

Provisional Recommendations

IUPAC seeks your comments

In this section we publish synopses of IUPAC's latest provisional recommendations on nomenclature and symbols. All comments on these recommendations are welcome and will be taken into consideration. The final revised versions are published in *Pure and Applied Chemistry* and synopses of these are published in *Chemistry International* as recent reports.

If you would like to comment on the provisional recommendations please write to your nearest national/regional centre requesting a copy of the full report. Copies are not available from the IUPAC Secretariat. The most recent list of the national/regional centres appears in *Chemistry International* 1995, **17**, 141.

Extension and revision of the nomenclature for spiro compounds

Spiro ring systems have two or more rings linked by one common atom. Several different methods are used to name such systems. Rules A-41, A-43, B-10 and B-12 (*Nomenclature of Organic Chemistry*, 1979) describe the basics of how to name these compounds. The alternative methods in rules A-42 and B-11 are abandoned.

This document describes the nomenclature in greater detail and extends it to cover branched polyspiro systems and compounds where three rings have one common spiro atom. A new notation, based on the von Baeyer method of naming spiro systems where all components are monocyclic, allows both linear and branched polyspiro systems to be named without ambiguity. It also enables the names to be readily interpreted.

Comments on these recommendations are welcome and should be sent by 31 March 1998 to: Dr G.P. Moss, Department of Chemistry, Queen Mary & Westfield College, Mile End Road, London E1 4NS, UK. Tel.: +44 (0) 171 975 5555 ext 3718. Fax: +44 1081 981 8745 (Chemistry) or +44 (0) 171 975 5500.

Extension and revision of the von Baeyer system for naming polycyclic compounds (including bicyclic compounds)

It has been recognized for some time that the von Baeyer system for naming polycyclic ring systems described in Rules A-31, A-32 and B-14 (*Nomenclature of Organic Chemistry*, 1979) has deficiencies. This document describes how to name any polycyclic ring system by the von Baeyer system. It extends the previous rules and provides guidance on the naming of ring systems which previously the rules did not cover.

The method is to identify the main ring and main bridge which provide the basic bicyclic system and numbers these atoms. Then all further bridges, whether or not they include additional atoms, are identified by indicating not only the number of atoms but also the two atoms to which the bridge is attached. The final name

also indicates the total number of rings and the total number of atoms in the ring system. Heteroatoms, unsaturation and substituents are shown in the usual way.

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Analytical aspects of chemically modified electrodes: classification, critical evaluation and recommendations

Chemically modified electrodes (CMEs) for analytical chemistry applications are classified and evaluated. Several analytical aspects of CMEs are critically reviewed. These include effects, such as analyte and/or reagent accumulation on the electrode to increase selectivity and detectability, and/or chemical transformation of the analyte to a form which is more suitable for its determination, electrocatalysis with the immobilized catalyst or analyte, permeability of neutral and ionic analyte or reagent, ionic equilibria of analyte and/or reagent, controlled analyte or reagent releasing as well as change of the electrode mass. Also, suitable definitions are provided and recommendations formulated for the most effective analytical use of CMEs. In a previous report prepared in the Commission on Electroanalytical Chemistry by R.A. Durst, A.J. Baeumer, R.W. Murray, R.P. Buck and C.P. Andrieux (*Pure Appl. Chem.* 1997, **69**, 1317), general terminology, definitions and methods of preparation of CMEs have been described and classified as well as relevant recommendations provided.

Comments on these recommendations are welcome and should be sent by 31 March 1998 to: Dr W. Kutner, Institute of Physical Chemistry, Polish Academy of Sciences, Kasprzaka 44, 01-224 Warsaw, Poland. Tel.: +48 22 632 32 21, ext. 3217; Fax: +48 22 632 52 76; E-mail: wkutner@ichf.edu.pl