit zwischenmolekularen Kräften (*Physikalisch-Chemisches Institut der Universität Heidelberg, Germany*)
- G. Somsen: Heats of solution of alkali halides in formamide (*Chemical Laboratory of the Vrije Universiteit, Amsterdam, Holland*)
- F. L. Swinton: The heat of mixing of the system cyclohexane/dicyclohexyl (*Royal College of Science and Technology, Glasgow, Scotland*)
- T. Yokokawa and O. J. Kleppa: Heats of mixing in caesium-rubidium mixtures (*Institute for the Study of Metals and Department of Chemistry, University of Chicago, Chicago 37, Illinois, U.S.A.*)

#### SESSION IV

- R. Arnek, K. Schlyter, and L. G. Sillén: A computer method for refining  $\Delta H$ :s and equilibrium constants from calorimetric data (*Department of Inorganic Chemistry, Royal Institute of Technology, Stockholm 70, Sweden*)
- P. Gerding: Enthalpies and entropies of the successive steps in the formation of cadmium(II)-halide complexes in aqueous solutions (*Department of Inorganic and Physical Chemistry, University of Lund, Lund, Sweden*)
- D. N. Glew: Thermodynamic treatment of binary compound freezing point curves. Evaluation of compound formula and formation enthalpy change (*Exploratory Research Laboratory, Dow Chemical of Canada, Sarnia, Ontario, Canada*)
- I. Grenthe: Thermodynamic properties of the rare earth diglycolate and dipicolinate complexes (*Department of Inorganic and Physical Chemistry, University of Lund, Lund, Sweden*)

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- G. Olofsson: Heats of formation of adducts between antimony pentachloride and some ketones and carboxylic esters (*Institute of Chemistry, University of Uppsala, Uppsala, and Thermochemistry Laboratory, University of Lund, Lund, Sweden*)

### SESSION V

- T. H. Benzinger: Calorimetry in the biochemical laboratory (*Bio-Energetics Laboratories, Naval Medical Research Institute, Bethesda, Maryland, U.S.A.*)
- P. Boivinot and E. Calvet: Enthalpy changes associated with bacterial growths (*Institut de Microcalorimétrie et Thermogénèse, Marseille, France*)
- W. J. Evans and W. B. Carney: Heat of protonation of haemoglobin (*Seed Protein Pioneering Research Laboratory, New Orleans, La., U.S.A.*)
- R. C. Wilhoit and A. Amador: A solution calorimeter for use in biochemical studies (*Department of Chemistry, New Mexico Highlands University, Las Vegas, New Mexico, U.S.A.*)
- R. C. Wilhoit and D. Shiao: Heats of combustion of some Krebs cycle acids and related compounds (*Department of Chemistry, New Mexico Highlands University, Las Vegas, New Mexico, U.S.A.*)

### SESSIONS VI and VII

- M. Fayard: Ordering transitions in a NaCl-type mixed oxide (*C.E.C.M., Vitry/Seine, France*)
- A. Ferrier: Note concernant le calcul des enthalpies de fusion a partir des diagrammes de phases et spécialement la chaleur de fusion du fer (*Département Chimie-Physique, Institut de Recherches de la Sidérurgie, Saint-Germain-en-Laye, France*)
- K. A. Gingerich, J. Efimenko, and P. K. Lee: Mass spectrometric study of the vaporization of uranium monophosphide (*Department of Chemistry, The Pennsylvania State University, University Park, Pennsylvania, U.S.A.*)
- M. A. Greenbaum, J. Weiher, and M. Farber: A new apparatus for obtaining high-temperature heat capacity and heat of fusion data: The electron-bombardment furnace drop calorimeter (*Rocket Power Inc. Research Laboratories, Pasadena, California, U.S.A.*)
- G. J. Janz: High temperature heat contents, heats and entropies of fusion for inorganic compounds of the type— $\text{MAO}_3$  and  $\text{M}_2\text{AO}_3$  (*Rensselaer Polytechnic Institute, Department of Chemistry, Troy, New York, U.S.A.*)
- J. D. Madeley and K. S. W. Sing: Isosteric heats of adsorption of water and benzene vapour (*Royal College of Advanced Technology, Salford, and College of Technology, Liverpool, England*)
- D. L. Martin: Calorimetric investigation of the martensitic transformation in sodium: Annealing effects (*Division of Pure Physics, National Research Council, Ottawa, Canada*)
- P. Mitacek, Jr. and J. G. Aston: Calorimetric determinations of rates and energies of activation (*The Pennsylvania State University, University Park, Penna., U.S.A.*)

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- M. Olette and A. Ferrier: An adiabatic drop calorimeter for heat content measurements at high temperatures till 2200°K. Enthalpy data, including heats of fusion, for some pure elements: Silicon, iron, nickel (*Physical Chemistry Department, Institut de Recherches de la Sidérurgie, Saint-Germain-en-Laye, France*)
- G. W. Orton: Phase transitions in the tungsten-carbon system (*Department of Mechanics, USAF Academy, Colorado, U.S.A.*)
- D. W. Osborne and F. Schreiner: Calorimetry of phase transitions in MoF<sub>6</sub> and in TcF<sub>6</sub> (*Argonne National Laboratory, Argonne, Illinois, U.S.A.*)
- E. L. Pace: Phase transitions in some fluorine compounds (*Morley Chemical Laboratory, Western Reserve University, Cleveland 6, Ohio, U.S.A.*)
- H. Suga, T. Matsuo, and S. Seki: Order-disorder phase transitions of KCN crystal (*Department of Chemistry, Osaka University, Osaka, Japan*)
- C. A. Wulff: The determination of barrier heights from low-temperature heat capacity data (*Department of Chemistry, University of Michigan, Ann Arbor, Michigan, U.S.A.*)
- C. A. Wulff and E. F. Westrum, Jr: Thermal studies of the plastic crystal transition in succinonitrile (*Department of Chemistry, The University of Michigan, Ann Arbor, Michigan, U.S.A.*)