

## APPENDIX

***IUPAC Publications on Nomenclature and Symbolism*****1.0 Compilations**

1.1 Nomenclature of Organic Chemistry, a 550-page hardcover volume published in 1979, available from Pergamon, Oxford.

- Section A: Hydrocarbons
- Section B: Fundamental heterocyclic systems
- Section C: Characteristic groups containing carbon, hydrogen, oxygen, nitrogen, halogen, sulfur, selenium and tellurium
- Section D: Organic compounds containing elements not exclusively those referred to in the title of Section C
- Section E: Stereochemistry
- Section F: General principles for the naming of natural products and related compounds
- Section H: Isotopically modified compounds

1.2 A Guide to IUPAC Nomenclature of Organic Compounds, a 182-page hardcover volume published in 1993, available from Blackwell Scientific Publications, Oxford, to be used in conjunction with item 1.1.

1.3 Nomenclature of Inorganic Chemistry, a 278-page hardcover volume published in 1990, available from Blackwell Scientific Publications, Oxford.

- Chapter 1: General aims, functions and methods
- Chapter 2: Grammar
- Chapter 3: Elements, atoms and groups
- Chapter 4: Formulae
- Chapter 5: Names based on stoichiometry
- Chapter 6: Neutral molecular compounds
- Chapter 7: Names for ions, substituent groups and radicals, and salts
- Chapter 8: Oxoacids and derived anions
- Chapter 9: Co-ordination compounds
- Chapter 10: Boron hydrides and related compounds

1.4 Biochemical Nomenclature and Related Documents, a 348-page softcover manual published in 1992 by Portland Press Ltd. for IUBMB, and available from the publisher (59 Portland Place, London W1N 3AJ, UK). The contents are as follows:

- Nomenclature of organic chemistry. Section E: Stereochemistry (1974)
- Nomenclature of organic chemistry. Section F: Natural products and related compounds (1976)
- Isotopically modified compounds
- Recommendations for the presentation of thermodynamic and related data in biology (1985)
- Citation of bibliographic references in biochemical journals (1971)
- Nomenclature and symbolism for amino acids and peptides (1983)
- Abbreviated nomenclature of synthetic polypeptides or polymerized amino acids (1971)
- Abbreviations and symbols for the description of the conformation of polypeptide chains (1969)
- Nomenclature of peptide hormones (1974)
- Nomenclature of glycoproteins, glycopeptides and peptidoglycans (1985)
- Nomenclature of initiation, elongation and termination factors for translation in eukaryotes (1988)
- Nomenclature of multiple forms of enzymes (1976)

- Symbolism and terminology in enzyme kinetics (1981)
- Nomenclature for multienzymes (1989)
- Abbreviations and symbols for nucleic acids, polynucleotides and their constituents (1970)
- Abbreviations and symbols for the description of the conformations of polynucleotide chains (1982)
- Nomenclature for incompletely specified bases in nucleic acid sequences (1984)
- Carbohydrate nomenclature. Part I (1969)
- Nomenclature of cyclitols (1973)
- Numbering of atoms in *myo*-inositol (1988)
- Conformational nomenclature for five- and six-membered ring forms of monosaccharides and their derivatives (1980)
- Nomenclature of unsaturated monosaccharides (1980)
- Nomenclature of branched-chain monosaccharides (1980)
- Abbreviated terminology of oligosaccharide chains (1980)
- Polysaccharide nomenclature (1980)
- Symbols for specifying the conformation of polysaccharide chains (1981)
- Nomenclature of lipids (1976)
- Nomenclature of steroids (1989)
- Nomenclature of quinones with isoprenoid side chains (1973)
- Nomenclature of carotenoids (1970) and amendments (1974)
- Nomenclature of tocopherols and related compounds (1981)
- Nomenclature of vitamin D (1981)
- Nomenclature of retinoids (1981)
- Prenol nomenclature (1986)
- Nomenclature of phosphorus-containing compounds of biochemical importance (1976)
- Nomenclature and symbols for folic acids and related compounds (1986)
- Nomenclature for vitamins B-6 and related compounds (1973)
- Nomenclature of corrinoids (1973)
- Nomenclature of tetrapyrroles (1986)

1.5 Compendium of Analytical Nomenclature, a 280-page hardcover volume published in 1987, available from Blackwell Scientific Publications, Oxford. The contents are as follows:

- Presentation of the Results of Chemical Analysis
- Solution Thermodynamics (activity coefficients, equilibria, pH)
- Recommendations for Terminology to be used with Precision Balances
- Recommendations for Nomenclature of Thermal Analysis
- Recommendations for Nomenclature of Titrimetric Analysis
- Electrochemical Analysis
- Analytical Separation Processes (precipitation, liquid-liquid distribution, zone melting and fractional crystallization, chromatography, ion exchange)
- Spectrochemical Analysis (radiation sources, general atomic emission spectroscopy, flame spectroscopy, X-ray emission spectroscopy, molecular methods)
- Recommendations for Nomenclature of Mass Spectrometry
- Recommendations for Nomenclature of Radiochemical Methods
- Surface Analysis (including photoelectron spectroscopy)

1.6 Compendium of Macromolecular Nomenclature, a 172-page hardcover volume published in 1991, available from Blackwell Scientific Publications, Oxford. The contents are as follows:

Basic Definitions of Terms Relating to Polymers  
Stereochemical Definitions and Notations Relating to Polymers  
Definitions of Terms Relating to Individual Macromolecules, their Assemblies, and Dilute Polymer Solutions  
Definitions of Terms Relating to Crystalline Polymers  
Nomenclature of Regular Single-strand Organic Polymers  
Nomenclature for Regular Single-strand and Quasi-single-strand Inorganic and Coordination Polymers  
Source-based Nomenclature for Copolymers  
A Classification of Linear Single-strand Polymers  
Use of Abbreviations for Names of Polymeric Substances

1.7 Compendium of Chemical Terminology: IUPAC Recommendations, a 456-page volume published in 1987, available in hardcover and softcover from Blackwell Scientific Publications, Oxford.

1.8 Quantities, Units and Symbols in Physical Chemistry, a 166-page softcover volume published in 1993 by Blackwell Scientific Publications, Oxford.

## 2.0 Documents not included in the compilations

### 2.1 Nomenclature of Elements and Compounds

#### *Boron Compounds*

Nomenclature of inorganic boron compounds (*Pure Appl. Chem.*, 1972, **30**, 681).

#### *Delta Convention*

Nomenclature for cyclic organic compounds with contiguous formal double bonds (*Pure Appl. Chem.*, 1988, **60**, 1395).

#### *Elements*

Recommendations for the names of elements of atomic number greater than 100 (*Pure Appl. Chem.*, 1979, **51**, 381).

#### *Enzymes*

Enzyme Nomenclature (1992), published by Academic Press in hardcover and softcover editions.

#### *Heterocyclic Compounds*

Revision of the extended Hantzsch-Widman system of nomenclature for heteromonocycles (*Pure Appl. Chem.*, 1983, **55**, 409).

#### *Hydrogen*

Names for hydrogen atoms, ions and groups, and for reactions involving them (*Pure Appl. Chem.*, 1988, **60**, 1115).

#### *Isotopically Modified Compounds*

Nomenclature of inorganic chemistry. Part II. 1. Isotopically modified compounds (*Pure Appl. Chem.*, 1981, **53**, 1887).

#### *Lambda Convention*

Treatment of variable valence in organic nomenclature (*Pure Appl. Chem.*, 1984, **56**, 769).

#### *Nitrogen Hydrides*

Nomenclature of hydrides of nitrogen and derived cations, anions and ligands (*Pure Appl. Chem.*, 1982, **54**, 2545).

#### *Numerical Terms*

Extension of Rules A-1.1 and A-2.5 concerning numerical terms used in organic chemical nomenclature (*Pure Appl. Chem.*, 1986, **58**, 1693).

#### *Polyanions*

Nomenclature of polyanions (*Pure Appl. Chem.*, 1987, **59**, 1529).

#### *Polymers*

Nomenclature of regular double-strand (ladder and spiro) organic polymers (*Pure Appl. Chem.*, 1993, **65**, 1561).  
Structure-based nomenclature for irregular single-strand organic polymers (*Pure Appl. Chem.*, 1994, **66**, 873).

#### *Radicals and Ions*

Revised nomenclature for radicals, ions, radical ions and related species (*Pure Appl. Chem.*, 1993, **65**, 1357).

#### *Zeolites*

Chemical nomenclature and formulation of compositions of synthetic and natural zeolites (*Pure Appl. Chem.*, 1979, **51**, 1091).

## 2.2 Terminology, Symbols and Units, and Presentation of Results

### *General*

Glossary of terms used in physical organic chemistry (*Pure Appl. Chem.*, 1994, **66**, 1077).

Glossary of atmospheric chemistry terms (*Pure Appl. Chem.*, 1990, **62**, 2167).

English-derived abbreviations for experimental techniques in surface science and chemical spectroscopy (*Pure Appl. Chem.*, 1991, **63**, 887).

### *Analytical*

Recommendations for publication of papers on a new analytical method based on ion exchange or ion-exchange chromatography (*Pure Appl. Chem.*, 1980, **52**, 2555).

Recommendations for presentation of data on compleximetric indicators, 1. General (*Pure Appl. Chem.*, 1979, **51**, 1357).

Recommendations for publishing manuscripts on ion-selective electrodes (*Pure Appl. Chem.*, 1981, **53**, 1907).

Recommendations on use of the term amplification reactions (*Pure Appl. Chem.*, 1982, **54**, 2553).

Recommendations for the usage of selective, selectivity and related terms in analytical chemistry (*Pure Appl. Chem.*, 1983, **55**, 553).

Nomenclature for automated and mechanised analysis (*Pure Appl. Chem.*, 1989, **61**, 1657).

Nomenclature for sampling in analytical chemistry (*Pure Appl. Chem.*, 1990, **62**, 1193).

Nomenclature for chromatography (*Pure Appl. Chem.*, 1993, **65**, 819).

Nomenclature of kinetic methods of analysis (*Pure Appl. Chem.*, 1993, **65**, 2291).

Nomenclature for liquid-liquid distribution (solvent extraction) (*Pure Appl. Chem.*, 1993, **65**, 2373).

Nomenclature for supercritical fluid chromatography and extraction (*Pure Appl. Chem.*, 1993, **65**, 2397).

Nomenclature and terminology for analytical pyrolysis (*Pure Appl. Chem.*, 1993, **65**, 2405).

Nomenclature for the presentation of results of chemical analysis (*Pure Appl. Chem.*, 1994, **66**, 595).

Recommendations for nomenclature in laboratory robotics and automation (*Pure Appl. Chem.*, 1994, **66**, 609).

### *Biotechnology*

Glossary for chemists of terms used in biotechnology (*Pure Appl. Chem.*, 1992, **64**, 143).

Selection of terms, symbols and units related to microbial processes (*Pure Appl. Chem.*, 1992, **64**, 1047).

### *Clinical*

Physicochemical quantities and units in clinical chemistry with special emphasis on activities and activity coefficients (*Pure Appl. Chem.*, 1984, **56**, 567).

Quantities and units in clinical chemistry (*Pure Appl. Chem.*, 1979, **51**, 2451).

Quantities and units in clinical chemistry: nebulizer and flame properties in flame emission and absorption spectrometry (*Pure Appl. Chem.*, 1986, **58**, 1737).

List of quantities in clinical chemistry (*Pure Appl. Chem.*, 1979, **51**, 2481).

Proposals for the description and measurement of carry-over effects in clinical chemistry (*Pure Appl. Chem.*, 1991, **63**, 301).

Quantities and units for metabolic processes as a function of time (*Pure Appl. Chem.*, 1992, **64**, 1569).

Quantities and units for electrophoresis in the clinical laboratory (*Pure Appl. Chem.*, 1994, **66**, 891).

Quantities and units for centrifugation in the clinical laboratory (*Pure Appl. Chem.*, 1994, **66**, 897).

#### *Colloids and Surface Chemistry*

Definitions, terminology and symbols in colloid and surface chemistry. I (*Pure Appl. Chem.*, 1972, **31**, 577). II, Heterogeneous catalysis (*Pure Appl. Chem.*, 1976, **46**, 71). Part 1.14: Light scattering (provisional) (*Pure Appl. Chem.*, 1983, **55**, 931). Reporting experimental pressure–area data with film balances (*Pure Appl. Chem.*, 1985, **57**, 621).

Reporting physisorption data for gas/solid systems with special reference to the determination of surface area and porosity (*Pure Appl. Chem.*, 1985, **57**, 603).

Reporting data on adsorption from solution at the solid/solution interface (*Pure Appl. Chem.*, 1986, **58**, 967).

Manual on catalyst characterization (*Pure Appl. Chem.*, 1991, **63**, 1227).

Thin films including layers: terminology in relation to their preparation and characterization (*Pure Appl. Chem.*, 1994, **66**, 1667).

#### *Electrochemistry*

Nomenclature for transfer phenomena in electrolytic systems (*Pure Appl. Chem.*, 1981, **53**, 1827).

Electrode reaction orders, transfer coefficients and rate constants—amplification of definitions and recommendations for publication of parameters (*Pure Appl. Chem.*, 1980, **52**, 233).

Classification and nomenclature of electroanalytical techniques (*Pure Appl. Chem.*, 1976, **45**, 81).

Recommendations for sign conventions and plotting of electrochemical data (*Pure Appl. Chem.*, 1976, **45**, 131).

Electrochemical nomenclature (*Pure Appl. Chem.*, 1974, **37**, 499).

Recommendations on reporting electrode potentials in non-aqueous solvents (*Pure Appl. Chem.*, 1984, **56**, 461).

Definition of pH scales, standard reference values, measurement of pH and related terminology (*Pure Appl. Chem.*, 1985, **57**, 531).

Interphases in systems of conducting phases (*Pure Appl. Chem.*, 1986, **58**, 437).

The absolute electrode potential: an explanatory note (*Pure Appl. Chem.*, 1986, **58**, 955).

Electrochemical corrosion nomenclature (*Pure Appl. Chem.*, 1989, **61**, 19).

Terminology in semiconductor electrochemistry and photoelectrochemical energy conversion (*Pure Appl. Chem.*, 1991, **63**, 569).

Nomenclature, symbols, definitions and measurements for electrified interfaces in aqueous dispersions of solids (*Pure Appl. Chem.*, 1991, **63**, 895).

Nomenclature, symbols and definitions in electrochemical engineering (*Pure Appl. Chem.*, 1993, **65**, 1009).

Terminology and conventions for microelectronic ion-selective field effect transistor devices in electrochemistry (*Pure Appl. Chem.*, 1994, **66**, 565).

#### *Kinetics*

Symbolism and terminology in chemical kinetics (provisional) (*Pure Appl. Chem.*, 1981, **53**, 753).

Kinetics of composite reactions in closed and open flow systems (*Pure Appl. Chem.*, 1993, **65**, 2641).

#### *Photochemistry*

Recommended standards for reporting photochemical data (*Pure Appl. Chem.*, 1984, **56**, 939).

Glossary of terms used in photochemistry (*Pure Appl. Chem.*, 1988, **60**, 1055).

#### *Quantum Chemistry*

Expression of results in quantum chemistry (*Pure Appl. Chem.*, 1978, **50**, 75).

#### *Reactions*

Nomenclature for organic chemical transformations (*Pure Appl. Chem.*, 1989, **61**, 725).

System for symbolic representation of reaction mechanisms (*Pure Appl. Chem.*, 1989, **61**, 23).

Detailed linear representation of reaction mechanisms (*Pure Appl. Chem.*, 1989, **61**, 57).

#### *Rheological Properties*

Selected definitions, terminology and symbols for rheological properties (*Pure Appl. Chem.*, 1979, **51**, 1215).

#### *Spectroscopy*

Recommendations for publication of papers on methods of molecular absorption spectrophotometry in solution (*Pure Appl. Chem.*, 1978, **50**, 237).

Recommendations for the presentation of infrared absorption spectra in data collections. A, Condensed phases (*Pure Appl. Chem.*, 1978, **50**, 231).

Definition and symbolism of molecular force constants (*Pure Appl. Chem.*, 1978, **50**, 1709).

Nomenclature and conventions for reporting Mössbauer spectroscopic data (*Pure Appl. Chem.*, 1976, **45**, 211).

Recommendations for the presentation of NMR data for publication in chemical journals. A, Proton spectra (*Pure Appl. Chem.*, 1972, **29**, 625). B, Spectra from nuclei other than protons (*Pure Appl. Chem.*, 1976, **45**, 217).

Presentation of Raman spectra in data collections (*Pure Appl. Chem.*, 1981, **53**, 1879).

Names, symbols, definitions and units of quantities in optical spectroscopy (*Pure Appl. Chem.*, 1985, **57**, 105).

A descriptive classification of the electron spectroscopies (*Pure Appl. Chem.*, 1987, **59**, 1343).

Presentation of molecular parameter values for IR and Raman intensity (*Pure Appl. Chem.*, 1988, **60**, 1385).

Recommendations for EPR/ESR nomenclature and conventions for presenting experimental data in publications (*Pure Appl. Chem.*, 1989, **61**, 2195).

Nomenclature, symbols, units and their usage in spectrochemical analysis. VII. Molecular absorption spectroscopy, UV and visible (*Pure Appl. Chem.*, 1988, **60**, 1449); VIII.

Nomenclature system for X-ray spectroscopy (*Pure Appl. Chem.*, 1991, **63**, 735); X. Preparation of materials for analytical atomic spectroscopy (*Pure Appl. Chem.*, 1988, **60**, 1461); XII.

Terms related to electrothermal atomization (*Pure Appl. Chem.*, 1992, **64**, 253); XIII. Terms related to chemical vapour generation (*Pure Appl. Chem.*, 1992, **64**, 261).

Recommendations for nomenclature and symbolism for mass spectroscopy (*Pure Appl. Chem.*, 1991, **63**, 1541).

Symbols for fine and hyperfine structure parameters (*Pure Appl. Chem.*, 1994, **66**, 571).

#### *Solid State*

Definitions of terms relating to phase transitions of the solid state (*Pure Appl. Chem.*, 1994, **66**, 577).

#### *Thermodynamics*

A guide to procedures for the publication of thermodynamic data (*Pure Appl. Chem.*, 1972, **39**, 395).

Assignment and presentation of uncertainties of the numerical results of thermodynamic measurements (*Pure Appl. Chem.*, 1981, **53**, 1805).

Notation for states and processes; significance of the word 'standard' in chemical thermodynamics and remarks on commonly tabulated forms of thermodynamic functions (*Pure Appl. Chem.*, 1982, **54**, 1239).

Standard quantities in thermodynamics: fugacities, activities and equilibrium constants for pure and mixed phases (*Pure Appl. Chem.*, 1994, **66**, 533).

Recommendations for nomenclature and tables in biochemical thermodynamics (*Pure Appl. Chem.*, 1994, **66**, 1641).

#### *Toxicology*

Glossary for chemists of terms used in toxicology (*Pure Appl. Chem.*, 1993, **65**, 2003).

## Refereeing Procedure and Policy (1995)

### 1.0 Contributions to Dalton, Perkin and Faraday Transactions, *J. Mater. Chem.*, *The Analyst*, *J. Anal. At. Spectrom.* and *J. Chem. Research*

#### 1.1 Introduction

This document summarises the procedure used for assessing papers submitted to the four *Transactions*, *J. Mater. Chem.*, *The Analyst*, *J. Anal. At. Spectrom.*, and *J. Chem. Research*, and provides guidelines for referees engaged in this assessment.

#### 1.2 Subject Matter

Papers are submitted to the various journals according to subject matter. If it is felt that a paper would be published more appropriately in an RSC journal other than the one suggested by the author, the referee should inform the Editor. The topics covered by the various journals are as follows.

*Dalton Transactions (Inorganic Chemistry)*. All aspects of the chemistry of inorganic and organometallic compounds, including bioinorganic chemistry and solid-state inorganic chemistry; the applications of physicochemical techniques to the study of their structures, properties and reactions, including kinetics and mechanism; new or improved experimental techniques and syntheses.

*Faraday Transactions (Physical Chemistry and Chemical Physics)*. Gas-phase kinetics and dynamics; molecular beam kinetics and spectroscopy, photochemistry and photophysics; energy transfer and relaxation processes: laser-induced chemistry; spectroscopies of molecules, molecular and gas-phase complexes: quantum chemistry and molecular structure, statistical mechanics of gaseous molecules and complexes; spectroscopies, statistical mechanics and quantum theory of the condensed phase, computational chemistry and molecular dynamics; colloid and interface science, surface science, physisorption and chromatographic science, chemisorption and heterogeneous catalysis, zeolites and ion-exchange phenomena; electrode processes, liquids and solutions; solid-state chemistry (microstructures and dynamics); reactions in condensed phases; physical chemistry of macromolecules and polymers; materials science; thermodynamics; biophysical chemistry and radiation chemistry.

*Perkin Transactions 1 (Organic Chemistry)*. All aspects of organic and bio-organic chemistry. These include synthetic organic chemistry of all types, organometallic chemistry, chemistry and biosynthesis of natural products, the relationship between molecular structure and biological activity, the chemistry of polymers and biological macromolecules, and medicinal and agricultural chemistry where there is originality in the science.

*Perkin Transactions 2 (Physical Organic Chemistry)*. Physicochemical aspects of organic, organometallic, and bio-organic chemistry, including kinetic, mechanistic, structural, spectroscopic and theoretical studies. Such topics include structure-activity relationships and physical aspects of biological processes and of the study of polymers and biological macromolecules.

*Journal of Materials Chemistry*. The chemistry of materials, particularly those associated with advanced technology; modelling of materials; synthesis and structural characterisation; physicochemical aspects of fabrication; chemical, structural, electrical, magnetic and optical properties; applications.

*The Analyst (Analytical Science)*. Theory and practice of all aspects of analytical chemistry, fundamental and applied, including inorganic and organic chemical, physical and biological methods in applications areas such as environmental, clinical, geological, industrial, veterinary, food, etc.

*Journal of Analytical Atomic Spectrometry*. The development of fundamental theory, practice and analytical application of atomic spectrometric techniques, including ICP MS and XRF.

*Journal of Chemical Research*. All areas of chemistry. The format of this journal (one- or two-page printed synopsis in Part S, plus microform version of authors' full text typescript in Part M) makes it particularly suitable for papers containing lengthy experimental sections or extensive data tabulations.

#### 1.3 Procedure

Each manuscript is considered independently by two referees. The referees' reports constitute recommendations to the appropriate Editorial Board, which is empowered to take final action on manuscripts submitted. The Editor, acting for the Editorial Board, is responsible for all administrative and executive actions, and is empowered to accept or reject papers. It is the Editor's duty to see that, as far as possible, agreement is reached between authors and referees; although the referees may need to be consulted again concerning an author's reply to comments, further refereeing will be avoided as far as possible.

1.3.1 *Adjudication of disagreements*. If there is a notable discrepancy between the reports of the two referees, or if the difference between authors and referees cannot be resolved readily, a third referee may be appointed as adjudicator. In extreme cases, differences may be reported to the appropriate Editorial Board for resolution.

When a paper is recommended for rejection by referees, the Editor will inform the authors and return the top copy of the manuscript. Authors have the right to appeal to the Editorial Board if they regard a decision to reject as unfair. The Editor may refer to the Editorial Boards any papers which have been recommended for acceptance by the referees, but about which the Editor is doubtful.

1.3.2 *Anonymity*. The anonymity of referees is strictly preserved, and reports should be couched in terms which do not disclose the identity of the writer. A referee should never communicate directly with an author, unless and until such action has been sanctioned by the Society, through the Editor.

1.3.3 *Confidentiality*. A referee should treat a paper received for assessment as confidential material. Information acquired by a referee from such a paper is not available for citation until the paper is published.

## 1.4 Policy

The primary criterion for acceptance of a contribution for publication is that it should advance scientific knowledge significantly. Papers that do **not** contain new experimental results may be considered for publication **only** if they either reinterpret or summarise known facts or results in a manner presenting an advance in chemical knowledge. Papers in interdisciplinary areas are acceptable if the chemical content is considered satisfactory.

Papers reporting results regarded as **routine** or **trivial** are not acceptable in the absence of other, desirable attributes.

Although short papers are acceptable, the Society strongly discourages the **fragmentation** of a substantial body of work into a number of short publications; such fragmentation is likely to be grounds for rejection.

The **length** of an article should be commensurate with its scientific content; however, authors are allowed every latitude (consistent with reasonable brevity) in the **form** in which their work is presented. Figures and flow-charts can often save space as well as clarify complicated arguments, and should not be excised unless they are unhelpful or really extravagant. The use of colour and/or half-tones is permitted in cases where genuine clarification results; referees are asked to advise on this.

If a paper as a whole is judged suitable for the *Journal*, minor criticisms should not be unduly emphasised. It is the responsibility of the Editor to ensure the use of reasonably brief phraseology, and to assist the author to present his work in the most appropriate format.

However, referees should not hesitate to recommend rejection of papers which appear incurably badly composed.

It should be clearly understood that referees' reports are made in confidence to the Editor, at whose discretion comments will be transmitted to the author. To assist the Editor, referees are requested to indicate which comments are designed only for consideration, as distinct from those which, in the referee's view, require specific action or an adequate answer before the paper is accepted.

Referees may ask for sight of **supporting data** not submitted for publication, or for sight of a previous paper which has been submitted but not yet published. Such requests must be made to the Editor, not directly to the author.

1.4.1 *Authentication of new compounds.* Referees are asked to assess, as a whole, the evidence in support of the homogeneity and structure of all new compounds. No hard and fast rules can be laid down to cover all types of compounds, but the Society's policy is that evidence for the unequivocal identification of new compounds should wherever possible include good elemental analytical data; for example, an accurate mass measurement of a molecular ion does not provide evidence of purity of a compound and must be accompanied by independent evidence of homogeneity. Low-resolution mass spectrometry must be treated with even more reserve in the absence of firm evidence to distinguish between alternative molecular formulae. Where elemental analytical data are not available, appropriate evidence which is convincing to an expert in the field may be acceptable.

Spectroscopic information necessary to the assignment of structure should normally be given. Just how complete this information should be must depend upon the circumstances; the structure of a compound obtained from an unusual reaction or isolated from a natural source needs much stronger supporting evidence than one derived by a standard reaction from a precursor of undisputed structure.

Referees are reminded of the need to be exacting in their standards but at the same time flexible in their admission of

evidence. It remains the Society's policy to accept work only of high quality and to permit no lowering of standards.

## 1.5 Titles and Summaries

Referees should comment on titles and summaries with the following points in mind.

Titles of papers are used out of context by several organizations for current awareness purposes. To enable such systems to serve chemists adequately, titles must be written around a sufficient number of scientific words carefully chosen to cover the important aspects of the paper.

Summaries should preferably be self-contained, so that they can be understood without reference to the main text.

## 1.6 Speed of Refereeing

The Editorial Boards are anxious to maintain and to reduce further if possible the publication times now being achieved. In this connection, referees should submit their reports with the minimum of delay, or return manuscripts immediately to the Editor if long delay seems inevitable.

## 1.7 Suggestions of Alternative Referees

The Editor welcomes suggestions of alternative referees competent to deal with particular subject areas. Such suggestions are particularly helpful in cases where referees consider themselves ill-equipped (in terms of specialist knowledge) to deal with a specific paper, and in highly specialized or new areas of research where only a limited number of experts may be available. If, in such a case, the alternative and the original referee work in the same institution, the manuscript may be passed on directly after informing the Editor.

## 1.8 Short Papers and Letters

'Short Papers' are published in *J. Chem. Research*. They are intended for the description of essentially complete pieces of work which can be described in two printed pages or less. They are **NOT** preliminary communications, nor in any way an alternative to *Chemical Communications*, for which there are additional criteria of novelty and urgency. The quality of material contained in a short paper should be the same as that in a full paper. Investigations arising out of some larger project but not prosecuted to the same degree are particularly appropriate for this format.

A short paper should not normally exceed in length about 8 pages of typescript, including figures, tables, etc. It should comprise a one-sentence abstract and discussion, but adequate experimental details are required. As a consequence of its length, it appears in full in Part S with no microform version in Part M.

'Letters', published in *Dalton Transactions*, *Analytical Proceedings*, and *The Analyst*, are a medium for the expression of scientific opinions and views normally concerning material published in that journal; it is intended that contributions in this format should be published rapidly. The letters section is for scientific discussion, and is not intended to compete with media for the publication of more general matters such as *Chemistry in Britain*.

Only rarely should a Letter exceed one printed column in length (about 1–2 pages of typescript). Where a letter is polemical in nature, and if it is accepted, a reply will be solicited from other parties implicated, for consideration for publication alongside the original letter.

## 1.9 Relationship with Communications Journals

In cases where a preliminary report of the work described has appeared (for example in *Chemical Communications*), referees

should alert the editor to any excessive and unnecessary repetition of material; this can arise in connection with communications journals in which the restrictions on length and the reporting of experimental data are less severe than those of *Chemical Communications*. Furthermore, the acceptability of the full paper must be judged on the basis of the significance of the additional information provided, as well as on the criteria outlined in the foregoing sections.

## 2.0 Contributions to Chemical Communications

*Chemical Communications* is intended as a forum for preliminary accounts of original and significant work, in any area of chemistry that is likely to prove of wide general appeal or exceptional specialist interest. Such preliminary reports should be followed up in most cases by full papers in other journals, providing detailed accounts of the work. It is Society policy that only a fraction of research work warrants publication in *Chemical Communications*, and strict refereeing standards should be applied. The benefit to the reader from the rapid publication of a particular piece of work before it appears as a full paper must be balanced against the desirability of avoiding duplicate publication. The needs of the reader, not the author, must be considered, and priority in publication should not be allowed to determine acceptability. Acceptance should be recommended only if, in the opinion of the referee, the content of the paper is of such urgency or impact that rapid publication will be advantageous to the progress of chemical research.

Communications should be brief and **not exceed two pages** in the printed form including Tables and illustrations — a maximum of 1500 words for a purely textual communication. Only in exceptional circumstances will a Communication be allowed to extend to four printed pages. Lengthy introductions and discussion, extensive data, and excessive experimental details and conjecture should not be included. Figures and Tables will only be published if they are essential to understanding the paper. Referees may ask for sight of supporting data before reaching a decision.

The refereeing procedure for Communications is the same as that for full papers, except that rapidity of reporting is crucial in order to maintain rapid publication.

## 3.0 Communications submitted to Analytical Proceedings and J. Anal. At. Spectrom.

Criteria for acceptance of communications submitted to *Analytical Proceedings* and *J. Anal. At. Spectrom.* are broadly similar to those for contributions to *Chemical Communications*, except that they should be concerned specifically with analytical chemistry. Scientific importance (rather than urgency) is the main criterion for acceptance. A decision whether or not to publish rests with the Editor, who will obtain advice from at least one referee.

## 4.0 Communications submitted to Perkin, Dalton or Faraday Transactions or J. Mater. Chem.

Criteria for acceptance of Communications submitted to *Perkin*, *Dalton* or *Faraday Transactions* or *J. Mater. Chem.* are similar to those for contributions to *Chemical Communications*, except that the work will be of more specialist interest. For *Perkin* and *Dalton Communications* inclusion of key experi-

mental data is expected. Assessment is carried out by a small nucleus of referees, consisting largely of members of the appropriate Editorial Boards.

## 5.0 Contributions to Mendeleev Communications

*Mendeleev Communications*, published jointly by the Royal Society of Chemistry and the Russian Academy of Sciences, is a sister publication to *Chemical Communications*, containing preliminary reports of the same type, in any area of chemistry. The majority of contributions are from Russian authors.

Assessment involves two stages of refereeing. Manuscripts submitted to the Moscow Editorial Office are refereed initially by a Russian scientist. If found acceptable they are then reviewed by Western scientists chosen by the Royal Society of Chemistry. Manuscripts submitted to the UK Editorial Office undergo this two-stage refereeing process in reverse.

## 6.0 X-Ray Crystallographic Work

6.1 All papers containing crystallographic determinations will be refereed by two referees, one a structural chemist. If the editor considers it advisable, the paper may also be sent to a specialist crystallographer for comment. Referees will not normally be expected to check values of structural parameters for publication (e.g. bond lengths and angles against atomic coordinates; this will be done after publication by the appropriate crystallographic data centre), but should still pay attention to the quality of the experimental crystallographic work. However, their primary concern should be such new chemistry as is involved in the structure.

6.2 Papers will often contain the information in their *titles* that an X-ray structure determination has been carried out. However, this is not obligatory, especially if the X-ray determination forms only a minor part. *Summaries* should normally contain this information.

6.3 A structure referred to in a Communication will normally be fully refined. The Communication can then be considered to fulfil the archival function, and the structure determination may not require further detailed refereeing when presented as part of a full paper. In the full paper, the author's purpose will then be served by a simple reference back to the original communication. However, if the crystallography is discussed again at any length in the full paper, the data should be re-presented to the referees in full, and re-published if considered necessary.

6.4 There may be other cases when an author wishes to publish a full paper in which the result of a crystal structure determination is discussed, but in which details or extensive discussion are considered unnecessary. The crystallographer may even be omitted as a co-author (for example when the determination is carried out by a commercial company). If the author is able to show the referees that this procedure is appropriate, it will be allowed provided that it does not lead to unnecessary fragmentation. However, the author must provide, as supplementary information, sufficient data relating to the crystal structure determination to allow a referee to make sure that the point made is correct, and co-ordinates *etc.* will be deposited. The brief published description of the determination should be supplemented by appropriate reference to 'unpublished work'.