Subcommittee on Polymer Terminology
IUPAC Polymer Division (IV)

Minutes of the meeting held in Cairns, Australia
26th June to 29th June 2018

Present

In person

Prof. Volker Abetz (*VA*, Germany)
Prof. Melissa Chan (*MC*, Malaysia)
Prof. Taihyun Chang (*TC*, Korea)
Mr. Jiazhong Chen (*JC*, USA)
Prof. Chris Fellows (*CF*, Australia)
Prof. Carlos F. O. Graeff (*CG*, Brazil)
Prof. Jiasong He (*JH*, China)
Dr. Karl-Heinz Hellwich (*KHH*, Germany)
Prof. Michael Hess (*MH*, Germany)
Dr. Roger C. Hiorns (*RCH*, France - **Chair**)
Prof. Wenbing Hu (*WH*, China)
Prof. Christine Luscombe (*CKL*, USA)
Prof. Peter Mallon (*PM*, South Africa)
Prof. John Matson (*JBM*, USA)
Prof. Stefano Valdo Meille (*SVM*, Italy)
Dr. Jan Merna (*JM*, Czech Republic)
Dr. Graeme Moad (*GM*, Australia)
Prof. Tamaki Nakano (*TN*, Japan)
Dr. Marloes Peeters (*MP*, UK)
Prof. Olga Philippova (*OP*, Russia)
Prof. Guido Raos (*GR*, Italy)
Prof. Greg Russell (*GTR*, New Zealand)
Prof. Cláudio dos Santos (*CdS*, Brazil)
Prof. Stan Slomkowski (*SS*, Poland)
Prof. Natalie Stingelin (*NS*, UK)
Prof. Patrick Théato (*PT*, Germany)
Prof. Paul D. Topham (*PDT*, UK - **Secretary**)
Prof. Michael Walter (*MW*, USA)
Dr. Andrey Yerin (*AY*, Russia)
Prof. Myung-Han Yoon (*MHY*, Korea)

Via Skype

Dr. Paola Carbone (*PC*, UK)
Dr. Francesca Giuntini (*FG*, UK)
Dr. Mario Malinconico (*MM*, Italy)
Dr. Adriana Sturcova (*AS*, Czech Republic)
Prof. Michel Vert (*MV*, France)

Appendices

1. OPENING SESSION

1.0 Welcome and apologies

RCH welcomed Members to the Subcommittee on Polymer Terminology (SPT) meeting and expressed thanks to all for making the great effort to attend, outlining the importance of IUPAC and SPT. *RCH* explained that the objectives of the week were to work towards the current strategy of SPT to run projects to completion in a timely fashion and focus on key new projects to submit. *RCH* explained the overall strategy of SPT is to have a 'sustainable cycle' of projects, old projects are completed and new projects are submitted (based on a rolling average of three projects in each category per year), and he reminded SPT members that it is funded projects that subsidize our meetings. *RCH* explained how SPT have been really good and active in recruiting new members, with a good balance of expertise, as well as gender and geographical diversity (although we will continue to improve where possible). At the current time, we do not need to bring in any more Observers until current Members step down. *RCH* highlighted the importance of the more experienced SPT Members and encouraged newer Members to take full advantage of their strengths and wealth of knowledge to ensure good knowledge transfer and progression planning.

RCH expressed gratitude to the most experienced SPT Members (those present: *JH*, *KHH*, *MH*, *SVM*, *SS*) for their continued dedication to the team.

RCH welcomed the Observers to the meeting, namely *VA*, *WH*, *MP*, *MHY*.

Apologies were received from Prof. Rameshwar Adhikari (*RA*, Nepal), Dr. Ray Boucher (*RB*, UK), Dr. Paola Carbone (*PC*, UK), Prof. Alain Fradet (*AF*, France), Dr. Francesca Giuntini (*FG*, UK), Prof. Philip Hodge (*PH*, UK), Prof. Richard Jones (*RGJ*, UK), Dr. Daniel Keddie (*DK*, UK), Prof. Mario Malinconico (*MM*, Italy), Prof. Adriana Sturcova (*AS*, Czech Republic), Prof. Michel Vert (*MV*, France), Prof. Jiri Vohlídal (*JV*, Czech Republic), Dr. Ted Wilks (*TW*, USA).

1.1 Approval of Minutes from the São Paulo SPT meeting of 2017

The minutes were approved subject to the correction of some minor errors identified by *KHH*.

ACTION: *PDT* to update Minutes and send to Fabienne to upload to the IUPAC website.

1.2 (i) Matters arising from the 2017 Minutes

RCH presented information on previous meetings. *JH* pointed out that the terms '**2008 – Taiwan'** and 'Taipei' were incorrect in the context used and explained that, in 1979, the Chinese Chemical Society and IUPAC signed an agreement in Davos saying 'The membership list of the Adhering Organizations will read as follows:

CHINA THE CHINESE CHEMICAL SOCIETY
THE CHEMICAL SOCIETY LOCATED IN TAIPEI, CHINA'.

The correct term is: 'Taipei, China'.

ACTION: *JH* to send Roger the relevant documentation to allow him to update his lists.
ACTION: *RCH* to update the web lists concerning previous meetings.

(ii) Gold Book

GM submitted a written report on the status of the Gold Book:

"I am the ICTNS rep for the Division. There is not much to report on that from since there has been no meeting since Brazil. The main aspect of this is refereeing IUPAC papers submitted to PAC (~ 20 since Brazil). There was some email discussion on the next edition of the GOLD book back in February. This is probably more an issue for SPT. There were a number of questions I raised. How will it be recognised that a definition in the Gold book has been updated by a more recent IUPAC publication or colour book? There are cases where a new term definition is based on or dependent on the current definition in the Gold book. If the Gold book definition is updated it may affect the definitions dependent on it in unforeseen ways. There are cases where Gold book definitions have been updated in colour books (e.g. the Purple book) but they have not been identified as updates. Brynn Hibbert responded to this but there was no circulated outcome to this discussion."

There was a discussion on the Gold Book. *CdS* was invited to give a presentation. He recapped that in ICTNS it had been resolved that the Good Book should be reconstructed and more regularly updated. This was especially important as many documents depend on the Gold Book for their definitions. By prior agreement, he stated that *CF* and *CdS* would ensure that the Gold Book online would be regularly updated with polymer terms.

They will make list of polymer terms- going through each document. It should not be underestimated how big this job is. The most recent version of the Gold Book must be checked. *GTR* stressed how serious this job was and that there was a need for a mechanism established in SPT to ensure Gold Book relevancy and accuracy of recommendations referring back to it.

MH mentioned that our WIKI activities should be extended to the Goldbook terms (the work not necessarily be done by the SPT WIKI team, but it should be advertised outside of the Division.

It was thus decided that in all documents that quote the Gold Book, the TGLs must quote the Gold Book definition they are using and the original source document if it is different. If they are making a modification to the Gold Book they must also quote the version that they are modifying in a similar way. TGLs should therefore carefully check the Gold Book and published recommendations to get the most recent terms. Particular care is required when the source document is more up to date than the Gold Book.

TGLs to send updated terms to *CF* and *CdS*. When a project is finished, the Chair or Secretary of SPT is to remind the TGL to contact *CF* and *CdS* about the Gold Book. The aim here is to return to a situation where the Gold Book gives the most recent and reliable definition.

ACTION: TGLs of projects to give prior warning to *CF* and *CdS* when new/amended definitions are about to be published, which will need to be included in the Gold Book.

1.3 Publications since the last SPT Meeting (Brazil 2017)

There are no new publications since the last meeting, but two papers have been submitted: *PH*'s document on 'WebGuide' and *MV*'s document on Lactic.

SS's Keywords paper was submitted to public review and ICTNS.

1.4 Chairperson's communication

1.4.1 Project and Paper submission processes, RCH

RCH explained that people are encouraged to use the project application form shown in the Agenda Appendices and available on the IUPAC web site. The project submission process is straightforward, but if anybody experiences problems, there are many SPT Members that are familiar with the process and can help.

For projects that have finished, *RCH* talked through the proposed submission process for the generated paper shown in Appendix 4 to these Minutes. *SS* asked if changes have been made following comments/suggestions from SPT Members, is it necessary to send it back out again for comments? *RCH* explained that this is not necessary for minor amendments. The process outlined in Appendix 4 was approved.

1.4.3 SPT Webpage, RCH

RCH explained that the SPT webpage does not have a great impact at the moment (see http://www.iupac.org/body/401/). Currently, under 'SPT Aims', the webpage says 'Welcome to Istanbul'. *RCH* has written a new passage for this section and requests that SPT Members check the wording when the webpage goes live [the new edition has gone live as of July 2018].

ACTION: *RCH* to upload the new passage for the 'SPT Aims' section and inform SPT.
ACTION: SPT Members to check the new passage and give feedback to *RCH*.

RCH explained that there will be a link to each of our papers in SPT, so it will be good to use the webpage as a source in the future. *MH* explained that he has SPT group photos for several of the meetings and *KHH* pointed out a small number of errors. *CdS* will be driving the SPT webpage.

ACTION: *RCH/CdS* to arrange for links to SPT papers to appear on the webpage.
ACTION: *MH* to send *RCH* photographs of SPT Members from previous meetings for the webpage.
ACTION: *KHH* to send *RCH* details concerning the errors on the webpage.

1.5 Project Statuses and Objectives at the start of the week

2013-001-1-800 *Structure-based Nomenclature for Regular Linear Star, Comb and Brush Polymers* - Chen
JC stated that the project is close to being finished. The document is waiting for final approval from *KHH* and then it should be complete.

2010-007-1-400 *Terminology for Chain Polymerization* – Moad
GM explained that since Brazil, the group had been communicating about issues raised with polycondensation and polyaddition. *GM* stated that the objectives of this week would be to solve this issue and get agreement from the group. Time will also be spent on a number of other terms that have been flagged.

2009-047-1-400 *Stereochemical Notations* – Hellwich & Moad
GM stated that the document needs a final proof read from *KHH*. The plan for the week is to try to find time for *KHH* and *GM* to work on it. *GM* wants to get this submitted as soon as possible.

2015-013-1-400 *Brief Chain: Brief Guide to Polymerization Terminology* – Luscombe/Moad
CKL explained that this project document relies on progress being made in *GM*'s Chain Polymerization project. The plan was to resolve the major issues with GM's project before the Task Group meet to work on Brief Chain. When they do, allocation of remaining terms will be distributed among Members, who will work on their terms during the meeting.

2014-014-1-400 (MODSIM) *Terminology for modelling and simulation of polymers* – Meille
SVM explained that the Task Group met in March in Milan to really get the project going. Martin Field is now involved in the project and has been very useful so far. The TG worked on definitions and, since that meeting, *GR* and *SVM* went over these definitions and have produced a new version of the document. This week, the TG will be updated on this work done and then the plan will be to make progress on the document. *SVM* has asked Fabienne for an extension. *SVM* inquired about getting skype connections with members who were not present in Cairns. Due to the availability of members, along with the time differences between Australia and Europe, it would be difficult, but we would try nonetheless.

2010-036-1-400 *Keywords* - Slomkowski
SS stated that the final document was sent to SPT for final approval and he has received some relatively minor changes that need to be made. As the changes to be made are minor, the document will not need to go back out to SPT for re-approval. *SS* plans to make the changes and submit the document as soon as possible.

2015-049-1-400 *Brief Guide to the Characterisation of Polymers* **-** Topham
PDT stated that the major aim for this week was to decide on the structure of the schematic flow diagram, which is the central point of the project/paper.

201x-xxx-1-400 (Project Committee) *Development of a Multilingual Glossary of Polymer Terminology with New Languages* - dos Santos
CdS explained that the first phase of the project is complete and now they need to migrate the work to the polymer education website. This has been discussed with Lynn Soby. It has been decided that they are not going for a second phase of this project at the moment as it is very expensive. A major project objective that remains is to migrate the work to the IUPAC website. *CdS* and *RCH* to discuss project application this week. *CdS* needs to discuss this project with SPEd. It is highly likely that the migration to the website will become another project, as it is a substantial amount of work.

2017-039-1-800 (GRAPHIC) *Graphical Representation of Polymer Structures* – Hellwich
KHH explained that this is a new project. The objectives of the week are to establish the scope of the project, make an outline and distribute tasks among the Task Group Members.

2015-032-2-400 (WIKI) Synchronizing Wikipedia: Polymer Definitions and Terminology – Hess
MH stated that the aim of the week was to get input from the working party and distribute tasks among the Task Group Members.

2013-049-1-400 (SEPARATION) Terminology on the Separation of Macromolecules – Hess
MH stated that a discussion is needed with the working party members. The problem is that the analytical division is about to make a new edition of the Orange Book, but *MH* is yet to get a

response from them. There could be discrepancies as there are large number of lists and a large number of definitions. In this project, the Task Group need to cut the list down this week to only polymer terms and it can progress without the reliance on the Orange Book project. *KHH* highlighted the fact that the group cannot make a new definitions if the Orange Book has already defined them. *RCH* pointed out that there is precedence for this and it works. The group need to look at the detailed definitions and work this out on a case-by-case basis, proposing modified definitions for polymer science only. They should quote the Orange Book, if the new version is available. If it is not then they should carry on but taking care to use the note, 'in polymer science' where they expect there might be a confusion of terms.
There was a PAC publication from the Analytical Division (Pure Appl. Chem. 2018; 90(1): 181–231) that was brought to the attention of *MH* in Cairns by *GM* (as member of ICTNS). *MH* will adjust the list of terms for our document and deliver the revised draft of our document by the end of this year.

2012-048-2-400 *A Brief Guide to Polymer Terminology* - Hiorns
RCH explained that this project will be finished this year. The plan is to submit in the next 6 months. The plan for this week is to go through the document and check the edits and text.

XXXX-XXX-X-400 (SEQUENCE) *Sequence controlled polymers* – Théato
PT explained that this is a new project to be submitted. There has been a delay in putting the proposal together. The objectives for the week are to put the proposal together and produce a first sketch of the project. This will be done in two sessions; one for proposal construction and one to work on the project outline.

Invited Lecture – *Polymer Nomenclature, KHH*
RCH introduced *KHH*. During the introduction, *RCH* discussed the importance of our cooperation with Division VIII and of the role of nomenclature in many SPT projects. *KHH* gave a well-received lecture on polymer nomenclature.

ACTION: *PDT* to send slides to SPT members and observers.

1.6 Project Statuses and Actions following work in SPT

2009-047-1-400 *Definitions and notations relating to stereochemical aspects in polymer science* - Moad
GM stated that the Task Group resolved issues on typographical errors and issues on referencing. These will be rectified by the end of the week. *KHH* will check document in the next two weeks. After which, the document will be submitted to SPT for comments and approval.
ACTION: *KHH* to go through the document and send it back to *GM* for final checks and then circulation to the Task group.

2013-001-1-800 *Structure-based nomenclature for regular linear star, comb and brush polymers* - Chen
JC explained that the document has been through DIV IV and VIII for review. The Task Group had a very good session, going through the document again and went through the remaining errors. The Task group will have a final version of the document by the end of September and

will submit the final version in October (it does not need to go back to SPT or DIV IV & VIII for further approval if no further problems appear).

ACTION: *JC* to submit the final document in October 2018.

2015-013-1-400 *Brief Chain: Brief Guide to Polymerization Terminology* - Luscombe
CKL. The Task Group had a productive meeting, where the members simultaneously worked on the same document using GoogleDocs, each working on their allocated terms and sections. The group just need to finish some small parts now. *CKL* will reformat the document into a paper draft. The Task Group should be able to meet in Paris 2019 to go through the paper and edit it into a Brief Guide.

ACTION: CKL to reformat the document into a paper format.

2014-033-1-400 *(Project Committee) Polymeric Carriers: Nomenclature for Polymeric Carriers Bearing Chemical Entities with Specific Activities and Names* - Vert
JC spoke on behalf of *MV*. The Task Group had a discussion about a possible extension. They also discussed the naming rules of conjugates. Suggestions were made to *MV* to modify the general formula of the conjugate name to make it easier to understand/make sense and also to add more examples to the document. *MV* responded rapidly and sent a new version of the document. There are still issues with brackets and some examples are too complex to name. For the document, the examples need to be changed. The Task Group will start with a simple example, then make it more complicated.

ACTIONS: *MV* to send report to *PDT*.
AY will simplify the naming.

2017-039-2-800 *Graphical Representation of Polymers* - Hellwich
KHH hosted the kick-off meeting with a significant part of the Task Group. The group identified problems that could arise in revising the 1994 document in addition to things not reported in this previous document. Tasks were distributed amongst the Task Group. When did the wavy lines come into play, for example?

ACTION: All Task Group members to look through their allocated two chapters of the Purple Book by November 2018.

2012-048-2-400 *A Brief Guide to Polymer Terminology* – Hiorns & Vohlídal
RCH. The Task Group discussed the use of two documents (one from *RCH* and one from *JV*) and eventually decided to use *RCH*'s template because it had more IUPAC terminology in. However, Jiri's document will be used to improve the final document. Mechanical and thermal properties were focussed on. Work will be done on reordering the document and there should be a new project on polymer properties and mechanics.

2015-049-1-400 *Brief Guide to the Characterisation of Polymers* - Topham
PDT stated that the Task Group have agreed on a rough structure for the document and a firmer structure for the schematic flow diagram. Tasks were distributed accordingly: *JH*, *MH* and *WH* will work on the behavioural characterisation. *PDT*, *JM* and *AS* to do work on the structural characterisation of polymers.

ACTIONS: Task Group Members to work offline on the schematic flow diagram. *JH*, *MH* and *WH* to work on the behavioural characterisation of polymers and *PDT*, *JM* and *AS* to work on the structural side of the flow diagram. *PDT* to arrange a Skype meeting in 2019 to discuss progress and next steps.

2006-028-1-400 *Electric Field Responsive Polymers* – Vohlídal
CG delivered the report on behalf of *JV*. The Task Group worked on revision of the document. *CG* will take on the task of collecting edits and changes from the Cairns meeting to deliver a final version in Feb 2019.

ACTION: *CG*/*JV* to submit the final document to SPT for feedback/approval.

2019-xxx-1-400 (Project Committee) *Development of a Multilingual Glossary of Polymer Terminology with New Languages* – dos Santos
CdS. Realised in the glossary one of the conditions is that the translations of the terms should be approved by NAOs. There should be a project to have the terms translated. *MHY* joined the group. *CdS* will submit the document shortly. The first version is finished, so *CdS* is now looking for the next step.

ACTION: *CdS* to submit the document shortly.

2014-014-1-400 (ModSIM) *Terminology for modeling and simulation of polymers* - Meille
SVM. The Task Group met a number of times in the week and have organised Skype timings for subsequent meetings. *WH* has taken part in the discussions and will join future polymer simulation projects. The group decided that it will be a Glossary of basic terms, as the document was getting too large and unmanageable. A follow-on project could be done to include the larger list of terms. A strong effort will be made to have a complete first version of the document ready by the end of 2018 to be circulated around the Task Group Members. The document will then hopefully be submitted to SPT for approval by Paris 2019.

ACTION: Task Group Members to complete the first draft of the document by the end of 2018 and *SVM* to circulate the document to SPT by July 2019.

2013-049-1-400 (SEPARATION) *Terminology on the Separation of Macromolecules* - Hess
MH. The project will be continued on the basis of the Orange Book and the recent publication Pure Appl. Chem. 2018; 90(1): 181–231.

ACTION: *MH* to finish the document by the end of 2018.

2010-007-1-400 *Terminology for Chain Polymerization* - Moad
GM. The Task Group have now decided on the remaining contentious points- they will stick to the original terms and will not be defining new terms in this project (*e.g.* step-growth polymerisation). *GM* will send the document for final circulation to the Task Group (including Stan Penczek, Kris Matyjaszewski, etc.) by the end of July 2018. Once the responses have been collated and dealt with, *GM* will send out the revised document to SPT (before the end of the year).

ACTIONS: *GM* to distribute the document to the Task Group by the end of July 2018.
GM to distribute the document to SPT by the end of 2018.

2015-032-2-400 (Project Committee) *Synchronizing Wikipedia: Polymer Definitions and Terminology* - Hess
MH. The Task Group have made good progress on the project. 95 IUPAC boxes have been inserted into Wikipedia pages. New IUPAC documents that need to be included into the project have been identified. The Task Group need to analyse what terms still need to be done with IUPAC boxes. *MH* explained that there is overlap with SPEd due to *GR*'s tutorials on Wikipedia. *MH* needs to discuss spending money for students with *RCH*. We have ongoing things, but then the next project has been identified (see actions below). The concept will be to create a mechanism of inserting IUPAC boxes on Wikipedia at the end of each SPT project.
ACTIONS: Selected Task Group Members to be trained in editing Wikipedia pages through a new project to be submitted by *GR* as soon as possible. Members include: *MH*, *PDT*, *JM*, *MP* and *CF*.

2012-001-1-400 Terminology of Nanomaterials and Nanotechnology in Polymer Science – Ober/Jones
CKO. Dick Jones (co-chair) and *CKO* have been pushing this project onwards. The document is just about finished and was sent around for approval. Comments received pointed out that there are two documents in one: one on lithography and one on nanomaterials. One document has now been pulled out- lithography. Lithography is going out for publication very soon (and should be seen as a bonus for this project). For nano, the Task Group will take pieces already created and build upon them to generate a new project, which will include other divisions- this will be a new project, led by *MHY*.

1.7 Social Events

It was agreed that two Social Secretaries, to refer to the Secretary, would be appointed to deal with the large amount of work arising from the tour and banquet organized on the last afternoon and evening of SPT. SPT expressed its gratitude to *CF* and *MW* for taking on these respective responsibilities.

1.8 Future Projects (Appendix 3)

The following projects were proposed (underlined name identified as Task Group Leader):

1. **Electronic formulae (ELECTRO)**

AY presented the project on tools for electronic representation on polymers. The intention is to follow graphical representation standards to allow people to know the best way of representing polymers. Accordingly, the idea is to delay around 1 year behind the KHH project on graphical representation of polymers. There is strong SPT support and this project will be further discussed in Paris 2019 to be submitted for joint DIV VIII / DIV IV finance in Winter 2019.

ACTION: *AY* to prepare the project for discussion at SPT in Paris 2019.

2. **Associates and aggregates of polymers** (MUSHROOMS) (forming shapes from different polymer chains)

TN, The objective is to come up with appropriate terms for aggregated polymers in a 3 year project. The plan is to try to submit the proposal by end of 2018. It will include nomenclature. SPT gave general approval for this project to go forwards.

ACTION: *TN* will submit a proposal by the end of 2018 for joint DIV VIII and VI funding.

3. **Sequence-control polymers (SEQUENCE)**

PT. Terminology and nomenclature project. *PT* presented the concept. A provisional Task group met during this week and worked on a proposal draft. The objective is to address the high precision of insertion of individual repeat units, but CRUs will no longer be considered. Need somebody from nomenclature on (*JC*). SPT gave general approval for this project to go forwards for submission in Spring 2019.

ACTION: *PT* to get a proposal document prepared for submission.

4. **Stars2**

JC, Nomenclature for much more complicated structures. Stars2 will deal with the same CRUs as in the Stars project. This new project will be about completing the nomenclature of irregular structures. The plan is to submit in the middle of November, but its submission is locked to the submission of Stars 1 (which should be Sept/Oct). The Stars2 proposal document is already looking strong. SPT Members have given their approval for this to go forwards.

5. ***Degradation of Polyolefins***

MM delivered a presentation on the degradation of polyolefins by Skype, outlining the project idea. *MM* explained that the project will make an evaluation and characterization of polymers that have additives for degradation. There will be experimental work by participants and part will be about clearer terminology of the effects of additives on polyolefins. Standardisation will also form an important part of this project. *MM* has a proposal document that he needs the Task Group Members to read and provide feedback. *WH* expressed interest to join the project. SPT members present approved the concept of the project.

ACTION: *MM* to send the proposal draft to interest Task Group Members for comments and look to submit the proposal in Autumn 2018.

6. **Nano/Lithography Split (NANO-NANO)**

MHY. This project has arisen from a natural split from the previous 'Nano' project (Ober), which is now focusing on lithography. This project will be a new proposal on the nanoscale properties of polymers. The document should go out to SPT for approval in September 2018. Involvement of the inorganic and health divisions should be considered. This involvement could also spread the financial burden on Div IV. Following discussion with *GTR* for financing, it was decided that this project would be best submitted around September 2018.
ACTION: *MHY* to prepare the proposal document ready for submission.

7. **Wikipedia workshop (WIKI-Train)**

GR to put a proposal together on a short project to get concerned SPT Members fully trained in editing Wikipedia pages in Milan next year. To be done quickly with a submission for October. SPT approved this project.
ACTION: *GR* to circulate the proposal to SPT for comments as soon as possible.

8. **Classification of definitions surrounded 'Step and Chain' polymerisations (OVER)**

JBM outlined a new project to reclassify the definition of polymerisations (Step *versus* Chain etc) due to the problems that have arisen in the Chain polymerisation project of *GM*. The project application form will be ready in September, but as funding is tight there may have to be a delay on submission [discussion resolved that it should be in Autumn of 2019]. SPT members gave general approval of the project.

ACTION: Wait for the approval to submit the project from SPT Chair (*RCH*) and DIV IV President (*GMR*)- in the meantime *JBM* should prepare the proposal documents.

9. Multilingual (LINGUAL)

CdS will link the multilingual project with SPEd, which will also spread the finances. This has already been approved by SPT Members.

ACTION: *CdS* to submit the proposal in the summer of 2019.

10. Revision of the Brief Guide to Polymer Nomenclature

RCH. Since the publication of this document, the first of the so-called Brief Guides, there have been high impact changes in polymer nomenclature, notably the introduction of apparent monomers in source-based nomenclature, and preferred names and shifting brackets in structure-based nomenclature. The project document is more near-ready for submission but is being held back on the request of the President due to funding; it will be submitted towards the end of 2019/start 2020.

ACTION: *RCH* to submit the proposal in the winter of 2019.

1.9 Group Participations (Appendix 5)

The Task Group Leaders were asked to provide an update of members by email following the meeting (see Appendix 5).

2.0 Any Other Business

VA, *WH*, *MP* and *MHY* joined SPT. *PM* was acknowledged for his enthusiasm and efforts this week and is welcomed in Paris next year as an invited SPT Observer.

RCH stated that he would like to have an election for SPT Chair in the Paris 2019 SPT meeting for a changeover in January 2020. It would bring his service to six years and he felt it was the right time for SPT for a change.

It was discussed that we should be thinking about a meeting in Africa or the Middle East in the future (by thinking of suitable hosts for future Macro conferences).

The subject of inviting some members who have been with SPT for many years, and are no longer active, but do occasionally make valued contributions and/or give advice to their younger members, to become Honorary Members was discussed. RCH reported that he had raised the subject with *RGJ* and *GTR* and that the matter would be discussed at Division level. While this does not stop SPT creating such a position, it was agreed that it would be simpler for SPT to recommend, through the Chair, members for Honorary positions (or whatever designation might be decided there) to the Division rather than having its own process.

2.1 Dates of the next meeting in Paris, France

General Assembly Year
SPT 8 – 11th July 2019
Polymer Division 6th – 7th July 2019
World Congress (Conference) 7th – 12th July 2019

PDT and RCH, 25th August 2018.

Appendix 1. Meeting Agenda

Pullman Cairns International Hotel, Cairns, Australia
Tuesday 26th to Friday 29th June 2018

	9	10		11	12	13	14	15		16		17	18
Tuesday	SPT		Break	KHH Lecture	Lunch		Projects		Break	Projects		R/H	Close
Wednesday	Projects			Projects			Projects			Projects		R/H	Close
Thursday	Projects			Projects			Projects			Projects	R/H	SPEd	
Friday	Projects			R/H, SPT & Close			Tour						

R = SPT report at 17:30	**Morning breaks: 10:30 to 10:50**
H = Housekeeping	**Lunch: 12:00 to 14:00**
KHH Lecture at 10:30, 'Polymer Nomenclature'	**Afternoon breaks: 15:30 to 15:50**

TUESDAY

Time	**Item**	**Subject**
09:00	**1.0**	Welcome and Apologies
	1.1	Approval of Minutes from the Brazil SPT meeting of 2017 (see Appendix 1; for full text version please see https://iupac.org/cms/wp-content/uploads/2017/11/Subcommittee-on-Polymer-Terminology-Meeting-Minutes-Sao-Paulo-July-2017_DRAFT2.pdf)
	1.2	(i) Matters arising from the 2017 Minutes
		(ii) Gold Book
	1.3	Publications since Brazil (Appendix 3)
	1.4	Chairperson's communication
		(i) Objectives for this meeting
		(ii) Project and Paper submission processes (see Appendices 4 & 5)
		(iii) SPT Web page (see Appendix 6)
	1.5	Project Statuses and Objectives (see Appendix 3)
	1.6	Timetable for the Cairns meeting (see Appendix 7)
	1.7	Social Events (PDT)
10:30	**Break**	
10:50	Invited Lecture and Discussion: Dr. Karl-Heinz Hellwich, 'Polymer Nomenclature'	
12:00	**Lunch**	
14:00	Projects	
15:30	**Break**	
15:50	Projects	
17:10	Reports to SPT	
17:50	Housekeeping	
18:00	**Close**	

WEDNESDAY

09:00	Project work
10:30	**Break**
10:50	Project work
12:00	**Lunch**
14:00	Project work
15:30	**Break**
15:50	Project work

17:30	Reports to SPT	
17:50	Housekeeping	
18:00	**Close**	

THURSDAY

09:00	Project work	
10:30	**Break**	
10:50	Project work	
12:00	**Lunch**	
14:00	Project work	
15:30	**Break**	
15:50	Project work	
16:50	Reports to SPT, Housekeeping & Close	
17:00	**Subcommittee on Polymer Education (SPEd)**	

FRIDAY

09:00	Project work	
10:30	**Break**	
10:50	Reports to SPT	
11:00	1.8	Future projects studies (see Appendix 3)
	1.9	Project Extensions
	1.10	Group participations (see Appendix 8)
11:50	2.0	Any other business
	2.1	2019 Meeting: Paris, France - 6-7 July for the Polymer Division, 8-11 July 2019 for SPT.
	Housekeeping	
12:00	**Close**	

PDT & RCH, 12th June, 2018.

Appendix 2. Rules of the Subcommittee on Polymer Terminology

1. The **membership** of the Subcommittee shall be decided by its **Official Members and approved by the Polymer Division Committee**. The Official Members are nominally those listed within the IUPAC Division IV webpages, but the official membership may be changed at any time with the agreement of the current Official Members.

2. Besides the Official Members, there are **Consultants** (former members who are still active), **Correspondents** (persons with only a loose connection with the Subcommittee), and **Observers** (persons who are invited by the Chairperson of the Subcommittee and approved by the Official Members of the Subcommittee).

3. No person shall be an **Observer** for more than two years but in the light of evidence of their contribution to the work of the Subcommittee they shall thereafter be invited to be Official Members.

4. **The Subcommittee will usually meet annually** (normally associated with an IUPAC General Assembly or a World Polymer Congress). Any **Official Member who fails to attend two consecutive meetings of the Subcommittee <u>and</u> fails to make substantial written contributions to the work of the Subcommittee over the same period of time** shall have their membership withdrawn.

5. No person shall remain an **Official Member**, **Consultant** or **Correspondent** of the Subcommittee who in the collective judgement of the Chairman, the Secretary, the Polymer Division President and Division Secretary have abused their membership and thereby their association with the Polymer Division.

6. **The list of the Consultants, Correspondents and Observers** will be reviewed annually by the Official Members. In addition, names can be added or removed at any time with the Subcommittee Chairperson's approval.

7. **Initiatives for polymer terminology and nomenclature projects or feasibility studies** may be placed before the Subcommittee by any interested party.

New projects should normally be launched as feasibility studies approved by the Subcommittee. The acceptance of a project or a feasibility study will normally be decided upon by the approval of the majority of the Official Members present at the meeting where it is proposed and will be subject to the Subcommittee Chairperson's approval.

8. Although in principle anybody can **submit a project proposal** directly to the IUPAC Secretariat, the agreed procedure for members of the Subcommittee is that a Project Submission Form is completed by the Task Group Leader of the proposed project and sent to the Subcommittee Chairperson who submits the form.

9. The names of the **Task Group Leaders** for official IUPAC recommendations and other projects are subject to the approval of the Subcommittee Chairperson and at least one Task Group Leader shall be an Official Member of the Subcommittee.

10. Provided they have relevant expertise, **Membership** of the task groups for official IUPAC recommendations and other projects is open to all Official Members, Consultants, Correspondents and Observers, subject to the approval of the Subcommittee Chairperson and the Task Group Leader.

Any member of a task group is free to propose additional, external members who could start as Observers or Correspondents with the approval of the Subcommittee Chairperson.

No Task Group Member should over commit through membership of too many Task Groups.

11. The **budgets** for individual projects will be made available by the Task Group Leaders for the use of the Subcommittee Chairperson to help attendance at the annual meetings of the Subcommittee.

12. The use of project budgets by Task Group Leaders for Task Group Meetings on individual projects shall be with the agreement of the Subcommittee Chairperson.

13. Task Group Leaders shall report progress to the annual meetings of the Subcommittee either in person or by asking another to represent them. It is expected that there should be clear evidence that they are driving their project(s) towards completion.

14. The **authorship** of a document prepared by a task group approved by the Subcommittee is decided by the Subcommittee Chairperson in consultation with the Task Group Leader(s). Membership of a task group does not automatically mean authorship.

Authors will normally be listed with the Task Group Leader(s) preceding the other authors and with Task Group Leader(s) and other authors being listed, respectively, in English alphabetical order. In the case of a dispute, the matter will be decided by a majority vote of the official subcommittee members present at the meeting at which the authorship is being decided.

15. Each **official IUPAC recommendation** prepared by the Subcommittee shall list the Official Members of the Subcommittee during the period of its preparation, as well as those consultants, correspondents and observers who, in the opinion of the Task Group Leader(s) and the Subcommittee Chairman, contributed significantly to the document. In the case of a dispute, the matter will be decided by a majority vote of the Official Members present at the meeting at which the names to be listed are being decided.

If the period of preparation of an official IUPAC recommendation started before 2002, when Commission IV.1 was in existence, the recommendation shall also list the Titular Members of the Commission during that period and list the Associate Members and others who, in the opinion of the Task Group Leader(s) and the Subcommittee Chairman, contributed significantly to the recommendation.

16. The **publication of translations of official IUPAC recommendations** by members of the Subcommittee have to be brought to the attention of the Chairperson and the Secretary of the Subcommittee and the IUPAC Secretariat (presently Fabienne Meyers). The translation should be identified as such and the original IUPAC cover page should precede the translation.

17. The Chair will be elected by Official Members to take up his/her position in the January of the following year. Any Official Member may become Chair through this process following nomination by at least one Official Member. The Chair appoints the Secretary.

Appendix 3. List of Projects and Publications

Translations Please inform the Secretary of translations that you might be aware of that have occurred during the last year.

1. The following translated documents have been published since our meeting in Brazil:

- **2003-042-1-800 Source-based nomenclature – Jones:** published as, '*Source-based nomenclature for single-strand homopolymers and copolymers* (IUPAC Recommendations 2016)', R. G. Jones, T. Kitayama, K.-H. Hellwich, M. Hess, A. D. Jenkins, J. Kahovec, P. Kratochvíl, I. Mita, W. Mormann, C. K. Ober, S. Penczek, R. F. T. Stepto K. Thurlow, J. Vohlídal, E. S. Wilks, *Pure & Appl. Chem.*, **2016**, *88*, 1073-1100 has been translated and published as '*Herkunftsbezogene Nomenklatur für einstrangige Homo- und Copolymere (IUPAC-Empfehlungen 2016)*', K.-H. Hellwich, K.-M. Roy, *Angew. Chem*. **2018**, *130*(10), 2756–2773. DOI: 10.1002/ange.201706791

2. The following projects delivered the following publications or have been accepted for publication:

2001-081-1-800: (DENDRITIC) Terminology and structure-based nomenclature of dendritic and hyperbranched polymers* – Fradet: accepted as, 'Terminology and structure-based nomenclature of dendritic and hyperbranched polymers (IUPAC Recommendations 2018)' A. Fradet, J. Chen, K.-H. Hellwich, J. Kahovec, K. Horie, W. Mormann, R. Stepto, J. Vohlidal, E. S. Wilks, *Pure & Appl. Chem.*, *accepted*.

3.

4. The following projects are currently in public review:

- **2008-020-1-400**: (WEB-GUIDE) *Revision of the web-based guide, IUPAC Recommendations on Macromolecular Nomenclature – Guide for Authors of Papers and Reports in Polymer Science and Technology* - Hodge
- **2014-033-1-400**: (LACTIC) *Nomenclature and terminology relevant to lactic acid-based polymers: synthesis, structure, properties, applications and degradation* - Vert

3. The following projects are expected to be sent to public review in the next few months:

- **2010-036-1-400**: (KEYWORDS) *Keywords in polymer science journals – Slomkowski*
- **2012-001-1-400**: (NANO-LITHO) *Terminology of nanomaterials and nanotechnology in polymer science,* Ober & Jones through the document, *Terminology of Polymers in Advanced Lithography*
- **2012-048-3-400**: (B-TERMS) *A brief guide to polymer terminology* – Hiorns & Vohlídal
- **2013-001-1-800**: (STAR) *Structure-based nomenclature for regular linear star, comb and brush polymers** - Chen

4. The following projects are working:

- **2006-028-1-400**: (FIELD) *Terminology for conducting, electro-active and field-responsive polymers* – Vohlídal
- **2009-047-1-400**: (STEREOCHEM) *Definitions and notations relating to stereochemical aspects in polymer science* – Hellwich & Moad
- **2010-007-1-400**: (CHAIN) *Terminology for chain polymerization* – Luscombe & Moad
- **2011-035-1-800:** *(TINCOPS) Terminology and nomenclature of inorganic and coordination polymers – a extended revision of Nomenclature for regular single-strand and quasi-single-strand inorganic and coordination polymers (1984)** - Jones

* Division VIII project pursued under the auspices of SPT.

- **2012-001-1-400**: (NANO) *Terminology of nanomaterials and nanotechnology in polymer science,* Ober & Jones through the document, *Terminology of nanomaterials and nanotechnology in polymer science*
- **2014-034-2-400** (CAR) *Nomenclature for polymeric carriers bearing chemical entities with specific activities and names* – Vert
- **2015-013-1-400**: (POLY) *Brief Guide to Polymerization Terminology* – Luscombe
- **2015-014-1-400**: (SEMIS) *Guide (and Brief Guide) to Polymer Semiconductors* – Walter
- **2015-032-2-400**: (WIKI) *Synchronizing Wikipedia: Polymer Definitions and Terminology* – Hess
- **2015-049-1-400** (CHAR) *Brief Guide to the Characterisation of Polymers* **–** Topham
- **2015-050-1-400** (ULTIMATE) *Definition of Terms Relating to the Ultimate Mechanical Properties of Polymers* – Adhikari
- **2016-050-3-400**: (µSTRUCTURE) *Definition of Terms Pertaining to Polymers in the Solid State: Molecular Arrangement from the Nano- to the Micrometer Scale* - Stingelin

5. The following projects have recently been accorded funding or extension or both:

- **2017-039-2-800**: (GRAPHIC) *Graphical Representation of Polymer Structures* - Hellwich

6. Projects submitted or close to submission to IUPAC for funding:

- **2016-XXX-1-400**: *Development of a multilingual glossary of polymer terminology with new languages* (LINGUAL) *(Project Committee*) – dos Santos
- **2016-040-1** Additives intended to promote the degradation of polyolefin-based thermoplastic materials (ADD) - Malinconico
- **2018-XXX-1-800** Structure-based nomenclature for irregular linear, star, comb and brush polymers with different types of constitutional repeating units (STARS 2) – Chen
- **2018-XXX-1-400** (NANO-NANO) – Yoon
- **2018-XXX-1-400** (Wiki-Train) – Raos
- **2018-XXX-1-400** Associates and aggregates of polymers (MUSHROOMS) – Nakano
- **2019-XXX-1-400** Sequence-controlled polymers (SEQUENCE) – Théato
- **2019-xxx-1-400** Development of a Multilingual Glossary of Polymer Terminology with New Languages (Project Committee) – dos Santos
- **2019-XXX-1-400** (OVER) – Matson
- **2019-XXX-1-800** Electronic Formulae (ELECTRO) – Yerin
- **2020-XXX-1-800** Revision of the Brief Guide to Polymer Nomenclature (BGR) – Hiorns

7. Feasibility Studies:

http of PB2	Moad
Degradation of polymers (DE)	Gardette
Renewable and recycled polymers	Vairon
Terminology for constitutionally-dynamic polymers	Vohlídal
Glossary of Terms for Space and Extreme Environments	Walter
Polymers for bioelectronics	Walter
Polymers for 3D printing	Walter
Ionic liquids/polymer inorganic devices	Ober
Mediatized terms	dos Santos
Modified extended short hand names	Vert
Polymers of Relevance to Human Health[1]	Stingelin
Terminology of Polymer Biodegradation and Toxicology in Polymers[2]	Gubala
Adhesion	Vairon

[1] In consultation with DIV VII
[2] To come from DIV VII

Appendix 4 - SPT's Submission Process – a Step-by-Step Guide

Step 1.
The Task Group Leader (TGL) obtains approval from all her/his team Members to publish.

Step 2.
The TGL e-mails both the Chair of SPT, requesting permission to go-ahead for further steps, and the Secretary, requesting the latest list of the e-mail addresses of SPT Members.

The following Steps 3- 5 are performed in parallel.

Step 3.
The TGL sends the document to all members of SPT for their constructive criticisms with a deadline of one month. This deadline can be reasonably extended when there are holidays. Should there be remarks and criticisms from the Members, the TGL should deal with them, with the SPT chair in copy, so that a satisfactory resolution is found. In the unlikely case that a disagreement cannot be resolved by the TGL, then the Chair will support the TGL to find a smooth resolution to the satisfaction of all parties. If within 30 days there has been no return of comments, the TGL can go to step 6.

Step 4.
The President of DIV IV, acting on advice from the TGL and the Chair of SPT, decides whether or not to send the manuscript to Division Members and other DIV IV Subcommittees. If the decision is yes, then the Division Secretary sends the TGL the latest, relevant e-mails lists. The process is then dealt with as in step 3, with the TGL keeping the DIV IV President and the SPT Chair in copy, and using their support as necessary.

Step 5 – for projects that are denoted -800 or have some impact on nomenclature.
The TGL sends a copy of the document to the President of Division VIII who distributes it to her/his members for their constructive criticisms. The process and deadline is the same as in step 3, except that the President of Division VIII collects the comments on behalf of the TGL. Additional exchanges will be directly between the TGL and the concerned Members, with the Div. VIII President and SPT Chair in copy.

Step 6.
The TGL e-mails the Chair and Secretary of SPT that the process has been completed to the satisfaction of all parties. The TGL sends a copy of the final manuscript and the names of fifteen external reviewers with this mail.

Step 7.
The Chair of SPT sends the manuscript and the list of referees to Fabienne giving instructions to submit the manuscript to ICTNS and Public review via Manuscript Central once she has clearance to do so from the Presidents of DIV IV and DIV VIII, who are copied into this e-mail. It can be taken as read by the Presidents that this mail gives them an explicit recommendation to go ahead and permit submission. The submission will be made in the name of the TGL.

Note: there have been problems with Manuscript Central caused by it being unable to follow two processes – that of submission to ICTNS and submission to public review. This can mean, for example, that automated e-mails demanding a resubmission are generated before resubmission should be allowed. Please be aware of this; if any automatic mails are generated, the TGL should contact Fabienne and check that both ICTNS and public reviews have been completed.

Appendix 5. Current Projects and Task Group Members

Project code and name	Active TG Members
PROJECTS SUBMITTED TO ICTNS AND PUBLIC REVIEW	
2001-081-1-800 Dendritic & Hyperbranched Dendritic & Hyperbranched	**Fradet**, Chen, Hellwich, Mormann, Vohlídal, Wilks
2008-020-1-400 Revision of "IUPAC Recommendations on Macromolecular Nomenclature; Guide for Authors of Papers and Reports in Polymer Science and Technology"	**Hodge**, Hellwich, Hiorns, Jones, Luscombe, Stingelin, Wilks
2014-034-2-400 (LACTIC) Nomenclature and terminology relevant to lactic acid-based polymers: synthesis, structure, properties, applications and degradation	**Vert**, Chen, Hellwich, Hodge, Nakano, Scholz, Slomkowski, Vohlídal
SPT PROJECTS ONGOING	
2006-028-1-400 Electric Field Responsive Polymers	**Vohlídal,** Graeff, Hiorns, Jones, Luscombe, Ober, Stejskal, Stingelin, Topham, Walter
2009-047-1-400 Definitions and Notations Relating to Stereochemical Aspects in Polymer Science	**Hellwich**, **Moad**, Fellows, Kitayama, Meille, Nakano, Vert
2008-015-1-400 Preferred Names for Polymers	**Mormann**, Chen, Hellwich, Wilks
2009-047-1-400 Definitions and Notations Relating to Stereochemical Aspects in Polymer Science	**Hellwich**, **Moad**, Fellows, Meille, Nakano, Vert
2010-007-1-400 (CHAIN) Terminology for Chain Polymerization	**Moad,** Fellows, Jones, Kitayama, Luscombe, Matson, Matyjaszewski, Merna, Nakano, Penczek, Russell, Topham
2010-036-1-400 Keywords	**Slomkowski**, Fellows, Hiorns, Jones, Kubisa, Luscombe, Nakano, Russell, dos Santos, Scholz, Stingelin, Walter
2012-001-1-400 (NANO) Terminology of Nanomaterials and Nanotechnology in Polymer Science	**Ober & Jones**, *Carter, *Hayakawa, Luscombe, Mansfield, Meille, *Reichmannis, *Schmidt, Slomkowski, Stingelin, Théato, *Ueda, Walter *consultants
2012-001-1-400 (NANO-LITHO) Terminology of Nanomaterials and Nanotechnology in Polymer Science: *Terminology of Polymers in Advanced Lithography*	**Ober & Jones**, Hayakawa, Hess, Luscombe, Meille, Stingelin R. G. Jones, K. R. Carter, T. Hayakawa, C. K. Luscombe, E. Mansfield[14], S. V. Meille, E. Reichmannis, Hans-Werner Schmidt, N. Stingelin[1] S. Słomkowski[11], P. Théato, M. Ueda[4], M. G. Walter
2012-048-2-400 (B-TERMS) A Brief Guide to Polymer Terminology	**Hiorns, Vohlídal**, Boucher, Chin Han, Do, Duhlev, Hodge, Jones, Kratochvíl, Luscombe, Matson, Moad, Phillippova, Ober, Slomkowski, Stingelin, Théato, Walter, Vairon, Vert
2013-049-1-400 (SEPARATION) Terminology on the Separation of Macromolecules	**Hess**, Chang, Kratochvíl, Moad
2014-014-1-400 (MODSIM) Terminology for modeling and simulation of polymers	**Meille**, Carbone, De Pablo, Field, Kremer, Moad, Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin, Sturcova
2014-033-1-400 (CAR) Polymeric Carriers: Nomenclature for polymeric carriers bearing chemical entities with specific activities and names (Project Committee)	**Vert**, Chen, Hellwich*, Hiorns, Jones, Merna, Moad, Moss, Yerin

2015-013-1-400 (POLY) Brief Chain: Brief Guide to Polymerization Terminology	**Luscombe, Moad,** Beuermann, Boucher, Fellows, Hiorns, Jones, Keddie*, Malinconico, Matson, Merna, Nakano, O'Reilly*, Russell, Topham, Vairon*, Vohlídal, Wassermann, Yokozawa*
2015-014-1-400 (SEMIS) Polymer Semis: Guide (and Brief Guide) to Polymer Semiconductors	**Walter,** Bao*, Boucher, Carbone, Graeff, Jeffries-El*, Loo*, Hiorns, Stingelin, Luscombe, Meille, Nakano, Ober, Reynolds*, Topham, Vohlidal
2015-032-2-400 (WIKI) Synchronizing Wikipedia: Polymer Definitions and Terminology (Project Committee)	**Hess,** dos Santos, Fellows, He, Hiorns, Luscombe, Merna, Moad, Ober, Peeters, Raos, Rumbles, Russell, Stingelin, Theato, Topham, Walker, Walter
2015-050-1-400 (ULTIMATE) Definition of Terms Relating to the Ultimate Mechanical Properties of Polymers	**Adhikari**, He, Henning, Hess, Lacs, Raos, Stingelin, Topham
2016-050-3-400 (µstructure) Definition of Terms Pertaining to Polymers in the Solid State: Molecular Arrangement from the nano- to the micrometer Scale	**Stingelin**, He, Hess, Mielle, Moad, Ober, Raos, Sturcova, Topham, Vohlidal
2015-049-1-400 (CHAR) Brief Guide to the Characterisation of Polymers	**Topham,** Boucher, Chang, dos Santos, Graeff, Hess, He, Hu, Merna, Moad, Philippova, Saiter, Schoenherr, Simon, Stingelin, Sturcova, Vohlidal

INTERDIVISIONAL PROJECTS

2011-035-1-800 Nomenclature of Inorganic Polymers (TINCOPS)	**Jones**, Batten (Blight) Damhus, Hiorns, Öhrström, Reedijk, Walter
2013-001-1-800 (STAR) Structure-based nomenclature for regular linear star, comb and brush polymers	**Chen,** dos Santos, Fradet, Hellwich, Hiorns, Nakano, Théato, Wilks
2017-039-2-800 (GRAPHIC) Graphical Representation of Polymer Structures	**Hellwich**, Chin Han Chan, Chen, Nakano, Théato, Topham, Yerin

PROJECTS SUBMITTED OR TO BE SUBMITTED

2016-040-1 (ADD) Additives intended to promote the degradation of polyolefin-based thermoplastic materials	**Malinconico**, Giuntini, Gardette, Chan, Hess, Merna, Peeters, Innocenti, Briassoulis
2018-XXX-1-800 Structure-based nomenclature for irregular linear, star, comb and brush polymers with different types of constitutional repeating units (STARS 2)	**Chen**, dos Santos, Hellwich, Fradet, Hiorns, Nakano, Théato, Wilks, Santos
2018-XXX-1-400 (NANO-NANO)	**Yoon**, Stingelin
2018-XXX-1-400 (Wiki-Train)	**Raos,** Hess, Merna, Marloes, Topham
2018-XXX-1-400 Associates and aggregates of polymers (MUSHROOMS)	**Nakano**, Abetz, Chen, dos Santos, Giuntini, Hiorns, Matson
2019-XXX-1-400 Sequence-controlled polymers (SEQUENCE)	**Théato**, Abetz, Fabio Arico (DIV VIII), Moad
2019-xxx-1-400 Development of a Multilingual Glossary of Polymer Terminology with New Languages (Project Committee)	**dos Santos**, Adhikari, He, Ho Do, Han, Jalal, Nakano, Philippova, Theato
2019-XXX-1-400 (OVER)	**Matson**,
2019-XXX-1-800 Electronic Formulae (ELECTRO)	**Yerin**, Matson, Moad, Peeters, Stingelin, Topham, Théato

2020-XXX-1-800 Revision of the Brief Guide to Polymer Nomenclature (BGR)	**Hiorns,** Boucher, Chen, Duhlev, Fradet, Hellwich, Jones, Nakano, Peeters, Vert

APPENDIX 6 SPT SCHEDULE – CAIRNS

	9:00 - 10:30	10:30 - 10:50	10:50-12:00	12 - 2	2 - 3:30	3:30 - 3:50	3:50 - 5:30		5:30
Tue. 26th	SPT		**Invited Lecture and Discussion 'Polymer Nomenclature' Dr. Karl-Heinz Hellwich**		**Stereochem Hellwich, Moad**, Fellows, Kitayama, Meille, Nakano, Vert **SEQs – Théato,** Abetz, Arico, Moad, Vohlídal **Semis – Walter,** Bao, Boucher, Carbone, Loo, Hiorns , Luscombe, Meille, Nakano, Ober, Stingelin, Topham **Lingual – dos Santos**, Adhikari, Chan, He, Ho Do, Jalal, Nakano, Philippova, Théato		**CARS – Vert,** Chen, Hellwich, Hiorns, Jones, Moad, Moss, Yerin **SEQs – Théato,** Abetz, Arico, Moad, Vohlídal **Semis – Walter,** Bao, Boucher, Carbone, Loo, Hiorns, Luscombe, Meille, Nakano, Ober, Stingelin, Topham **Lingual – dos Santos**, Adhikari, Chin Han, He, Ho Do, Jalal, Nakano, Philippova		**5:30-6:00** Reports / House-keeping
Wed. 27th	**Field – Vohlídal**, Stingelin (l.chair), Hiorns, Luscombe, Ober, Jones, Topham, Walter **STARS – Chen,** Wilks, Hellwich, Fradet, Hiorns, Nakano, Vert **Ultimate – Adhikari,** He, Hess, Henning, Lach, Topham		**Field – Vohlídal**, Stingelin (local chair), Hiorns, Luscombe, Ober, Jones, Topham, Walter **CHAR – Topham,** Hess, Chang, He, Saiter, Simon, Schoenherr, Vohlídal, Rose. **STARS – Chen,** Wilks, Hellwich, Fradet, Hiorns, Nakano, Vert		**Chain – Moad,** Fellows, Hodge, Jones, Luscombe, Nakano, Penczek, Russell , Topham, Vairon **ModSim – Meille,** Carbone, Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin **µstructure – Stingelin**, He, Hess, Ober, Mielle, Moad, Topham **STRUCTURE – Chen**, dos Santos, Hellwich, Fradet, Hiorns, Nakano, Théato, Wilks		**Chain – Moad,** Fellows, Hodge, Jones, Luscombe, Nakano, Penczek, Russell, Topham, Vairon **µstructure – Stingelin**, He, Hess, Ober, Mielle, Moad, Topham **STRUCTURE – Chen**, dos Santos, Hellwich, Fradet, Hiorns, Nakano, Théato, Wilks		**5:30-6:00** Reports / House-keeping
Thur. 28th	**Wiki – Hess**, He, Hiorns, Luscombe, Ober, Moad, Peeters, Rumbles, Stingelin, Topham, Walter **GRAPHIC – Hellwich,** Chan, Chen, Nakano, Théato, Topham, Yerin **ModSim – Meille,** Carbone, Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin **Mushrooms – Nakano,** Abetz, Chen, dos Santos, Giuntini, Hiorns, Matson, Stingelin, Topham		**Wiki – Hess**, He, Hiorns, Luscombe, Ober, Moad, Peeters, Rumbles, Stingelin, Topham, Walter **GRAPHIC – Hellwich,** Chan, Chen, Nakano, Théato, Topham, Yerin **ModSim – Meille,** Carbone, Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin **Mushrooms – Nakano,** Abetz, Chen, dos Santos, Giuntini, Hiorns, Matson, Stingelin, Topham		**POLY – Luscombe, Moad,** Beuermann, Boucher, Hiorns, Jones, Keddie, Nakano, O'Reilly, Russell, Topham, Vairon, Wassermann, Yokozawa **ELECTRO – Yerin,** Hellwich, Matson, Moad, Peeters, Stingelin **ModSim – Meille,** Carbone , Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin **Nano-Litho – Ober, Jones,** Stingelin (local chair), Carter, Hayakawa, Luscombe, Meille, Reichmannis, Schmidt, Slomkowski, Ueda, Walter **SEQs – Théato,** Abetz, Arico, Moad, Vohlídal		**POLY – Luscombe, Moad,** Beuermann, Boucher, Hiorns, Jones, Keddie, Nakano, O'Reilly, Russell, Topham, Vairon, Wassermann, Yokozawa **CARS – Vert,** Chen, Hellwich, Hiorns, Jones, Moad, Moss, Yerin **ModSim – Meille,** Carbone, Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin **B-Terms Hiorns/Vohlídal**, Boucher, Do, Hess, Hodge, Jones, Kratochvíl, Luscombe, Moad, Ober, Stingelin, Walter, Vairon **SEQs – Théato,** Abetz, Arico, Moad, Vohlídal	4:50 R/H	**5:00 – 7:00** **Subcommittee on Polymer Education**
Fri. 29th	**Separation – Hess,** Chang, Kratochvil, Moad **Nano – Ober, Jones,** Stingelin (local chair), Carter, Hayakawa, Luscombe, Meille, Reichmannis, Schmidt, Slomkowski, Ueda, Walter **BGR – Hiorns**, Boucher, Chen, Duhlev, Fradet, Hellwich, Jones, Nakano, Théato, Vert **ModSim – Meille,** Muthukumar, Nakano, Raos, Russell, Rutledge, Stingelin		SPT		Tour				

Appendix 7. Contact Addresses of Members of SPT

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