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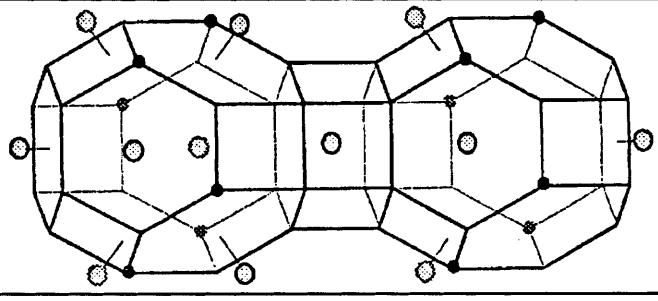
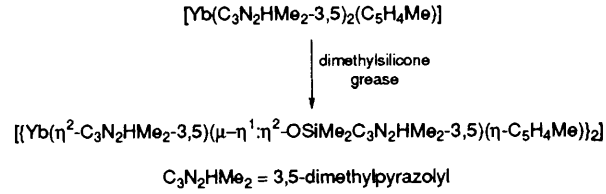
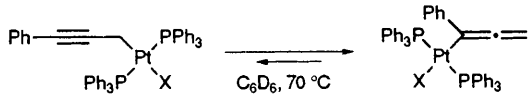
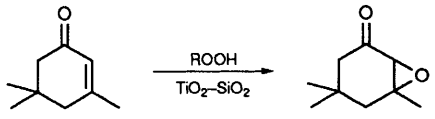
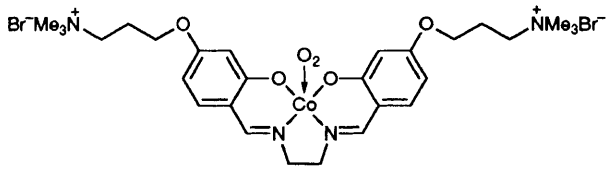




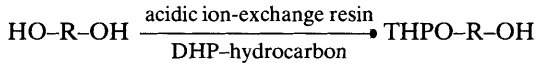


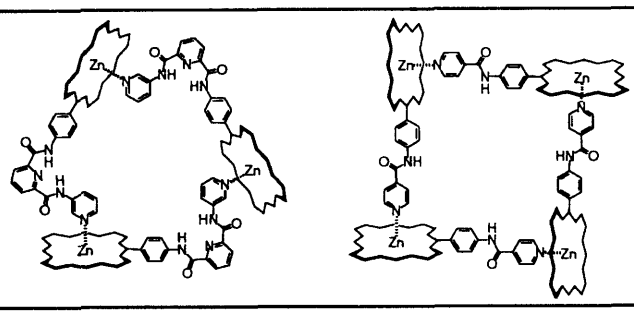


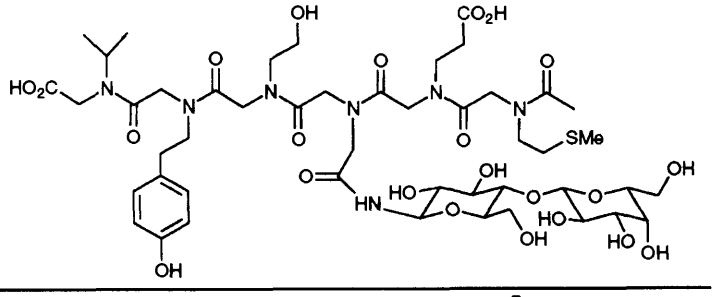
Sol–gel derived titania–silica aerogels are excellent catalysts for the epoxidation of an electron-deficient α-keto olefin under mild conditions.

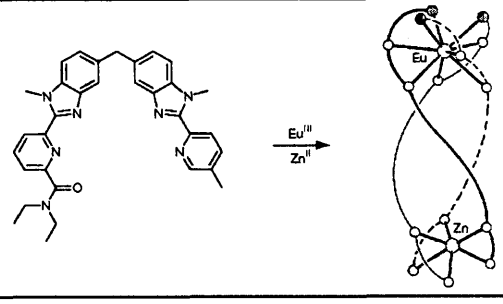


Above complex cleaves DNA under ambient aerobic conditions with modest G-selectivity









Corrigenda

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The Chemical Communications Editorial Board is pleased to announce the appointment of Associate Editors, with effect from 1 January 1996. From that date manuscripts should be directed to the appropriate Editor.

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Any author may submit a manuscript direct to Dr Parker or Dr Kybett at Cambridge if preferred.

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Names and Symbols for the Transfermium Elements
Request for comments on IUPAC provisional recommendations

The text overleaf was published last year in *Pure and Applied Chemistry* as definitive IUPAC recommendations. However, as a consequence of subsequent criticism, especially from the USA, the IUPAC Bureau has reconsidered the situation, and has decided that the recommendations should revert to provisional status. Comments from the chemical community are therefore requested, and should be sent to:

Professor A. M. Sargeson
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Canberra, ACT 0200
Australia

by 31st May 1996.

Introduction

The Transfermium Working Group (TWG) was set up in 1986 under the joint auspices of the International Union of Pure and Applied Chemistry (IUPAC) and the International Union of Pure and Applied Physics (IUPAP). Its conclusions, duly endorsed by IUPAC and IUPAP, were published in the following three reports:

1. Criteria that must be satisfied for the discovery of a new chemical element to be recognized, *Pure & Appl. Chem.*, **63**, 879–886 (1991).
2. Discovery of the transfermium elements: Introduction to the discovery profiles, *Pure & Appl. Chem.*, **65**, 1757–1763 (1993).
3. Discovery of the transfermium elements: Discovery profiles of the transfermium elements, *Pure & Appl. Chem.*, **65**, 1764–1814 (1993).

IUPAC went a stage further by inviting responses on reports 2 and 3 from the three major groups concerned, *i.e.*, Lawrence Berkeley Laboratory, California; Joint Institute for Nuclear Research, Dubna; and Gesellschaft für Schwerionenforschung, Darmstadt. These responses together with the TWG's reply to the responses were published unedited in *Pure & Appl. Chem.*, vol. 65, (1993), pp. 1815–1824.

Recommendations

The TWG recognized that the responsibility for naming the transfermium elements must rest with the IUPAC Commission on Nomenclature of Inorganic Chemistry (II.2). The Commission met in Balatonfüred (Hungary) on 31st August 1994 to consider the naming of the transfermium elements 101–109 inclusive. The Commission consisted of twenty chemists, all with equal voting rights, from twelve different countries, namely Australia, Finland, Hungary, Japan, Netherlands, Russia, South Africa, Spain, Sweden, Switzerland, United Kingdom and United States of America. The debate was wide-ranging, thoughtful and objective, bearing in mind the significance of the process to chemistry in general.

Beforehand, the three major groups involved in the discoveries had been asked for their proposals concerning the naming of the elements and the reasons for their choices. All three groups had responded. The Commission carefully considered the proposals, and at the beginning it addressed the precedents for naming elements. It agreed unanimously to continue the practice of naming elements after appropriate scientists, places and properties. However, it resolved (16 to 4 votes [1]) that an element should not be named after a living person. The majority of the Commission felt that it was necessary to have the perspective of history in relation to these discoveries before such a decision was made. The Commission also agreed to accept the conclusions of the TWG as one of the bases for selecting names. In addition, it was sensitive to the suggestions from the three groups about the choices for the names. In the final analysis all the names chosen came from their proposals, but not necessarily in the order suggested.

Ultimately, the Commission reached the recommended names below with a remarkable degree of consensus as the voting figures display.

Element	Name	Symbol	Voting in favour
101	Mendelevium	Md	20
102	Nobelium	No	20
103	Lawrencium	Lr	20
104	Dubnium	Db	19
105	Joliotium	Jl	18
106	Rutherfordium	Rf	18
107	Bohrium	Bh	20
108	Hahnium	Hn	19
109	Meitnerium	Mt	20

The recommendations of the Commission as a whole were ratified unanimously by the Titular Members.

Regarding elements 101–103, the Commission accepted the 'status quo' even though it recognized the conclusion of the TWG that an error had been made in the initial report on the discovery of element 102 (Nobelium).

Element 104 was named Dubnium to recognize the distinguished contributions to chemistry and modern nuclear physics of the international scientific centre at Dubna near Moscow.

Joliotium was chosen as the name for element 105 to recognize the French scientist F. Joliot-Curie who contributed greatly to the development of nuclear physics and chemistry, and who shared the Nobel prize in 1935 with Mme. I. Curie.

Elements 106 and 107 were named after Ernest Rutherford (New Zealand) and Neils Bohr (Denmark), respectively, to recognize their distinguished contributions to our knowledge of atomic structure. The Commission recommends the name Bohrium (Bh) for element 107, instead of the proposed Nielsbohrium, so that it conforms to the names of the other elements named after individuals.

Naming the adjoining elements 108 and 109 after Otto Hahn (Germany) and Lise Meitner (Austria) recognizes their decisive role in the discovery of nuclear fission.

[1] All ballots were secret and scrutinized by two members from countries other than those of the institutions involved.

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