

Subcommittee on Polymer Terminology IUPAC POLYMER DIVISION (IV)

Minutes of the meeting held in the Royal College, Glasgow, Scotland 6th to 9th July, 2010

Present

Taihyun Chang (Korea), Alain Fradet (France), Aubrey D. Jenkins (UK), Richard G. "Dick" Jones (Chairman, UK), Kurt Geckeler (Korea), Jung-Il Jin (Korea), Jiasong He (China), Karl-Heinz Hellwich (Germany), Michael Hess (Germany), Roger C. Hiorns (Secretary, France), Phil Hodge (UK), Jaroslav Kahovec (Czech Republic), Tatsuki Kitayama (Japan), Pavel Kratochvíl (Czech Republic), Przemysław Kubisa (Poland), Stefano V. "Valdo" Meille (Italy), Graeme Moad (Australia), Werner Mormann (Germany), Tamaki Nakano (Japan), Christopher K. Ober (Division IV President, USA), Stanislaw Penczek (Poland), Cláudio dos Santos (Brazil), François Schué (France), Ram Prakesh Singh (India, Polymer Division, observer), Dennis W. Smith Jr (USA), Michel Vert (France), and Jiří Vohlídal (Czech Republic)

Appendices

Appendix 1: Agenda

Appendix 2: Timetabled Discussions

Appendix 3: Current Projects and Task Group Members

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1. Opening Session

1.1 Welcome and apologies

The Chairman welcomed everyone to the meeting. The Subcommittee on Polymer Terminology (SPT) had been particularly active over the last year, and this meeting was timely as face-to-face discussions would help resolve many ongoing exchanges.

The Chairman announced, with a deep sense of loss, the death of Prof. Itaru Mita. Until the very end, Itaru gave loyal service, and in his memory, a half-minute's silence was observed.

Apologies were received from Prof. Bob Stepto for not attending. Prof. Bob Stepto and Mrs Joan Stepto's good wishes to SPT were announced. SPT gave a heartfelt wish to Prof. Bob Stepto that he have a swift return to good health.¹

1.2 Approval of the Preceding Minutes from the SPT Meeting in Glasgow (2009)

The minutes were accepted without further corrections. The Chairman thanked Prof. Tatsuki Kitayama for preparing them and for subsequent corrections by Subcommittee members.

1.3 Matters arising from the 2009 Minutes

None arose, outside of those to be addressed through the agenda of this meeting.

1.4 IUPAC developments

Prof. Jung-Il Jin is now ex-President of IUPAC and Prof. Nicole Moreau is now President. It was noted that such changes usually result in changes of policy. The Chairman reported that he, the Division President and two representatives from each of the Inorganic (II) and the Physical & Biophysical Chemistry (I) Divisions attended a meeting at Cornell University in September 2009 to discuss the development of Materials Chemistry in IUPAC. This group had planned to meet again in April but could not due to volcanic activity in Iceland. The meeting was thus deferred until the ACS meeting in Boston, Mass. in August. It has since transpired that the Bureau is opposed to any bid for a new Materials Division and is seeking to steer the activities of the 'Cornell' group away from such a possibility. Prof. Pavel Kratochvíl noted that there was a push for a Materials Division at least 15 years ago, when it would have been possible to have more involvement from the

¹ At the meeting's end, news was received of Prof. Bob Stepto's return to good health.

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Polymer Division, but following the abolition of the commissions, the inertia had been huge. Nevertheless, while IUPAC is a weighty institution, it is also not unreceptive to change.

On the 10th of February 2010, Dr John W. Jost retired from the position of Executive Director of IUPAC and Dr Terrence A. Renner took over. For the time being though, Dr Jost continues as Managing Editor, *Pure and Applied Chemistry* (PAC).

1.5 Publications since Glasgow 2009

2002-006-2-400 *Terminology for Reversible-deactivation Radical Polymerization previously called "Controlled" Radical or "Living" Radical Polymerization*, A. D. Jenkins, R. G. Jones, and G. Moad. *Pure Appl. Chem.* **82(2)**, 483-491 (2010).

The Chairman commented that it had cleared a path to a new project, led by Dr Graeme Moad, on the Terminology of Chain Polymerizations (detailed below).

2008-022-1-400 *Dispersity in Polymer Science*, R. G. Gilbert, M. Hess, A. D. Jenkins, R. G. Jones, P. Kratochvíl, R. F. T. Stepto, *Pure Appl. Chem.*, **81(2)**, 351-353 (2009) and subsequently reprinted, with a preface by R. G. Jones, in *Polym. Int.*, **59**, 23-24 (2010).

It was noted that this is probably one of the most important documents to have come from SPT for some time. Its relevance to all of polymer science and its ease of use calls for as great a dissemination of its content as possible. A copy has been printed in *Polymer International* with the consent of IUPAC and the Editor-in-Chief of the journal, however, it was not at the front of the journal as had been originally sought.

ACTION: The Chairman to clarify with the Editor-in-Chief as to how best promulgate SPT publications with *Polymer International*

2005-001-1-200 *Towards Defining Materials Chemistry* P. Day, L. V. Interrante and A. R. West *Pure Appl. Chem.* **81(9)**, 1707-1717 (2009)

This project originated from within the Inorganic Division, but there was also considerable input from the Physical Division, Prof. Chris Ober and Prof. Dick Jones.

German translation of:

2002-14-1-400 and extended as 2006-005-1-400 *Glossary of Polymer Class Names*

Translated by a member of *Angewandte Chemie* and corrected by Drs Karl-Heinz Hellwich and Michael Hess, and published in *Angew. Chem.*, **122(28)** 4943-4951 (2010). Karl-Heinz offered copies of this document to SPT.

A discussion arose on hyperlinking the document from the IUPAC website. There might be trouble in gaining access to the document itself, as each institution has its own access rights to each journal. The IUPAC site would nevertheless be able to link to the journal and thereby help promulgate the article. The Chairman will approach Dr Gerard P. "Gerry" Moss to let him know of this publication and others that have appeared overtime. Dr Gerry Moss might have such a list himself, and in any case, everyone should send to the SPT Secretary details of publications outside of PAC.

ACTION: Chair, Secretary and all SPT members

Japanese translation of:

2000-007-1-400 *Sol-gel document*, *Pure Appl. Chem.*, **79(10)** 1801 (2007) and published in *Kobunshi*, **58(11)** 838-843 (2009).

Japanese translation in preparation of:

2008-022-1-400 *Dispersity in Polymer Science*, *Pure Appl. Chem.*, **81(2)**, 351-353 (2009) by Prof. Tatsuki Kitayama

The translation will be ready within around 6 months.

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Announcements in Chemistry International

2009-047-1-400 *Definitions and Notations Relating to Stereochemical Aspects in Polymer Science*, K.-H. Hellwich and G. Moad

Announced on page 20 of the July issue, 2010.

1.6 Upcoming publications

2003-019-2-400 *Definitions of Terms Relating to Crystalline Polymers-Revision of IUPAC Recommendations 1988*

Profs Giuseppe Allegra and Stefano V. "Valdo" Meille have received positive referee comments. A revised version of the document implementing viable suggestions received from the reviewers and TG members has been prepared and distributed to TG members. Prof. Bob Stepto and Prof. Pavel Kratochvíl have given significant contributions to the preparation of the new document.

Action: GA, VM and RS

2002-017-1-400 *Polymerization Processes and Polymers in Dispersed Systems*

The Chairman reported that Dr John Jost had this document as being under review, thereby confirming its submission by Prof. Stanislaw Slomkowski.

2004-043-1-400 *Terminology Relevant to Bio-related Polymer Science and Applications*

Prof. Michel Vert has submitted this document to Dr John Jost for review but has had no information on its current status. The Chairman recommended he send it again as an attachment to Dr Jost with a request of status.

ACTION: MV

1.7 General Procedure for project completion and submission

There was a general discussion of the normal procedure for project submission. Once Task Group Members (TGM) have approved a project, it is distributed to SPT members for approval. Not all members will reply, but if a reasonable timeframe is set, then all comments are collected and dealt with by the Task Group Leader (TGL). If further discussion is required, an electronic exchange to expedite the document is preferred, however, if this cannot resolve matters it should then be dealt with by a face-to-face meeting. Once the SPT Chairman is satisfied with the document, it will go to the Division President, who will, if he is in agreement, approve its submission for public review and consideration by the Inter-Divisional Committee on Terminology, Nomenclature and Symbols (ICTNS). The document then goes through public review and ICTNS in a parallel process that often takes around 6 months or so. The external reviewers are selected by TGLs, but ICTNS conducts the review process.

It should be noted that if in a project a term is defined using a modification of a Gold Book entry, then a note should be added explaining why there is a difference between the two, and why the new definition is preferred.

1.8 Promulgation of Terminology Recommendations

Prof. Pavel Kratochvíl said that he and others had written to around 70 polymer journals in the 1980s to request publication of lists of valid IUPAC recommendations on polymer nomenclature. Some did publish and the exercise was considered of benefit. He wondered if such an exercise could not be carried out again for polymer terminology. The Chairman suggested that if it were a short document, around 2 pages, much like the Basic Guidelines project (2008-032-1-400), then that would help in its promulgation. Prof. Jiří Vohlřídál said it would help if it were included in journals' *Instructions for Authors*. The Chairman mentioned that that was indeed one the Basic Guidelines project aims. Dr Roger Hiorns said that it was important to involve publishers from the start of the project. Prof. Pavel Kratochvíl proposed an equivalent document for Terminology which was agreed.

ACTION: RGJ, JV and RCH will progress the idea

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1.9 Change in title page style in PAC

The Editorial Board of PAC has adopted a new style for the title page for published documents. In future, only names of authors will appear on the front page and these will be presumed to be those of the person(s) preparing the document for publication. All other names will be relegated to the end of the document with the lists of sponsors, if any. The Chairman, citing an e-mail² from Prof. Bob. Stepto received on 07/07/2010, stated that it was of great concern that the contributions of hard working TGMs would be marginalised in this way. Dr Graeme Moad noted that there would also be a problem when using search engines as there is no way of distinguishing TGMs from SPT members. Prof. Pavel Kratochvíl stated that it was an undesirable change. SPT was greatly concerned by the development. It was agreed that henceforth all TGMs will be listed as authors with the name(s) of the TGL(s) being indicated as corresponding authors.

Action: TGLS to adapt documents accordingly. The Chairman will ask the Division President to express displeasure at this change.³

2. Projects

2.0 Agreement of timetable for project discussions

The Chairman presented a draft timetable for consideration. This was accepted with several minor modifications. The finalised version is shown in Appendix 2.

2.1 Reports from projects underway and discussed in Glasgow

2007-009-1-800 (extension from 2002-037-1-800)

Rotaxanes & Catenanes

Report by Prof. Jiří Vohlídal

This document is thought ready for the review stage. The abbreviation PRO, prior to the number for each term, was used throughout the manuscript. This is a rule from Division VIII and indicates each unique term without need to reference a particular document. PRO here indicates Polymer Rotaxanes. The codes are in the document when it is published. Both rules and definitions can have such numbers.

Prof. Pavel Kratochvíl noted that in a section on individual terms, the differentiation between polymer and macromolecule was sometimes not clear. e.g. 1.3 macromolecular rotaxane where it was not clear if it was a substance or a molecule. Prof. Jiří Vohlídal replied that there are “two levels of objects defined in the document”: the macromolecular level and the polymeric material level. It should be noted that a rotaxane is defined as a supramolecular species in the Div. VIII document. A ‘macromolecular rotaxane’ is a molecular species and a ‘polyrotaxane is a rotaxane polymer’, *i.e.* a compound composed of macromolecular rotaxane species. He intimated that references can be made available to SPT for the structures cited in the document. Some of these structures are complex, and while in the literature there are considerably more complex structures being reported, the aim of the document was to explain and illustrate with the simpler examples.

Everyone in SPT had had the chance to see this document.

² Said e-mail

For some reason, PAC has started to mention the working party as only an afterthought at the end of a document. Authorship now apparently belongs only to the one or few members of the WP involved in the final preparation for publication. This is a travesty of the truth. I know, for example, that there were many important contributions made by experts, external to and from within the SPT, to the recently published NRP document, yet only Jenkins, Jones and Moad appear as the authors. The omission of the names of the experts involved is a deliberate and unnecessary insult.

In my view, as has been our tradition, the working party is the body key to any of our documents and its members should be listed as authors. I attach a copy of the draft of the rotaxanes document circulated recently by Jiri and also a copy modified so that the WP members appear as authors and not as an afterthought. I would recommend to the SC that it adopts the modified format or something equivalent to it in all documents. The approach I have taken is not to mention the names of the WP separately from those who have been involved in preparing a document for publication.

³ Following further discussion between the Chairman, the Division President and Prof. Bob Stepto, it was decided that protest was futile and unnecessary given the solution given above. However, given the importance with respect to the profile of SPT and its members, the matter will be tabled for the next meeting.

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Given that this is a Division VIII project it was thought correct that Div. VIII should have a chance to see it before submission. Prof. Phil Hodge and Dr Karl-Heinz Hellwich are members of Div. VIII so would present the document at the forthcoming divisional meeting.

Action: PH and K-HH to recommend to Div. VIII that the project go forward to review

2004-043-1-400 *Terminology Relevant to Bio-related Polymer Science and Applications*

Report by Prof. Michel Vert

A copy of this project document had been sent to the Chairman and the Divisional President, and from there has been sent to Dr John Jost. It was noted that while much has been done on this document within SPT, given its complexity it would benefit from review prior to finalisation. Prof. Hitchen Grant was a private external reviewer who had been particularly helpful prior to it being sent to the Chairman. However, it was not clear to the TGL what the current status of the document might be. There ensued a short discussion on this project and members of SPT made minor recommendations for changes, notably those relevant to Gold Book entries. Prof. Michel Vert was warmly thanked for his hard work and staying-power in seeing this project through to submission. He had overcome many obstacles.

Action: Chairman will check with Dr John Jost as to the status of this document. MV will incorporate comments from SPT members and format errors after the review process.

2005-005-2-400 *Terminology of the Properties of Macromolecules in Solution*

Report by Prof. Taihyun Chang

Not as much progress had been made of late as the TG was waiting for modifications from Prof. Bob Stepto, who himself has had to wait for improvements in his health. The first full draft will be distributed to the TGMs by the end of this year, and then to SPT members before the SPT meeting in Puerto Rico. Prof. Taihyun Chang was accordingly asked to request an extension to this project.⁴

2010-012-1-400 *Development of a Multilingual Glossary of Polymer Terminology*

(previously **2007-008-1-400**).

Report by Dr Cláudio dos Santos

Prof. Máximo Barón has joined the project; Spanish will be incorporated. Dr Cláudio dos Santos demonstrated how this project will operate from the view of the end-user using Portuguese as an example. A defining rule of the Glossary is that any definition is only one hyperlink away from the translated term. The website is currently up and running, although only for translators' use. Dr Cláudio dos Santos has registered classes of terms into tables, that are the backbone of the computer run system, and it is these that the translators will work from.

Dr Cláudio dos Santos asked if the SPT would comment critically on the project and how it might better run. The first stage is to complete a handful of languages, and the second to look at a larger number of languages. The project deadline is September 2010. He believes that it will be possible to be online by then, although only parts of the project will have been completed by that date. He will be in touch with Dr Fabienne Meyers by September 2010 to work out how to link to the IUPAC site. Deadlines were agreed: January 2010, initial translation tests by native speakers; January 2011, incorporation of further languages (Chinese, Russian, Korean and Japanese); and October 2011, final testing.

The computer engineer will require the remaining \$3000 come September 2010. Unlike most projects, the money here is directed towards a party outside of SPT to ensure website construction. However, the translational work will be carried out by the SPT members, and therefore this project could go on *ad infinitum*. Prof. Jiasong He noted that the Chinese character translation of the Glossary of Basic Terms will appear at the beginning of next year, and it would be a relatively simple matter to provide those translations for the website Glossary. In the first instance, simplified Chinese characters will be used; at a later stage, when they become available,

⁴ Prof. Taihyun Chang later reported that Prof. Bob Stepto will be sending him his revision by end-September so that he and Dr Michael Hess might revise the document in October 2010. A request for a project extension will also be forthcoming during October.

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terms in Chinese traditional characters will be available. Dr Michael Hess mentioned that there was already a German version available prepared by Dr Karl Heinz Hellwich and superseding the 1974 version, and Prof. Tatsuki Kitayama will supply a Japanese version.

It was wondered whether or not the site should operate through the IUPAC Polymer Education site (<http://www.iupac.org/polyedu/>). The Division President noted that it would be good to have a link through from the Polymer Education site to the Glossary, but that it would best be placed on the main IUPAC site so as to spread responsibility for maintenance and updates. The Chairman thanked Dr Cláudio dos Santos for a good contribution in a particularly adventurous project.

Action: CDS to send JH and MH a glossary table. Members of SPT able to provide French, Spanish, Japanese and Korean translations to contact CDS for tables to work from.

2008-015-1-400 *Preferred Names of Polymers*

Report by Prof. Werner Mormann

In the recent period, little progress had been made as Prof. Werner Mormann and Dr Karl-Heinz Hellwich, the main participants to this project, had been preoccupied with a conference and personal business, respectively. Both stated that they will be able to pick up threads as their respective circumstances change. It was noted by the Chairman that the project was spent up and will be requiring an extension. The TGL stated that this is important as it will be required for the relevant software.

Action: WM and K-HH

2010-036-1-400 *Keywords*

Report by Prof. Przemysław Kubisa

This is the first report on this project. The preliminary list of keywords was expanded. The project application was submitted May 2010. The time requested was 2 years with \$5000 support.

The aim of the project is to collect and collate the most important keywords used in the literature, however, the problem lies in their organisation, so it was proposed to start with some determination of the document's structure. The Chairman raised the matter of there having been no questions in the review process, but also mentioned that the project can only go ahead once the money has been received. The TGL stated that the real measure of the success of this project will be if Journal Editors find it of use.

Action: PKu

2010-007-1-400 *Terminology for Chain Polymerization*

Report by Dr Graeme Moad

The main conclusion in the group meeting was that attention should first be directed to determining the main classes of chain polymerisation. Specialists would be invited to ensure coverage of all the relevant classes. Groups of polymerizations already noted include, for example, chain growth condensation polymerizations, ATRP, anionic, cationic, etc.. The TG will identify the main papers to be used as references for this work and any known issues with current terminology will also be addressed (e.g., inconsistencies with IUPAC terminology). Dr Graeme Moad presented a list of people to be invited to join the project (see below) and it was noted that it was inevitable that the final number of TGMs would exceed the optimum recommended by the Chairman. Within the TG it had been determined that: Prof. Tamaki Nakano will contact Profs. Yokozawa, Aoshima and Nozaki to establish their willingness to participate; Prof. Phil Hodge will contact Prof. Robert Grubbs to establish whether someone from his group could be involved and Dr Graeme Moad will contact Prof. Jean-Pierre Vairon.

The proposed subdivision of work would be as follows: anionic polymerization – Nakano, Kitayama; chain growth condensation polymerization (catalyst transfer polymerization) – Hiorns, Yokozawa; radical polymerization – Moad, Matyjaszewski, Russell; coordination polymerization – Nozaki; metathesis polymerization – Hodge, Grubbs nominee; cationic polymerization – Aoshima, Vairon; ring-opening polymerization – Penczek; supramolecular polymerization - ?

The chairman congratulated Dr Graeme Moad on an excellent start to the project.

Action: GM

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2001-081-1-800 *Terminology and Structure-Based Nomenclature of Dendritic and Hyperbranched Polymers*

Report by Dr Alain Fradet

A big problem for this project has been to define dendrimers, and although the group has met several times, they have yet to complete the document. The first part has been completed, and the second part, currently with Dr Jaroslav Kahovec, will be added shortly. The TG will discuss the changes via e-mail and then meet in Prague or Germany before the end of 2010 to complete the project in readiness for SPT review. The Chairman wondered if this meeting might be expensive. Prof. Werner Mormann thought not as the group will be meeting where people are already based. The Chairman reminded the participants that the project was spent up, however, if the members individually wished to use funds from active accounts for which they have responsibility as TGLs, then they might reasonably do so. All contributors to the project will be co-authors. The Chairman commended Dr Alain Fradet for having constructively brought the project forward.

Action: AF, JK, WM

2005-043-2-400 *Terminology for Self-Assembly and Aggregation of Polymers*

Report by Prof. Dick Jones

This burgeoning project was allocated 5 hours for a TG meeting and even then only half of the document had been considered. A new draft will be circulated by the end of September 2010 that will contain comments and questions. The TGMs will be expected to deal with as many points as possible by electronic communication. Prof. Chris Ober (co-TGL) noted that he had some more time now and could more fully look at the present draft even before the new one is circulated.

Action: RGJ and CKO

1999-051-1-800 *Nomenclature for Chemically Modified Polymers*

Report by Prof. Tatsuki Kitayama

Prof. Tatsuki Kitayama was glad that many of the TGMs were present as this meant the draft was well discussed. Comments will be sent to him so that he can prepare a final version by the 1st of September. He would like to receive suggestions of names of external reviewers.

Given that this is an inter-divisional project, Drs Jaroslav Kahovec and Karl-Heinz Hellwich, and Prof. Phil Hodge as joint members of both Division IV and Division VIII will help facilitate its way. It is expected that by March 2011 it will be possible to compile the reviews, modify as necessary and then seek the agreement of the Chairman and the Divisional President to submit. It was agreed that some reviewers' names be held over for ICTNS. Given that the project had been a long one, it was also suggested that care be taken in recording all co-authors of the project. The Chairman thanked Prof. Tatsuki Kitayama for driving the project to completion.

Action: TK, KH-H, JK, PH, SPT members

2008-020-1-400 *Revision of "IUPAC Recommendations on Macromolecular Nomenclature – Guide for Authors of Papers and Reports in Polymer Science and Technology"*

Report by Prof. Phil Hodge

A large part of the document was attacked workman-like by the TG. Much was done. A new draft will be circulated to the TG before end-October 2010. Prof. Phil Hodge reported that things were still moving on in the document and that a steady state had yet to be reached. Prof. Phil Hodge expected comments from TGMs before Christmas on the re-draft.

Action: PH

2008-032-1-400 *Basic Guidelines to Polymer Nomenclature*

Report by Dr Roger Hiorns

For the first time, the TG was able to look fully at a complete draft of the document and dealt with all of it except for the last paragraph. The publishers in the TG were not present though, so the TGL will go to see them in the following week during the MACRO2010 conference. By the end of August a revised draft will be circulated to TGMs for return of comments by end-September. With

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the approval of the TGMs, the document will then be sent to Ray Boucher (Wiley) to prepare a mock-up draft for circulation to Managers and Editors of other journals to obtain their opinions. This will be considered a private review stage. Their comments will be incorporated into a finalised version which, once approved by the TGMs, will be sent to the Chairman requesting approval for submission from SPT.

The Division President stated that special attention should be given to copyright for this document. PAC would hold copyright but it allows free distribution by any party. However, in this instance a clause ensuring that the document is distributed whole rather than in part or with modifications should be included. It was noted that a final version of the document will go to the Division President for use in the Polymer Education website.

Action: RCH

2003-060-2-400 *Terminology on Separation of Macromolecules*

Report by Prof. Taihyun Chang

This project is behind schedule as 3 years ago it was extended to terms beyond the initially planned limit of chromatography. In the meeting this week, TGMs agreed on a structure for the document, and dealt with around 80 terms. The first major draft will appear in around 2 months time. An extension will be requested. It is hoped that a final draft will be presented to SPT before the end of 2011.

Action: TC

2009-047-1-400 *Definitions and Notations Relating to Stereochemical Aspects in Polymer Science*

Report by Dr Karl-Heinz Hellwich

A first meeting, of 90 minutes, consisted of a brainstorming session considering the necessary changes to the original document. Terms to be discussed will thus include *meso* and *racemo*, *cis* and *trans*, and similar, along with other relevant terms such as regioregularity and the constitutional repeating unit. A consideration of "Fischer projections" will also be made. Sections will consider absolute configurations of polymers with and without chirality centres, atropisomeric groups, double bond configuration, mixtures of polymers and degrees of regularity, pseudo-chirality, and prochirality. Complementarity and consistency with the *Crystalline* project will be sought along with the necessary revisions to, or consistency with, a 2002 publication on stereochemically asymmetric polymerizations [*Pure Appl. Chem.*, **74**(6), 915–922, (2002)].

The project will not deal with all possible terms, but as can be inferred from the above, will define the foremost rules and terms of the subject. It was felt that the project should, however, try to cover eventualities that might arise in the next decade. A paper summarising the scope of the project will be circulated to TGMs by November.

The Chairman congratulated Dr Karl-Heinz Hellwich on this excellent start.

Action: K-HH

2006-041-1-400 *Glossary of Thermal and Thermomechanical Properties of Polymers*

Report by Dr Michael Hess

There remain only 2 or 3 terms to define and it was predicted that within 2 months the document will be sent to selected external reviewers. After incorporating their observations it will then be sent to SPT members. It is hoped to submit the document to public review and ICTNS by the end of the year - which would tie in with the end-date of the project. Dr Michael Hess noted that there were sufficient funds left for one final meeting with Prof. Bob Stepto.

Action: MH and RS

2003-042-1-800 *Revision of Source-Based Nomenclature of Homopolymers & Copolymers*

Report by Prof. Tatsuki Kitayama

Comments on the last draft of the document are still being received from TG and SPT members indicating that further corrections are required. Some examples given are of non-existent polymers and this is being discouraged. There were found to be two points of view within the TG: those who want the establishment of a systematic source-based nomenclature for polymers, and those who

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want nomenclature that defers to existing IUPAC organic and inorganic nomenclature. Given the concerns of Division VIII, it was felt that a document that acknowledged both approaches might be best.

There were found to be problems arising when dealing with inorganic polymers since there are instances in which the rules for inorganic nomenclature conflict with those for organic nomenclature. In the TG discussion, it was stressed, especially by Dr Jaroslav Kahovec and Dr Karl-Heinz Hellwich, that if the document names inorganic polymers following rules for organic polymers, then it might be better to use traditional names to simplify or await a document on inorganic polymers.

Some structural representations remain to be dealt with, as indeed does a listing of preferred names which would be good to address in this document, e.g., hexamethylene adipate.

Dr Karl-Heinz Hellwich's name would be added to the TGM list, however, it was also noted that the limit for project participation should be checked.

Source-based nomenclature has been discussed in other projects, namely the Web-based Guide (2008-020-1-400) and the Basic Guidelines (2008-032-1-400) without consultation with this project. Thus discussions between the various project leaders should be set-up. The following timetable was agreed: the TGL to prepare a revision for TGMs by end-July 2011; Dr Karl-Heinz Hellwich to take the document to Division VIII at the meeting in August 2010; the TGL to attend to the Appendix and correlate the retained trivial names with those in organic nomenclature before end-August; other TGMs to send comments to the TGL before end-August; electronic communications to follow with a revision for the TGMs expected by the end of 2010. Further revisions will be performed as required, however, it is expected that the document will be ready for public review by end-March 2011.

Action: PH and RCH, as TGLs of the projects mentioned, to contact TK with their revisions.

2006-004-1-400 *Recommendations on the Abbreviated Terms of Polymers*

Report by Prof. Jiasong He

Two drafts had been prepared since the last meeting in August 2009, the last being the 5th. The main points arising were that: the IUPAC names in the Extended List should include source-based names and class names; and that the definition of abbreviation, acronym and code should be emphasized and described in the text body of the Recommendations.

The agreed timetable was: before end-September 2010, the TGMs members will send their additional input to the TGL; end-November 2010, the TGL will send a revised document to all TGMs, who should report back to the TGL before before 15 February, 2011.

Action: JH

2006-028-1-400 *Terminology for Conducting, Electroactive and Field-responsive Polymers*

Report by Prof. Jiří Vohlídal

A new draft had been submitted to the TG shortly before the meeting. As yet no comments had been received but would be welcomed up to the end of October. There are now more than 300 entries in the document so only problematic entries should be raised for further discussion. Funding will expire in December 2010, so the project will require an extension. Since this is a heavily physical document, physicists will be sought for external review.

The agreed timetable is: end of October, remarks from TG members with suggestions for private reviewers; end of January 2011, remarks from selected external reviewers; end March 2011, redistribution of document to TGMs; June 2011, meeting in Puerto Rico with the TGMs to look at selected entries.

Action: JV and TGMs

2003-019-2-400 *Definitions of terms relating to crystalline polymers - revision of IUPAC Recommendations 1988*

Report by Prof. Stefano V. 'Valdo' Meille

A productive meeting was held to discuss the revised version that implemented viable suggestions from external reviewers, Prof. Robert F. T. Stepto and other active TGMs.—Some additional comments by TGMs were discussed. SVM incorporated observations from Dr Karl-Heinz Hellwich

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to ensure coherence with the Stereochemical project (2009-047-1-400). It was agreed that the document implementing new alterations resulting from the TG discussion will be sent to TGMs and the SPT within two weeks. Four weeks further will be allowed for additional comments which will be also incorporated into the document. Together with a list of suggested referees the finalized document will be sent to the SPT Chairman for his approval and then to the Division President, for possible consideration by ICTNS and public revision.

Action: SVM, GA, K-HH and TGMs

2.2 Feasibility Studies

The Chairman noted that the best feasibility study is one that results in an application. If a project sits around for a year as a 'proposed feasibility study' but without anything happening, then it is purposeless and should be considered defunct. If people have ideas, they should prepare an application in readiness for submission. That would be sufficient for SPT to assess its viability. Indeed, if any forms were presented at the present meeting, the Chairman and the Division President will be willing to consider signing them straight away.

The only feasibility study proposed last year was *Ultimate Mechanical Properties* which has lapsed. Another, *Elastic Properties of Materials*, is dependent on Prof. Bob Stepto's input, and since he is not present, it had best wait for his comments.

The Chairman raised the subject of a revision of the '*Nomenclature for regular single-strand and quasi single-strand inorganic and coordination polymers*' document [*Pure Appl. Chem.*, **57(1)**, 149-168 (1985)], which is badly needed. While inorganic polymers were the main concern of polymer scientists, coordination polymers were more the concern of inorganic chemists. The former will therefore be the subject for our attention and Prof. Dick Jones, with Drs Hiorns and Kahovec, will prepare a draft application before the end of the year for SPT for approval. Dr Karl-Heinz Hellwich will ask for the requisite support from Division VIII. Prof. Phil Hodge asked if the document will have a formal link to Division VIII. The Chairman confirmed that it would have to be a Division VIII project, but responsibility for its progress would then be delegated back to SPT.

Dr Karl-Heinz Hellwich suggested that there be two projects - inorganic polymers, and coordination polymers. Dr Jaroslav Kahovec recalled that this had been raised before with the President of Division VIII but that no one could be found who was competent in coordination polymers, and therefore it was dropped. It was agreed therefore that the document would only deal with inorganic polymers.

Action: RGJ, RCH and JK to draft an application for approval by SPT. K-HH to seek support within Div. VIII.

Prof. Jiří Vohlídal proposed a project on *Constitutionally-dynamic polymers* that would consider both terminology and some points of nomenclature. This area is rapidly increasing and it would be a timely project. He proposed to discuss the project with Prof. Jean-Marie Lehn. He assured the Chairman that he would have some open capacity soon, given that many of his projects will shortly be finishing. Prof. Stefano V. 'Valdo' Meille noted that the document might overlap with the Self-Assembly project, and it was suggested by Prof. Chris Ober that a copy of the Self-Assembly document might be sent to Prof. Jiří Vohlídal.

Action: CKO, RGJ and JV

There are many documents that require revision, and a notable document to work on would be the *Graphical Representation project* within Division VIII. However, this would necessitate intervention by Dr Karl-Heinz Hellwich and given that he is somewhat overcharged at present, it might be better to wait till next year.

2.3 Proposed Feasibility Studies

The item "Proposed Feasibility Studies" was dropped. Only Feasibility Studies are to be considered.

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3. Any other business

3.1 Extensions and the financial state of affairs

Before calling for extensions, the Division IV President made a comment on the financial situation. In order to stay on track, SPT should make around 6 proposals per year. SPT in fact has exceeded this and therefore, while not wishing to put a brake on excellent projects, there will have to be a slowing down of submission rates. The current financial situation for many institutions is difficult, and although our Division is quite steady, it has received slightly less market-variable funding from Samsung (for which the Division remains exceedingly grateful, and gives thanks to the Past-President for his help), and will have to provide some monies for the forthcoming 2011 Year of Chemistry. Funds are expected from Wiley, and the Divisional President will shortly be writing to other companies to see if he can obtain greater funding. Given that our total budget is of the order of \$55000 (not counting Samsung and Wiley), reasonably small sums can make a great difference.

Action: All SPT members to send company details to the Divisional President so that he can write and ask for funding of the order of \$5000.

The Chairman then gave a short explanation of the way in which SPT keeps its finances, which is by tradition different to that in other Subcommittees. The money from all projects is pooled and then redistributed according to the travel needs of SPT members—and while this generally concerns funding for major meetings each year, there are also funds made available for smaller meetings for project advancement. For the main meetings, funds are allocated using an Excel spreadsheet algorithm that takes into account distance travelled, role in the Subcommittee and number of days of attendance.

The following projects should seek extensions.

2003-060-2-400 *Terminology on Separation of Macromolecules*

2005-005-2-400 *Definitions of terms relating to individual macromolecules, their assemblies, and dilute polymer solutions*

2006-028-1-400 *Terminology for Conducting, Electro-active and Field-responsive Polymers*

Action: TC, JV

3.2 Co-author names on projects

A discussion on the participation and membership of particular projects was held. Please see Appendix 3 for details of project membership.

2003-060-2-400 *Terminology on Separation of Macromolecules*

Prof. Taihyun Chang confirmed all names currently on this project are required.

2005-005-2-400 *Definitions of Terms Relating to Individual Macromolecules, their Assemblies, and Dilute Polymer Solutions*

Prof. Jiří Vohlídal will be seeing many projects off in the near future through their naturally finishing, thus reducing his load, and remains a member of this project.

2006-041-1-400 *Glossary of Thermal and Thermomechanical Properties of Polymers*

Prof. Stefano V. 'Valdo' Meille and Dr Cláudio dos Santos have been involved in this project and therefore should be co-authors.

2006-004-1-400 *Recommendations on the Abbreviated Terms of Polymers*

Prof. Jiasong He has sent a list of 12 project members to the Chairman, all of which have been active.

2010-012-1-400 *Development of a Multilingual Glossary of Polymer Terminology*
(previously **2007-008-1-400**).

This project is exceptional and therefore can have as many names as required. Dr Cláudio dos Santos did state though that some names on the project were completely unknown to him! This

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was because the project came to him already initiated. Thus some names will be removed (Prof. Marguerite Rinaudo - as no contact has been had, and indeed her entry on the IUPAC website does not list a participation in this project), and some added (for example, Prof. Máximo Barón and Prof. Valdo Meille). No contact had been made with Prof. David Tabak of late. Argentina is now an associated member and it is possible that Brazil will too be in a similar situation. This permits accreditation of working members.

2008-020-1-400 *Revision of "IUPAC Recommendations on Macromolecular Nomenclature—Guide for Authors of Papers and Reports in Polymer Science and Technology"*

It was agreed that Dr Ted Wilks should be added as he drafted the original.

1999-051-1-800 *Nomenclature for Chemically Modified Polymers*

The Chairman noted that he did not wish his name on this project - and that it should be removed. The Chairman wondered if Dr Bob Fox should be kept on this project. Prof. Werner Mormann noted that care should be taken when people contributed in the past and in this case the project will require particular attention. Dr Bob Fox participated in Ottawa and should be in the SPT listing. Dr Ted Wilks initiated the project and contributed to it so is a co-author.

2001-081-1-800 *Terminology and Structure-Based Nomenclature of Dendritic and Hyperbranched Polymers*

Dr Alain Fradet and Dr Jaroslav Kahovec co-chair this project.

Dr Bob Fox can be deleted from the list of active TGMs. Prof. Máximo Barón is an active TGM.

2007-009-1-800 *Rotaxanes & Catenanes*

Dr Michael Hess and Prof. Pavel Kratochvíl asked that their names be removed from this project.

2003-042-1-800 *Source-based Nomenclature of Single-strand Organic Polymers*

Prof. Werner Mormann does contribute to this project - but is not on Prof. Tatsuki Kitayama's list. Dr Karl-Heinz Hellwich is contributing, so should be added. The name Kevin Thurlow should be removed.

2010-036-1-400 *Keywords*

Currently the list for this project is:

Prof. Przemysław Kubisa (TGL), Prof. Dick Jones, Prof. Kurt Geckeler, Dr Roger Hiorns and Dr Cláudio dos Santos.

2010-007-1-400 *Terminology for Chain Polymerization*

The names of this project are currently under discussion - as detailed in the Project report above.

Concern was expressed by the Chairman as to Prof. Jung-II Jin's participation in the sense that he hoped that his time would not be underused now that he is Past-President of IUPAC. Prof. Jung-II replied that he was participating in some projects and for the current time the situation suited him well.

As a general comment, the Chairman recalled his statements of the meeting in Torino when he declared that it was in SPT's and the projects' interest to limit their participation to no more than around 7 projects or so.

Action: All TGLs to send updated lists of TGMs to the Secretary

3.3 Miscellaneous remarks on other projects and activities

A proposal was made in Brazil to look at a 'terminology in nanotechnology' project (CKO/RGJ). A project application was prepared and submitted but the application requires further advice from the Division President.

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Prof. Jiří Vohlídal commented that 'Glossary of Class Names of Polymers Based on Chemical Structure and Molecular Architecture', [*Pure Appl. Chem.*, **81**(6), 1131-1186 (2009)] required an *erratum*. The Chairman suggested that the whole of SPT could study the document for a period to establish a more complete list of *errata*.

Dr Karl-Heinz Hellwich raised two points: (i) that Prof. Jiří Vohlídal and he will collect *errata* for the aforementioned Class names document; and (ii) if anyone in the 'Class Names' project was available could they please contact him about the definition of ionenes containing spiro-atoms. Prof. Pavel Kratochvíl noted that ionene had already been defined and suggested that Dr Karl-Heinz Hellwich contact Prof. Przemysław Kubisa. Prof. Jiří Vohlídal replied that the term spiro-ionene, however, was not defined in the 'Ionic Polymers' document.

Action: KH-H to contact PKu

The Chairman raised the Purple Book for discussion. It has been in print for 3 years and the RSC will accept inclusions and new Chapters for a revised online version. There will not be another paper version. SPT should therefore prepare new documents to send to the RSC for inclusion. Consistency with the sectional style (Terminology before Nomenclature) of the Purple Book will be required. It was decided that chapters be renumbered to accommodate new chapters in the perceived correct positions.

Prof. Pavel Kratochvíl raised the subject of the Guidelines for document preparation for PAC. These are not available on the new IUPAC website but are on the old one (<http://old.iupac.org/reports/provisional/guidelines.html>). It was hoped by SPT that this would be corrected. The Division President noted that whatever happens on the website, it is careful but slow. It is expected that some financial contribution will help move things along. Prof. Pavel Kratochvíl commented that the system was not hopeless, as the links work. A general concern remained that having two sites in operation, side-by-side, is causing confusion for many users.

The Chairman requested all members to consider recruiting younger members, in particular women, to join SPT. First they might attend as observers to see for themselves if the business of SPT is of interest to them, and also for SPT to see if they can easily integrate.

4. Closure and next meeting

The Chairman closed the meeting with thanks to all for coming. He looked forward to seeing everyone in Puerto Rico next year.

Next meeting

During the 46th General Assembly at San Juan, Puerto Rico, 30th July – 7th August 2011⁵
<http://www.iupac2011.org/Default.html>

RCH 6th of August 2011

⁵ 2011 is the IUPAC designated *International Year of Chemistry*

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Appendix 1: Agenda

SUBCOMMITTEE ON POLYMER TERMINOLOGY

Glasgow, Scotland

6th to 9th July, 2010

1. OPENING SESSION

1.1. Welcome and apologies

1.2. Approval of the Minutes from the Glasgow Subcommittee Meeting of 2009

1.3. Matters arising from the 2009 Minutes

1.4. IUPAC developments

1.5. Publications since Glasgow 2009

2002-006-2-400 *Terminology for reversible-deactivation radical polymerization previously called "controlled" radical or "living" radical polymerization*, 2010, 82(2), pp. 483-491 - Jenkins, Jones & Moad

2008-022-1-400 *Dispersity in Polymer Science: Pure Appl. Chem.*, 2009, 81(2), pp. 351-353 – Stepto, reprinted in *Polym. Int.*, 2010, 59, 23-24 with a preface – Jones

2005-001-1-200[†] *Towards defining materials chemistry: Pure. Appl. Chem.* Toward defining materials chemistry, 2009, 81(9), pp. 1707-1717 - Day, Interrante & West

1.6. Upcoming publications

The Chairman is not aware of any upcoming publications.

1.7. Timetable for the Glasgow Meeting inc. determination of social events

2. PROJECTS

2.1 Projects approved

2007-008-1-400 (extension) *Multilingual Glossary* - dos Santos (\$6,000)

2009-047-1-400 *Definitions and Notations Relating to Stereochemical Aspects in Polymer Science* – Hellwich & Moad (\$6,000)

2010-007-1-400 *Terminology for Chain Polymerization* – Moad (\$6,000)

2.2 Projects in the process of approval

2009-1-400 *Terminology of Nanomaterials and Nanotechnology in Polymer Science* – Ober & Jones

2010-1-400 *List of Key Words* – Kubisa

2.3 Projects with ICTNS & submitted for public review

2002-017-1-400 *Polymerization Processes and Polymers in Dispersed Systems* – Slomkowski

2.4 Projects in final stages of preparation

2001-081-1-800 *Terminology and Structure-Based Nomenclature of Dendritic and Hyperbranched Polymers* - Kahovec

2.5 Projects in Preparation by Working Parties [denoted Task Groups in the minutes]

2003-019-2-400 *Crystalline Polymers* – Allegra, Meille

2003-060-2-400 *Terminology on Separation of Macromolecules* - Chang

2004-043-1-400 *Terminology for Biomedical (Therapeutic) Polymers* - Vert

cont.

[†] Joint project of the Inorganic, Physical and Polymer Divisions.

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2005-005-2-400	<i>Terminology Properties of Macromolecules in Solution</i> – Chang
2005-007-1-400	<i>Guide to Terminology and Nomenclature</i> – Jones
2005-043-2-400	<i>Self-Assembly and Aggregation in Polymers</i> - Ober, Jones
2006-004-1-400	<i>Abbreviations</i> - He, Tabak
2006-028-1-400	<i>Terminology for Stimulus Responsive Polymers</i> – Vohlidal Project title 'Terminology for Conducting, Electroactive and Field-responsive Polymers'
2006-041-1-400	<i>Glossary of Thermal and Thermomechanical Properties of Polymers</i> - Hess
2007-008-1-400	<i>Multilingual Glossary</i> – dos Santos
2008-015-1-400	<i>Preferred names of Polymers</i> - Mormann
2008-020-1-400	<i>Revision of the Division IV web-based Terminology Guidelines</i> - Hodge
2008-032-1-400	<i>Basic guidelines to polymer nomenclature</i> – Hiorns
2009-047-1-400	<i>Stereochemical Aspects in Polymer Science</i> – Hellwich & Moad
2010-007-1-400	<i>Terminology for Chain Polymerization</i> – Moad

2.6 Interdivisional projects not listed elsewhere

1999-051-1-800	<i>Source Based Nomenclature for Modified Polymer Molecules</i> - Kitayama
2003-042-1-800	<i>Revision of Source-Based Nomenclature of Homopolymers & Copolymers</i> – Kitayama
2007-009-1-800	<i>Nomenclature for Macromolecular Rotaxanes</i>

2.7 Feasibility Studies

F-18 *Ultimate Mechanical Properties* - Hess

2.8 Proposed Feasibility Studies

PSF-3	<i>Elastic Properties of Polymers</i> – Hess
PFS-9	<i>Nomenclature in Inorganic Polymers</i> – Jones, Hiorns, Kahovec

3. ANY OTHER BUSINESS

4. 2011 MEETING

During the 46th General Assembly at San Juan, Puerto Rico, 30th July – 7th August 2011*
<http://www.iupac2011.org/Default.html>

RCH 3rd of June 2010

* N.B. 2011 is the IUPAC designated *International Year of Chemistry*

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Appendix 2: Timetabled discussions

Titles in **red** are those of terminology projects, those in **blue** are of nomenclature projects, while those in **purple** fall somewhere in between.

	Tuesday, 6 th July	Wednesday, 7 th July	Thursday, 8 th July	Friday, 9 th July	
09:00-10:30 a.m.	Welcome, Agenda & Schedule finalization	Biomolecules (30 min) / Self-assembly	Basic guidelines / Separations	Stimuli-responsive / Web-based guidelines	
COFFEE/TEA					
11:00-12:00 p.m.	Abbreviations / Chain polymerization	Crystalline / Modified	Solution properties / Stereochemical	FS/PFS & closing remarks	
12:00-01:00 p.m.					
LUNCH					
02:30-03:30 p.m.	Dendrimers etc. / Self-assembly	Multilingual (45 min) / Preferred names (short report only)	Thermomechanical	EXCURSION TO THE BURRELL COLLECTION	
COFFEE/TEA					
04:00-05:00 p.m.	Dendrimers etc.	Web-based guidelines (can continue on)	Self-assembly / Source-based		
05:00-06:00 p.m.	Rotaxanes	Keywords (short report 15 min) / Chain Polymerization (short report)			

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Appendix 3: Current Projects and Task Group Members

Project code and name	Active and Past TG Members ¹
<i>SPT Projects</i>	
2002-017-1-400 <i>Polymers in Dispersed Systems</i> (in ICTNS review)	Slomkowski , Alemán, Gibert, Hess, Horie, Kubisa, Meisel, Mormann, Penczek, Stepto
2003-060-2-400 <i>Separation of Macromolecules</i>	Chang , Berek, Davankov, Gilbert, Hess, Jandera, Kratochvíl, Moad, Pasch, Stepto, Tabak, Vohlídal
2004-043-1-400 <i>Biomedical (Therapeutic) Polymers</i>	Vert , Doi, Fradet, Hellwich, Hess, Hodge, Horie, Kubisa, Penczek, Rinaudo, Schué, Work
2005-005-2-400 <i>Macromolecules, Assemblies and Dilute Solutions</i>	Chang , Hess, Horie, Kratochvíl, Sato, Stepto, Vohlídal
2005-043-2-400 <i>Self-Assembly and Aggregation in Polymers</i> (was 2005-043-1-400 , and was denoted 2006-043-2-400 in 2006 and 2009 minutes)	Ober & Jones , Chang, Hess, Hodge, Kratochvíl, Moad, Vert
2006-004-1-400 <i>Abbreviations</i>	He , Hellwich, Hess, Horie, Jones, Kahovec, Kitayama, Kratochvíl, Meille, Meisel, Mita, ² dos Santos, Slomkowski, Tabak, Vert, Vohlídal, Work
2006-007-1-400 <i>Crystalline Polymers (revision)</i> (was 2003-019-2-400)	Allegra, Meille , Geil, He, Hess, Jin, Kratochvíl, Mormann, Stepto
2006-028-1-400 <i>Electric Field Responsive</i> (was denoted 2007-028-1-400 in 2008 minutes)	Vohlídal , Ober, Jin, Jones, Hiorns, Horie, Stejskal, Schué
2006-041-1-400 <i>Glossary of Thermal Properties</i>	He, Hess , Horie, Joon-so Kim, Meille, Moad, dos Santos, Schué, Stepto, Vert, Vohlídal
2007-008-1-400 <i>Multilingual Glossary</i>	Hess & dos Santos , Barón, Camino, Chang, Fradet, He, Kitayama, Kubisa, Meille, Vohlídal
2008-015-1-400 <i>Preferred Names for Polymers</i>	Mormann , Chang, Hellwich, Kahovec, Kitayama, Wilks
2008-020-1-400 <i>Revision of "IUPAC Recommendations on Macromolecular Nomenclature; Guide for Authors of Papers and Reports in Polymer Science and Technology"</i>	Hodge , Hellwich, Hiorns, Jones, Kahovec, Mormann, Wilks
2008-032-1-400 <i>Basic Guidelines to Polymer Nomenclature</i>	Hiorns , Boucher, Duhlev, Hellwich, Hodge, Jenkins, Jones, Ober, Smith, Vairon, Vohlídal
2009-047-1-400 <i>Definitions and Notations Relating to Stereochemical Aspects in Polymer Science</i>	Hellwich, Moad , Jones, Kitayama, Kahovec, Meille, Nakano, Vert
2010-007-1-400 <i>Terminology for Chain Polymerization</i>	Moad , Hiorns, Hodge, Kitayama, Kubisa, Matyjaszewski, Nakano, Penczek, Russell
2010-036-1-400 <i>Keywords</i>	Kubisa, Jones, Geckeler, Hiorns, dos Santos
<i>Interdivisional Projects</i>	
1999-051-1-800 <i>Source Based Nomenclature for Modified Polymers</i> (is also called 2006-006-1-800 , and was denoted 1999-051-1-400)	Kitayama , Fox, Fradet, Hodge, Horie, Kahovec, Kubisa, Ober, Vert, Vohlídal, Wilks
2001-081-1-800 <i>Dendritic & Hyperbranched</i>	Fradet & Kahovec , Barón, Hellwich, Hodge, Horie, Kahovec, Kubisa, Mita, ² Mormann, Stepto, Vohlídal, Wilks

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2003-042-1-800 <i>Source-Based Nomenclature of Single-strand Organic Polymers [includes copolymers]</i>	Kitayama , Haddletone, Hellwich, Hess, Hodge, Horie, Jenkins, Kahovec, Kratochíl, Mita, ² Mormann, Ober, Penczek, Stepto, Vohlidal, Wilks
2007-009-1-800 <i>Nomenclature for Macromolecular Rotaxanes</i> (was denoted 2000-007-1-800 and is an extension of the project previously called 2002-037-1-800 which was itself called 2000-037-1-400)	Vohlidal , Fradet, Gibson, Hodge, Horie, ² Jenkins, Kahovec, Kitayama, Metanomski, ² Mita, ² Mormann, Stepto, Wilks, Yerin
FEASIBILITY STUDIES	
FS-20 <i>Terminology and Nomenclature of Polymers in Nanotechnology</i> (pending discussions)	Ober, Jones
FS-22 <i>Nomenclature of Inorganic Polymers</i>	Hiorns, Jones, Kahovec
FS-23 <i>Elastic Properties of Polymers</i>	Hess & Stepto
FS-24 <i>Constitutionally-dynamic polymers</i>	Kahovec

Notes

¹ Given the new system for (co)-authorship, this table lists active members both present and past.

² Deceased, but will be a co-author to this project.

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Appendix 4: Contact Addresses of Members of SPT

Prof. Dr R. G. 'Dick' JONES (Chairman)
19 Leycroft Close,
Canterbury, Kent CT2 7LD, U.K.
Tel. +44-1227 768019
FAX: +44-1227 827558
kapitimana@googlemail.com

Dr Roger C. HIORNS (Secretary)
CNRS, IPREM, Université de Pau
2 av. President Angot,
F-64057 Pau Cedex, FRANCE
Tel.: +33 (0) 540 008 488
roger.hiorns@univ-pau.fr

Prof. Dr Giuseppe ALLEGRA
Dipartimento di Chimica
Materiali e Ingegneria Chimica
Politecnico de Milano
Via L. Mancinelli, 7
20131 Milano, ITALY
Tel.: +39 2 2399 3023
Fax: +39 2 239 3080
giuseppe.allegra@polimi.it

Prof. Dr Máximo BARÓN
Facultad de Ciencias Exactas y Naturales
Universidad de Belgrano
Villanueva 1324
1426 Buenos Aires, ARGENTINA
Tel.: +54 11 4511 4735/6
Fax: +54 11 4821 4887
baron@ub.edu.ar

Prof. Dr Taihyun CHANG
Department of Chemistry
Pohang University of Science & Technology
San 31 Hyoja-dong, Nam-gu
Pohang Kyungbuk, 790-784, KOREA
Tel. +82 54 279 2109
Fax: +82 54 279 3399
tc@postech.edu

Prof. Dr Alain FRADET
Laboratoire de Synthèse Macromoléculaire
Université Pierre et Marie Curie
Tour 54 - Case 184
4 Place Jussieu
75252 Paris, FRANCE
Tel.: +33 1 44273804
Fax: +33 1 44277054
afr@ccr.jussieu.fr

Prof. Dr Jiasong HE
Institute of Chemistry
Chinese Academy of Sciences
Beijing 100190, CHINA
Tel.: +86 10 6261 3251
Fax: +86 10 6261 3251
hejs@iccas.ac.cn

Dr Karl-Heinz HELLWICH
Postfach 100731
D-63007 Offenbach
GERMANY
Tel.: +49 69 716731 23
Fax: +49 69 716731 19
Hellwich.iupac@web.de

Dr Michael HESS
FB 8, Makromolekulare Chemie
Universität Siegen
Adolf-Reichwein-Straße 2
D-57068 Siegen, GERMANY
hess_iupac@yahoo.de

Prof. Dr Philip HODGE
Department of Chemistry
University of Manchester
Oxford Road, Manchester
M13 9PL, U.K.
Tel.: +44 (0)161 275 4707
Fax: +44 (0)1524 793 252
Philip.Hodge@man.ac.uk

Subcommittee on Polymer Terminology

IUPAC POLYMER DIVISION (IV)

Prof. Dr Kazuyuki HORIE
6-11-21, Kozukayama
Tarumi-ku, Kobe 655-0002
JAPAN
Tel.: +81 78 791 0941
Fax: +81 78 797 7277
horiek@spring8.or.jp

Prof. Dr Aubrey D. JENKINS
Vixen's
22a North Court
Hassocks, W. Sussex BN6 8JS
U.K.
Tel. and Fax: +44 1273 845410
polygon@vixens.eclipse.co.uk

Prof. Dr Jung-Il JIN
Department of Chemistry
Korea University
5-1, Anam-dong, Sungbuk-ku
Seoul 136-701
KOREA
Tel.: +82 2 920 3290 3123
Fax: +82 2 928 7387
+82 2 921 6901
jjjin@korea.ac.kr

Dr Jaroslav KAHOVEC
Institute of Macromolecular Chemistry
Academy of Sciences of the Czech Republic
Heyrovsky Sq. 2
162 06 Praha, CZECH REPUBLIC
Tel.: +420 296 809 322
Fax: +420 296 809 410
kah@imc.cas.cz

Prof. Dr Tatsuki KITAYAMA
Department of Chemistry
Graduate School of Engineering
Osaka University
Toyonaka, Osaka 560-8531
JAPAN
Tel.: +81 6 6 850 6230
Fax: +81 6 6841 0104
kitayama@chem.es.osaka-u.ac.jp

Prof. Dr Pavel KRATOCHVÍL
Institute of Macromolecular Chemistry
Academy of Sciences of the Czech Republic
Heyrovského náměstí 2
CZ 162 06 Praha 6
CZECH REPUBLIC
Tel.: +420 296 809 277/351
Fax: +420 296 809 411/410
krat@imc.cas.cz

Prof. Dr Przemysław KUBISA
Centre of Molecular and Macromolecular
Studies
Polish Academy of Sciences
Sienkiewicza 112
90-363 Łódź, POLAND
Tel.: +48-42-6819815
Fax: +48-42-6847126
pkubisa@bilbo.cbmm.lodz.pl

Prof. Stefano Valdo MEILLE
Dipartimento di Chimica
Materiali e Ingegneria Chimica
Politecnico di Milano
Via L. Macinelli, 7
I-20131 Milano
ITALY
valdo.meille@polimi.it

Dr Graeme MOAD
CSIRO Materials Science and Engineering
Bag 10 Clayton South
Victoria 3169, AUSTRALIA
Tel.: +61 3 9545 2509
Fax: +61 3 9545 2446
graeme.moad@csiro.au

Prof. Dr Werner MORMANN
FB 8, Makromolekulare Chemie
Universität Siegen
Adolf-Reichwein-Straße 2
D-57068 Siegen, GERMANY
Tel.: +49-271 740 4713
Fax: +49-271 740 2226
mormann@chemie.uni-siegen.de

Subcommittee on Polymer Terminology IUPAC POLYMER DIVISION (IV)

Prof. Dr Tamaki NAKANO
Division of Biotechnology & Macromolecular
Chemistry,
Hokkaido University,
N 13, W 8, Kita-ku
Sapporo 060-8628
JAPAN
nakanot@eng.hokudai.ac.jp
Tel.: + 81 11 706 6606
Fax: +81 11 706 6869

Prof. Dr Chris OBER
Department of Materials Science and
Engineering
Cornell University
310, Bard Hall
Ithaca, NY, USA
Tel.: +1 607 255 8417
Fax: +1 607 255 6575
cko3@cornell.edu

Prof. Dr Stanislaw PENCZEK
Centre of Molecular and Macromolecular
Studies
Polish Academy of Sciences
Sienkiewicza 112
90-363 Łódź, POLAND
Tel.: +48 42 6819815
Fax: +48 42 6847126
spenczek@bilbo.cbmm.lodz.pl

Dr Cláudio DOS SANTOS
Instituto de Ciências Exatas e Biológicas
Universidade Federal de Ouro Preto
Campus Morro do Cruzeiro
35,400-00 Ouro Preto, BRAZIL
Tel.: +55 33 3559 1707
claudio@iceb.ufop.br

Prof. Dr Francois SCHUÉ
Organisation Moléculaire Evolution et
Matériaux Fluores, UMR CNRS 5073
Laboratoire de Chimie Macromoléculaire
Université Montpellier II
Science et Techniques du Languedoc
Place Eugène Bataillon
F-34095 Montpellier Cedex 5, FRANCE
Tel.: +33 4 67 726080
schue@univ-montp2.fr

Prof. Dr Stanislaw SLOMKOWSKI
Centre of Molecular and Macromolecular
Studies
Polish Academy of Sciences
Sienkiewicza 112
90-363 Lodz
POLAND
Tel.: +48 42 682 6537
Fax: +48 42 684 7126
staslomk@bilbo.cbmm.lodz.pl

Prof. Dr Dennis W. Smith
Department of Chemistry,
Clemson University,
383 Hunter Laboratories,
PO Box 340973
Clemson, SC 29634-0973, U. S. A.
Tel.: +1 864 656 1160
Fax: +1 864 656 6613
dwsmith@clemson.edu

Prof. Dr Robert F. T. STEPTO
Polymer Science and Technology Group
Manchester Materials Science Centre
University of Manchester and UMIST
Grosvenor St., Manchester M1 7HS
U.K.
Tel.: +44-161-200-3574
Fax: +44 161 200 3586
+44 161 200 8877
rfts@tesco.net

Prof. Dr David TABAK
Praça Pio X, 78, Sala 1213
Centro
CEP 20091-040 Rio de Janeiro, RJ
BRAZIL
Tel.: +55 21 2233 9971
Fax: + 55 21 2518 5396
Home tel.: + 55 21 2274 6144
tabak@uninet.com.br
tabak@globo.com

Subcommittee on Polymer Terminology
IUPAC POLYMER DIVISION (IV)

Prof. Dr Jean-Pierre VAIRON
Laboratoire de Chimie Macromoléculaire
Université Pierre et Marie Curie
4, Place Jussieu
Paris Cedex 05
75252 Paris, FRANCE
Tel.: +33 1 44 275 045
Fax: +33 1 44 277 089
vairon@ccr.jussieu.fr

Prof. Dr Michel VERT
Faculté de Pharmacie
Université Montpellier 1
15 avenue Charles Flahault
BP 14491
34093 Montpellier cedex 5, FRANCE
Tel.: + 33 4 67 41 82 60
Fax: +33 4 67 52 08 98
vertm@univ-montpl.fr

Prof. Dr Jiří VOHLÍDAL
Department of Physical and Macromolecular
Chemistry
School of Sciences
Charles University in Prague
Albertov 2030, 128 40 Praha 2,
CZECH REPUBLIC
Tel.: +420 2 2195 2347
Fax: +420 2 2491 9752
vohlidal@natur.cuni.cz