

COST Action FP1105
Understanding wood cell wall structure, biopolymer interaction and composition: implications for current products and new materials

Draft Minutes of the 2nd Management Committee Meeting

Tuesday, 14th of May, 2013, 16:15-17:30

Venue: Edinburgh Napier University

Edinburgh, UK

0. Welcome to participants

The Chairman of COST Action FP1105, Philip Turner, opened the meeting at 16:15 by welcoming the representatives from the following countries:

Austria, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Luxembourg, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

1. Adoption of agenda

The agenda was approved as sent out.

2. Minutes of last meeting

Participants were informed of matters arising from the previous management committee meeting in Stockholm. Matters arising included:

- Information request relating to activities relevant to DC progress report (PhD numbers, proposal preparation, research collaboration, publications, other activities).
- STSM proposals to be submitted
- Establish subgroups on LinkedIn site
- Promotion of Action to Early stage researchers
- Action brochure
- Place ideas on shared pulp samples on LinkedIn site
- Suggest smaller focused workshops

- Suggest acronyms on LinkedIn site (Poll taken and Wood CellNet agreed).

The chair confirmed that all these issues had been addressed.

3. Report from the COST Office

3.1 News from the COST office

No news from the COST office.

3.2 Status of Action

21 COST countries have signed the MoU. In addition we currently have six additional Non-COST countries participating in the Action.

3.3 Budget Status, planning and allocation process

Participants were informed that the budget had been increase up to 150,000€. To date we have planned:

- One core group meeting, which was held in September in Riga.
- Two main workshops.
- 5 STSM were agreed upon in the first year.
- One small physics workshop.

The local organiser support for the Edinburgh workshop was approved (1740€)

4. Progress report of working groups

The three working groups had separate meetings to discuss the workshop and make recommendations for future activities. The minutes of these meetings are attached in Appendix 1, 2 and 3 for each Working Group.

5. Action planning

5.1 Annual progress conference

The Action chair presented the first progress report to the domain committee in March 2013.

The feedback received from the DC is summarized bellow:

- The DC commends the management and coordination of the Action as well as the very useful strategic document aiming at stimulating further ideas prepared by the core group and disseminated among the participants.
- The Action website presents all Action activities.
- The DC commends the Action's goal of developing a platform for the development of new biopolymer based materials.
- The DC encourages the involvement of industrial participants in these activities.
- The DC has acknowledged the number of STSMs organized during the first year.
- A use of other COST instruments like Training Schools should be also considered.
- The DC has also acknowledged the joint activities with the domain MPNS.
- The DC would also encourage joint activities within the domain FPS, in particular with the actions FP0904 and FP1006.

It was requested that information that has been requested to date on issues such as research proposals submitted and PhD students studying within the remit of the Action be provided to the Action administrator. This information is an important part of the feedback that is given to the Domain committee at the annual progress conference.

5.2 Action budget planning

A new budget for next year (2013/14) will be submitted to the MC for approval during May.

5.3 Action planning

5.3.1 Location and date of next meeting

The next workshop will be held in Trabzon, Turkey in October 2013.

5.3.2 Long-term planning

Prof. Jorge Canhoto from University of Coimbra has agreed to organize the workshop in Coimbra (Portugal) in 2014.

Offers were made to host future workshops in: Zurich and Slovenia. A request was made for additional proposals from MC members who should contact the action chair with suggestions.

6. STSM status, applications

A number of new potential STSMs were identified in the working groups discussions. The proposals should be submitted through the working groups leaders to Claudia Crestini and carbon copy the Action Administrator.

7. Publications, dissemination and outreach activities

The Chair of COST Action, Philip Turner reminded the participants to send the list of recent publications related to the COST Action FP1105 activities in order to monitoring progress report.

We now have a publication database on the COST website (<http://www.napier.ac.uk/forestproducts/cost-action/Pages/Documents-publications.aspx>) which members can upload information via the website administrator. The Action website is the primary source of information for dissemination to the general public and Action's participants.

8. Request for new members

A proposal was made for Argentina to join the COST Action. It was made clear that an Institution has to be approved rather than a country. Maria Soledad Peresin was tasked to contact the Argentinean parties interested and to revert back to the chair with proposed institutions. It was agreed that the core group will be delegated the responsibility of approving any proposed participants.

A proposal was made by David McDonald for the Canadian research network "FIBRE" to be formally adapted as a member of the Action. The MC approved this. There was some discussion around potential collaboration between FIBRE and the Action. Ideas included:

- Join training schools
- STSM
- Small strategy workshop
- Exchange of participants

Possible dates for a strategy workshop were August 1st 2013 or Tappi research committee meeting in Montreal in the autumn of 2013. It was agreed that the core group will exchange ideas about this via email and then revert back to David McDonald with suggestions.

9. Promotion of gender balance and of Early Stage Researchers (ESR)

The current situation in Action FP1105 is recognized to be satisfactory. It was noted that there was a good participation of both, females and early stage researchers. It was recorded that we should continue promoting the participation of female and early stage researchers at future workshops. Participants were encouraged to promote the Action amongst early stage researchers within their institutions.

At the moment we do not have precise figures on early stage researchers. It was proposed that we ask participants to fill in an online survey to confirm their status.

10. Non-COST country participations

MC members approved the following Non-COST countries to join the Action: Russia, Brazil and Chile.

11. AOB

Dimitris Argyropoulos agreed to follow up potential funding for US participants travel from NSF with Prof. Thomas Amidon.

It was also agreed to include the domain committee feedback report in the Action's website.

12. Closing

The Chairman of COST Action FP1105 Prof. Philip Turner thanked the participants for their contribution to a successful workshop and closed the meeting.

Appendix 1



COST Action FP1105

Understanding wood cell wall structure, biopolymer interaction and composition: implications for current products and new materials

Draft Minutes of the Working Group 1 Meeting

Working group leader: Tomas Larsson

Tuesday, 14th of May, 2013

Merchiston Campus
Edinburgh. UK

Welcome from WG 1 Chair

Philip Turner gave an overview of the current state of the action and concluded that after one year of activities are essentially on track with what was planned.

Review of milestones

The action members are currently in the process of preparing (or delivered) a total of 3 publications and 7 applications (4 WoodWisdom.net) accounted for within the action

Discussion of common scientific ideas

A discussion point brought up during the meeting was that modeling is missing from any milestones in the MoU i.e. no separate heading for modeling is present in the MoU although modeling is discussed within the document and represents a significant part of the activities in WG1.

A short poll showed that the distribution of WG1 participants on the main topic of WG1 was as follows:

Plant genetics: 5

Physics: 5

Material testing: 3

Modeling: 6

It is difficult to define suitable common materials due to the broad spectrum of activities in the action. It would be better to agree on standard procedures for characterizing materials used in the action.

A discussion came up with suggested cross-disciplinary research question:

- Controlling weak molecular interactions (VdW, H-bonding)
- Physics and genetics and chemistry, this area could support 3-4 Marie Curie post-doc applications and a workshop
- Nano-robotics to manipulate and pull out individual cellulose fibrils
- Synthetic biology, artificial cells
- Integrate modeling better into the other activities in the WG and action
- Structural mechanics modeling for determining the impact of cellulose fibril aggregation on fibre strength
- Training school in high resolution microscopy

Appendix 2



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COST Action FP1105

Understanding wood cell wall structure, biopolymer interaction and composition: implications for current products and new materials

Draft Minutes of the Working Group 2 Meeting

Working group deputy leader: Geoffrey Daniel
Tuesday, 14th of May, 2013
Merchiston Campus
Edinburgh, UK

There were 16 persons at the WG2 meeting- less than in Stockholm but several new faces. Some people may have also changed groups from WG2.

A number of topic areas and questions were discussed and the background/experience/facilities of group members was identified.

The topics discussed included the following:

1. Chemical deconstruction of chips/pulps under acetic (acid) conditions (micro/nanoparticles);
2. Hemicellulose separation (hardwoods); ny products;
3. Electron beam (microwave) irradiation energy efficiency, chemical reduction/efficiency, use in producing nyproducts;
4. Recycling & separation of paper components (additives, deinking etc etc);
5. New methods for breaking down cell walls (EB, Tempo, enzymatic);
6. New technologies for renewable grass sources;

Regarding topic areas, there was wide interest with the eastern Europeans keen on the grasses and the Scandinavians new materials (micro/nanoparticles). All are however interested in analytical techniques.

There were some discussions concerning areas with high interest on the list and possibly having a small sub-group meeting (if it can be arranged and there is sufficient interest) before the Turkey meeting. Then the group could report back in Turkey. In this way things could be speeded up somewhat and we could create some common interactions on a topic people are already working.

The areas which could possibly have some starting interest for a sub-group would be points 1-3 above.

As far as STSMs we suggested that 4 would be possible for the next budget period.

No Marie Curie applications had been made so far in WG2.

We should have at least 3 hrs in Turkey for discussions.

Actions before/after Turkey meeting:

- Mailing list with main interests in WG2.
- Some research areas were discussed in more detail, including:
 - Hemicellulose separation wood/grasses.
 - Electron beam irradiation.
 - Chemical deconstruction.
- Sub-group meeting before Turkey was proposed on one of the above.
- It was agreed that ways of improving communication within the group to speed contact desemination-direct e-mail, video contact, etc. One of the objectives of any workshop would be to focus on new research proposals, including: Marie Curie; National; EU applications.

Appendix 3



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Draft Minutes of the Working Group 3 Meeting

Working group leader: Ingo Burgert

Tuesday, 14th of May, 2013

Merchiston Campus
Edinburgh, UK

WG3 Meeting Summary

1. Objectives of participants

- Better understand self-assembly processes.
- Use wood composites for new materials.
- Mimic self-assembly for new materials.

2. Diverse group of researchers:

- Common theme: self assembled materials
- Self assembly
 - retain
 - decompose, fractionate
 - mimic

3. Bottom-up approach with individual components

- Problem of upscaling to higher hierarchical levels

4. Top-down approach while retaining hierarchy and functionalize it

Problem of heterogeneity

5. Research directions of the participants

Cellulose:	12
Lignin:	13
Hemicelluloses:	5
Extractives:	5
Cell wall structure:	5

6. Workshop in January 2014 organized by a group that consists of a researcher of each discipline

Are we able to mimic self-assembly?

Are we able to control self assembly?

What knowledge is missing?

Relevant length scales?

Material concepts and application?

Invite relevant key-note speakers and stimulate discussions which can lead to joined research proposals

7. Summer-School on:

Surface chemistry and functionalization of nanocellulose

Aalto University & VTT

In Summer 2014

8. STSM

Member of the Group of M. Alma, Turkey to Aalto University