BRITISH CHEMICAL ABSTRACTS

Foreword.

The "A" section of the abstracts, dealing with pure chemistry, will be issued to Fellows of the Chemical Society and other subscribers at the end of each month, whilst the "B" section, covering applied chemistry, will appear each week, and will be circulated along with the *Journal of the Society of Chemical Industry* to members of that Society and to special subscribers.

The price of the "A" and the "B" sections is £3 13s. 6d. each per annum, post free (including joint Index), but Fellows of the Chemical Society may obtain the "B" abstracts for £1 10s. 0d., whilst Members of the Society of Chemical Industry may obtain the "A" abstracts for £2 0s. 0d. [The yearly membership subscriptions are £3 0s. 0d. in the case of the Chemical Society and £2 10s. 0d. in the case of the Society of Chemical Industry.] Copies of "A" or "B" abstracts printed on one side of the paper, and suitable for filing purposes, may be obtained at reasonable charges.

The general basis of classification adopted in the two sections is printed below. For the guidance of readers of "A" abstracts, it should be pointed out that abstracts of analytical papers may be found not only at the end of each section as tabulated below, but sometimes also, when the analytical method described has a very specialised object, in the body of the section, according to the material with which the analytical method deals.

A.—PURE CHEMISTRY.

General, Physical, and Inorganic Chemistry.

Sub-atomics.

(*a*) Atomic spectra. Infra-red, visible, ultra-violet, *X*-ray emission and absorption spectra, Zeeman and Stark effects, Compton effect.
(*b*) Electrical properties: Ionisation potentials of atoms, photo-electric and thermionic effects.
(*c*) Properties of electrons and gaseous ions. Magnetic properties.
(*d*) Isotopes—atomic weights.
(*e*) Radioactive processes.
(*f*) Other sub-atomic processes.
(*g*) Theories of atomic structure and sub-atomic mechanism.
(*h*) Atomic dimensions (except in solid state).

Molecular Structure.

(*a*) Molecular spectra: Emission and absorption spectra of organic and inorganic substances. Fluorescence, luminescence, and phosphorescence. Raman effect.
(*b*) Ionisation potentials. Photo-electric effect with compounds.
(*c*) Conductivity. Dielectric constants. Dipole moment.
(*d*) Molecular volumes.
(*e*) Optical properties: Molecular refraction, dispersion, rotatory dispersion, optical activity, magnetic rotation.
(*f*) Theories of molecular structure. Valency, secondary valency, including co-ordination, electronic and magnetic theories, constitutional formulæ of inorganic substances.
(*g*) Molecular sizes and forces. Surface tension.

Crystal Structure.

(*a*) *X*-Ray examination.
(*b*) Crystal models.
(*c*) Magnetic and electrical properties of crystals: Piezo-electricity; magnetostriction.
(*d*) Optical properties. Rotatory dispersion.
(*e*) Compressibility. Tensile strength.
(*f*) Mesomorphic state.

Physical Properties of Pure Substances (not included above).

(*a*) Molecular weights.
(*b*) Electrical constants: Conductance, thermoelectric power, light-sensitivity, etc. Magnetic susceptibility.
(*c*) Optical constants.
(*d*) Thermal constants: Specific heats, heat of change of state, boiling points, freezing points, transition points.
(*e*) Chemical constants.
(*f*) Pressures and volumes: Density, vapour pressure, coefficient of expansion, equations of state, theory of corresponding states.
(*g*) Compressibility.
(*h*) Viscosity; fluidity; plasticity.
(*i*) Diffusion.

Solutions and Mixtures.

(*a*) Gaseous mixtures, liquid mixtures (excluding dilute solutions), solid solutions (including alloys), property–composition curves.
(*b*) Miscibility of liquids and of solids. Solubility of gases and solids in liquids.
(*c*) Distribution phenomena: Partition, absorption, adsorption, surface films, surface energy, membrane effects.
(*d*) Dilute solutions: (i) Non-electrolytic solutions; (ii) Solutions of electrolytes. Colligative properties; non-colligative properties.
(*e*) Disperse systems. Preparation and properties of suspensions, emulsions, smokes, foams, sols, gels, jellies. Coagulation, peptisation, ageing, cataphoresis, imbibition, etc.

Kinetic Theory. Thermodynamics.

(*a*) Equilibrium in homogeneous systems; equilibrium, dissociation, ionisation constants, activity coefficients, etc.
(*b*) Equilibrium in heterogeneous systems; uni- and multi-component systems, phase rule.
(*c*) Thermochemistry.

Electrochemistry.

(*a*) Electrical conductance.
(*b*) Transport phenomena.
(*c*) Electrode and diffusion potentials; e.m.f., concentration cells, etc.
(*d*) Polarisation, overvoltage, passivity, etc.
(*e*) Application of electrochemical methods.

Reactions.

(*a*) Velocity studies in (i) Homogeneous systems; (ii) Heterogeneous systems.
(*b*) Catalysed reactions: (i) and (ii) as above.
(*c*) Electrode reactions.
(*d*) Photochemical reactions.
(*e*) Irradiated reactions.

New Methods of Preparing Substances arranged according to periodic table), etc.
Improved Methods of Preparing Substances, etc.
Analysis.
Apparatus.
Lecture Experiments.
Historical.

Geochemistry.

Organic Chemistry.

Aliphatic.

Hydrocarbons.
Halogen, nitro-, and nitroso-derivatives.
Alcohols.
Ethers.
Alkyl salts.
Sulphur compounds, including sulphonic acids.
Acids.
Thio- and sulpho-acids.
Aldehydes.
Aldoximes.
Ketones and diketones.
Ketoximes.
Sugars, glucosides, and carbohydrates.
Amines.
Amino-alcohols.
Amino-acids.
Cyano-acids, thiocyano-acids.
Amino-aldehydes and -ketones.
Amides (including cyanic, cyanuric, and thiocyanic acids).
Nitriles, carbylamines, metallic cyanides.
Amidoximes, imino-ethers.
Diazo-compounds.
Phosphorus compounds.
Arsenic, antimony, boron, silicon, etc. compounds.
Aliphatic organo-metallic compounds.

Homocyclic.

Hydrocarbons C_nH_{2n} to C_nH_{2n-6}.
Halogen, nitroso-, and nitro-derivatives.
Sulphonic acids.
Hydrocarbons C_nH_{2n-8} to C_nH_{2n-14}. Derivatives under each.
Amines. Includes anilides, carbamides, thiocarbamides, and sulphonic acids.
Azoxy-compounds.
Azo- ,,
Hydrazo- ,,
Diazo- ,,
Diazoamino- ,,
Phenols. Aminophenols, thiophenols, sulphides, sulphonic acids.
Alcohols.
Phenol-alcohols.
Acids. Sulphonic acids and hydrazides under each member.
Aldehydes. Derivatives under each.
Ketones. ,, ,, ,,
Diketones and oxyketones.
Quinones.
Camphor group.
Terpenes.
Ethereal oils.
Resins and balsams.
Bitter principles and indifferent substances.
Colouring matters (unclassified natural and artificial).
Tannins.

Heterocyclic, etc.

Furan group.
Thiophen group (Se).
Bases: N_1, N_2, N_3, etc.
Alkaloids.
Phosphorus compounds.
As, Sb, Bi, B, Si compounds.
Organo-metallic compounds.
Proteins.

Analysis.

Biochemistry.

Respiration.
Blood: Gases; constituents; reactions (hæmolysis, anti-body formation, etc.).
Organs and their Proximate Constituents: Analytical data of constituents of organs: pure substances isolated from organs.
Secretions: Milk; lymph, etc.
Excretions: Urine; fæces; other excretions.
Diseases: Natural and experimental (in alphabetical order).
Metabolism: General; special; intermediary; fate of substances in the animal body.
Physiological Action: Variation of physiological conditions; action of drugs; toxicology.
Enzymes: General; specific.
Micro-organisms: Yeasts, moulds, protozoa, bacteria.
Hormones.
Vitamins.
Vegetable Physiology: General; reproduction and fertilisation; respiration; growth; proximate principles; diseases; poisons.
Analysis.

B.—APPLIED CHEMISTRY.

I. General; Plant; Machinery.
II. Fuel; Gas; Tar; Mineral Oils.
III. Organic Intermediates.
IV. Dyestuffs.
V. Fibres; Textiles; Cellulose; Paper.
VI. Bleaching; Dyeing; Printing; Finishing.
VII. Acids; Alkalis; Salts; Non-Metallic Elements.
VIII. Glass; Ceramics.
IX. Building Materials.
X. Metals; Metallurgy, including Electrometallurgy.
XI. Electrotechnics.
XII. Fats; Oils; Waxes.
XIII. Paints; Pigments; Varnishes; Resins.
XIV. Indiarubber.
XV. Leather and Glue.
XVI. Agriculture.
XVII. Sugars; Starches; Gums.
XVIII. Fermentation Industries.
XIX. Foods.
XX. Medicinal Substances; Essential Oils.
XXI. Photographic Materials and Processes.
XXII. Explosives.
XXIII. Sanitation; Water Purification.