

# 41th IUPAC GENERAL ASSEMBLY, Brisbane, July 2001

## Physical Chemistry Division

### Commission on Physicochemical Symbols, Terminology and Units (I.1)

#### MINUTES

#### Background material:

- (a) "Berlin minutes"      The minutes from the 40th IUPAC General Assembly in Berlin in 1999. The document has been available on the web since September 1999. Handed out as paper copies at the meeting.
- (b) "Doc. 3C"              The manuscript to the 3rd Edition of the "Green Book" ("GB3"), Version of June 23, 2001. This was sent by e-mail on that date, and also distributed by mail. Handed out as paper copies at the meeting.

#### Participants:

Titular members	Jeremy Frey, Chairman Bertil Holmstrom, Secretary Roberto Marquardt Herbert Strauss Michio Takami
Associate Members	Franco Pavese Martin Quack Anders Thor
Others	Tomislav Cvitas (Chairman IDCNS) Jurgen Stohner (Technical Editor GB3)

Guests, part of meeting, as detailed below

- 1. Opening**                      The meeting was opened at 09.00 on Sunday, July 1, with the Chairman's welcome, adoption of agenda, and an orientation about the day's schedule: Joint meetings with I.5 at 14.00, with I.3 at 15.30, and with I.2 at 15.00.
- 2. Report from PCDC**              The chairman reported from yesterday's meeting with the Physical Chemistry Division Committee. All present IUPAC commissions will terminate at the end of the year 2001, and the system of "titular members" (with travel costs automatically paid by IUPAC) will disappear. IUPAC will draw a line between "*Nomenclature*" (which will form a new division, dealing with systems for naming compounds), and "*Terminology*". The latter will sort under the PCD, a sort of recreating I.1 under a new name, and consist of three persons. JF, being a member of the PCDC, will be chairman, and two more persons will be appointed

(by PCDC?). The new "I.1" will be responsible for bringing forward new projects, to be carried out by *ad hoc* groups. (Possible projects will be discussed later during the meeting).

### 3. Berlin minutes

The minutes from the 40th IUPAC General Assembly in Berlin in 1999 were formally laid *ad acta*. Some of the decisions from Berlin are referred to below.

### 4. GB3

**4.1 Publisher** MQ reported that a contract was signed on 2001-05-21 between IUPAC and the Royal Society of Chemistry. The RCS will act as publisher for the GB3. The book is to appear in print not later than 4 months after receiving the manuscript. Six months after the book is published, IUPAC will be allowed to put 50 % of the material on the web as .pdf files, with the remainder after a full year.

**4.2. Cover page** (a) **Title.** Reversing our decision from Berlin, it was decided that the 3rd Edition will carry the same title as the previous editions, "Quantities, Units and Symbols in Physical Chemistry". (b) The **list of authors** was decided to run as on the Doc. 3C, with the alteration that *all* names would be in lower case (i.e. E. Richard Cohen etc). (c) Other decisions: The **IUPAC logo** is to appear prominently at the top, and the **year of publication** at the bottom. Page iii is to be printed exactly like the cover.

**4.3 Preface** JS, MQ and HS will extend the present text, emphasizing in which ways the present edition differs from the previous one.

**4.4 Style** Several minor matters of style were raised. JF will make sure that the text follows established British style codes.

**4.5. Inconsistencies** There are several cases of inconsistencies in Doc 3C, like references to different editions of one and the same document. Reminders of such cases are to be sent to BH, not to JS, before August 15.

**4.6 Time scale for finalizing** The time frame for finalizing the GB3 was outlined as follows: (a) By August 15 all comments from everybody has to be sent to JS (note §4.5!). (b) By September 1, JS will send the corrected document, including Indices, to the chairman of the PCDC (George Wilson), and at the same time, in GW:s name, to the chairman of the IDCNS (TC). (c) During November the document, with comments from the IDCNS taken into account, will be sent to the publisher.

**4.7. Translations** It is highly desirable that GB3 is translated into other major languages, projects which will involve huge efforts from people outside the present I.1. Two rules for translations were laid down: (i) Anyone willing to work on translation must be willing and able to work with the TEX language. (ii) The work is to start after the final text is sent to the publisher. Responsible for getting the work done are these I.1 members: French RM, German MQ, Italian FP, Japanese MT, and Portuguese RM. MT is to work closely with Kozo Kuchitsu, RM with Romeu Rocha Filho.

**4.8 Text modifications as decided in Berlin** (Berlin minutes § 2.4) (a) The text on pH in Sec. 2.13 is replaced by new text provided by I.3. (b) Sec. 2.14 Colloid and Surface Chemistry is modified by HS and Lisbeth Ter-Minassian Saraga. (c) Ch. 8 Uncertainty of Measurements is modified by JF and Richard Cohen. AT will do additional proof-reading to ensure that there are no conflicts with ISO. (d) ISO country codes are available of the web. AT will send reference to JS. (e) A simplified version of the IUPAC web version of the Periodic Table will be printed on the inside front cover. (In addition it was decided to retain the table of Energy Conversion Factors on the inside back cover.) (f) Although not mentioned in Berlin, it was considered necessary to reconsider exactly what fonts are to be used for the Greek alphabet (Appendix I).

**4.9 Proposed text modifications.** At the present stage proposed text modifications must be handled with extreme restrictivity. (a) BH had (010518) proposed a modified wording of Section 1.2, which mentions only one out of several existent conventions of organizing physical quantities. It was decided to retain the present text, but put in a sentence at the end, mentioning that electric charge rather than electric current is used as base quantity in defining atomic units (Sec. 7.3). It was also decided to change the word "recommends" in the footnote to "recommended". (b) BH had (010518) proposed consolidating the two sections on atomic units, 3.8 and 7.3 (v) into a new 7.5. Being too late to change the present edition, it was decided to keep the proposal in mind for the next edition. (c) It was decided to include the word "yet" in footnote (4) of Sec. 2.10, to read "... the dalton, with symbol Da, although the name and the symbol have not yet been approved by CGPM." JF will write to CCU on behalf of I.1 and suggest that the unit dalton, with symbol Da, be adopted as a synonymic for the unified mass unit u.

**4.10 Global proof-reading.** It is highly desirable that the complete text is read from end to end by the several persons. TC, MQ, MT and AT expressed willingness to take on this arduous task.

## 5. Joint meetings

During Sunday afternoon, I.1 was visited in turn by Commission I.5 Spectroscopy (chairman John Bertie), I.3 Electrochemistry (Chris Brett) and I.2 Chemical Thermodynamic (Ron Weir). The visits followed the same pattern. (a) A discussion of collaboration after the dissolution of the present commissions: It is clear that I.1 (which is to continue under a new name) will need expertise input from outside. The new I.1 will create a list of persons interested in active participation in future terminology work. (b) A copy of Doc. 3C was handed over to visiting chairmen, encouraging them to provide copies to commission members (and any other interested). Any corrections, typographic or others, are to be sent to JS before August 15.

## 6. Future projects

The Monday session started with a brain storm of future projects and the time sequence for these. (a) The immediate project is the .pdf version of GB3. How is the text to be parcelled? Which parts are to form the "First Fleet"? Introductory pages should be given in several languages (not restricted to these in which complete translations are planned). (b) A much bigger project (perhaps of one year's duration) is to produce a user-friendly, fully-interactive web version of the GB3. (c) For years, a "future

project" of I.1 has been to produce a shorter Green Book, a "Light" or "Student" version. It was decided that BH will start work on this project.

#### 7. Details of GB3

Quite some time was spent on many details of "Doc. 3C". The discussion was sometimes heated but always friendly. Notes were taken by JS.

#### 8. Visit by PCDC

PCDC chairman George Wilson and vice chairman elect John Ralston spent some time with I.1. GW informed of planned changes in IUPAC work (as already noted in §2 above). JF informed about (a) the state of GB3, as detailed above, (b) of our plans of future collaboration with outside expertise (§ 5a above), and our plans for future projects (§6). GW explained that IUPAC will automatically pay travel and subsistence for 3 participants for future meetings, and that costs of additional participants will have to be negotiated separately in each specific situation.

#### 9. The "new I.1"

The new "Commission on Physicochemical Symbols, Units, and Terminology" will continue the work of our current commission with new and expanded responsibilities (i.e. including photochemistry, as in GB3 ref. [43], [70] and [75]). In view of the information given by GW, it was decided not to explicitly name two persons to join JF in constituting a formal three-man body, but to rely on the list discussed in §5a to form *ad hoc* parties. - To facility internal communication, a name for group e-mail will be created. Some possible candidates are qus@iupac.org, physchem.qus@iupac.org, qus.pc@iupac.org. - A likely occasion for a next meeting would be in connection with a PCDC meeting planned for spring 2002, probably in Lausanne.

#### 10. Closing

The Chairman thanked the participants for constructive discussions, and declared the last meeting of IUPAC Commission on Physicochemical Symbols, Terminology and Units closed at 18.00, July 2, 2001.

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Bertil Holmstrom  
Secretary

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Jeremy Frey  
Chairman