



International Association of Chemical Thermodynamics
IACT

Minutes of the Meeting of the Board of Directors

in the

Business Room of the Organising Committee, Hotel Gromada, Warsaw, Poland

Sunday August 3rd 2008 from 16.00 to 18.00

Present at the meeting:

Chairman	Prof. J.-P. E. Grolier
Past Chair	Prof. R.D. Weir
Secretary	Dr. J.H. Dymond
Treasurer	Prof. T.W. De Loos
Members	Prof. T. Atake Prof. U.K. Deiters Dr. A.R.H. Goodwin Prof. T.M. Letcher Prof. M.A.V. Ribeiro da Silva Prof. E. Vogel
Counsellors	Prof. S. Randzio

1. **Preliminary Matters, and any Announcements**

The Chairman welcomed those present.

2. **Apologies**

Apologies were received from Prof. M. Frenkel, Prof. Li-Xian Sun, Prof. A. Victorov, Prof. W.A. Wakeham and Professor Mary Anne White

3. **Minutes of the Clermont-Ferrand Meeting, 2007**

The Minutes of the Meeting held in Clermont-Ferrand, France on 30 May 2007 were approved and signed.

4. **Secretary's Business**

4.1 *IACT Publicity at 20th. ICCT*

Arrangements had been made to display the IACT banner and hand out up-dated A5-size flyers, with information on IACT, at a stand at this Conference. A rota was drawn up for Board members to man this stand during the coffee breaks.

4.2 *IACT Awards 2008*

The Rossini Lectureship: The 2008 Rossini Award winner is Prof. Jürgen Gmehling, University of Oldenburg, Germany. His certificate will be presented to him by Professor Grolier, just before his lecture on Wednesday at 9 a.m.

Junior Awards: There were 28 applications for the so-called Doctorate Awards this year. Now that Michiel Thijssen has moved on from his position in Elsevier, we have reverted to our

preferred name of “Junior Awards” this year. A committee was set up under Ron Weir to review these applications – other members were John Dymond and Trevor Letcher. They independently drew up a Merit List of 8 candidates in order, and by awarding 8 points for a first choice, 7 for second etc, scores were obtained for each candidate. The top 5 were granted awards. In alphabetical order, they are:

Dr. R.M. Bogel-Lukasik, Department of Chemistry, Universidade Nova de Lisboa, Portugal. (Polish).

Dr. L.M. Casás, Department of Applied Physics, University of Vigo, Spain (Spanish).

Mr. O. Elizalde-Solis, Thermodynamics Laboratory, Instituto Politécnico Nacional, México D.F. (Mexican).

Dr. F. Lovell, Department of Chemical Engineering, Imperial College, London, UK (Spanish).

Dr. A.F.L.O. M. Santos, Department of Chemistry, University of Porto, Portugal. (Portugese).

It is to be noted that they represent 4 different countries; there are three male and two female winners.

These certificates will be presented by Dr Goodwin during the Cocktail Party before the Concert of Chopin Music.

Note added: All certificates were signed by the Chairman and Secretary after this meeting. Prof. Randzio undertook to have them framed, at IACT’s expense.

4.3 *Arrangements for the IACT Business Meeting*

As per last time, slides had been prepared in PowerPoint for this meeting.

The following papers had been emailed to all IACT members:

- Agenda
- Minutes of the Boulder meeting
- Election notification
- Resumés of candidates
- Financial statement
- Project list 2008

4.4 *Arrangements for the Election to the Board*

It was agreed that voting for Directors should take place at the beginning of the meeting to allow time for the tellers (Prof. Weir and Prof. Ribeiro da Silva) to count the votes and declare the result before the end of the meeting. Voting slips would therefore be handed out at the door.

Dr. Dymond noted that Prof. Weir was retiring as Past-Chair. Prof. Grolier was retiring as Chairman, and will become Past-Chair for 2008-2012. Prof. Deiter and Prof. Ribeiro da Silva will retire, having served two terms, and Prof. Atake had come to the end of his first term. Prof. de Loos, having been appointed Treasurer in 2007 will continue to 2010.

Elected members:

Prof. T. Atake	his first term ends in 2008 – eligible for a further 4-year term
Prof. U.K. Deiters	his second term ends in 2008 (6 years)
Prof. T.W. De Loos	appointed Treasurer to 2010 (first term as officer)
Dr. J.H. Dymond	his second term ends in 2010
Dr. M. Frenkel	appointed to 2010 [first term]
Dr. A.R.H. Goodwin	becomes Chair 2008-2012
Prof. J.-P. E. Grolier	becomes Past-Chair 2008-2012
Prof. T.M. Letcher	appointed to 2010 [second term]
Prof. M.A.V. Ribeiro da Silva	his second term ends in 2008 (6 years)
Prof E. Vogel	appointed to 2010 [second term]
Prof. R. Weir	retires in 2008

Counsellors

Prof. S. Randzio	appointed to 2010 [first term]
Prof. Li-Xian Sun	appointed to 2010 [first term]
Prof. A. Victorov	appointed to 2010 [first term]
Prof. W.A. Wakeham	appointed to 2008 (6 years)
Prof. M.A. White	appointed to 2010 [second term]

As per the Constitution, a Nominating Committee had been set up, under the Chair-Elect. It produced a list of 5 nominees for the four vacancies: Prof. T. Atake (Japan), Prof. J. Boerio-Goates (U.S.A.), Prof. J.P.M. Trusler (UK), Prof. A. Victorov (Russia), Prof. W.A. Wakeham (UK). No additional names were submitted by members.

It was agreed that the unsuccessful candidate and the organiser of the successful bid for ICCT-2012 would be appointed as Counsellors. In order to encourage younger chemists to become involved in IACT, it was decided to invite Dr. Deresh Ramjugernath (South Africa), Prof. Josefa Fernández (Spain), Prof. Luis Galicia-Luna (Mexico), Dr. Rob Chirico (U.S.A.) and Professor Manuel Minas da Piedade (Portugal) along to the meeting of the new Board, immediately after this ICCT, as observers, with a view to their standing for election next time. Prof. Weir agreed to invite them.

5. Treasurer's Report

The Abbey bank balance at April 28th 2007 was GBP 5461.14, and the total assets, including cash in hand, was GBP 5840.64. In the following twelve months, a donation of GBP 490.05 was received from Elsevier, and there was bank interest of GBP 33.27. On the debit side, five poster prizes were made at the Russian Conference on Chemical Thermodynamics in 2007, at a total cost, including wire transfer charges, of GBP 508.94, and a donation of GBP 280.26 was made to Thermodynamics 2007. Our annual subscription to IUPAC was GBP 29.77. The balance at April 28th 2008 was GBP 5165.49. In addition, there is cash in hand of GBP 20.00 and USD 734.09. Dr. Goodwin moved the adoption of the accounts. This was seconded by Prof. Weir and unanimously approved.

It was noted that, since then, bank interest of GBP 146.15 and a single membership fee paid in international stamp vouchers which realised GBP 5.70 have been received, but there are the following outstanding expenses:

- i) 50% of the costs of travel and subsistence for the Rossini Lecturer. (It was recommended in the Report of the IACT Awards Committee in 2006 that IACT and ICCT share these costs.)
- ii) the cost of the 5 Junior awards, at USD 500 each plus the cost of wire transfers.
- iii) £23.80 for the photocopying of 400 flyers for IACT.
- iv) the cost of framing the certificates which were awarded at this Conference.

6. 20th ICCT, 2008, Warsaw, Poland

Professor Randzio reported that there were 325 people from 39 countries registered for the Conference. On-line registration had worked very smoothly, but there had been lots of correspondence from intending participants. Successive reminders to pay the registration fee had resulted in more payments. A number of abstracts had been received for which the authors had not paid the registration fee – these abstracts were not included in the Abstracts Book. Several authors asked to have their abstract in the Book, and were prepared to pay for this, though they were not intending to come to the Conference - this was not accepted.

There had been many problems over visas, especially from Russia, India, Algeria and Iraq, which required different details. However, only one person had been prevented from coming by not having a visa, and he had been too late in applying. The organisers had been unsuccessful in obtaining an official definition of a “developing country”, from whence participants might be charged a reduced fee. In the end, the organisers decided who qualified. There had been sponsorship to a total of 30,000 Zlotys.

Only one speaker, Prof. Wunderlich, had been unable to attend (by injury). His lecture would be presented by Prof. M. Pyda.

IUPAC Poster Prizes: IUPAC has offered 3 Poster Awards to this Conference. The winners will each receive a certificate and a personal copy of the Green Book. Normally the Conference organisers arrange the judges for these prizes but, on this occasion, the IACT Board agreed to take responsibility, with Prof. Weir, Prof. de Loos and Prof. Vogel acting as judges. Presentation of these prizes will be at the Closing Session of the Conference on Friday.

Prof. Randzio reported that there had been a number of financial problems:

- i) the Government had indicated, at the time the budget was drawn up, that they would pay up to 50% of the Conference costs. This was subsequently changed to zero support from Government. It was hoped to claim some money back from Universities.
- ii) each registration fee was subject to 22% VAT, but it was hoped that some of this could be claimed back as the Conference Centre included VAT in its charges.
- iii) prices for meals had increased by 100% since the budget was drawn up.
- iv) variation in exchange rates meant that income from registration fees was lower than expected.

As a result of these budgetary problems, it will be necessary to negotiate the standard payment to IACT of USD 20 per participant.

A vote of thanks was expressed to Prof. Randzio, and to his committee, for all they had done to lay the groundwork for a very successful Conference.

7. Update on Projects

7.1 *Project on Thermochemistry of Chemical Reactions* (M.A.V. Ribeiro da Silva)

Two manuscripts are at present being checked by members of the Physical and Bio-physical Chemistry Division Committee for consistency with the Green Book. A recommendation will then be submitted on behalf of Division I as to the suitability for external review by 15 reviewers.

Professor Ribeiro da Silva drew Members' attention to the IUPAC website which announced, unknown to him, that these manuscripts would be subject to yet another round of reviews. Members expressed their concern at the unacceptably long delays from the IUPAC publication process for these manuscripts.

7.2 *Project on Guidelines for Modulated-Temperature Differential Scanning Calorimetry* (J.-P.E. Grolier)

The Project progresses well. At this ICCT in Warsaw, there will be a Workshop "Modulated and Oscillation Temperature Techniques" (MOTT) dedicated to the Project. Two Invited Lectures will be given by Task Group members (B. Wunderlich, Ch. Schick). The objectives of the project are clearly defined and writing up of guidelines and directives will not be a problem.

A Task Group meeting during the Conference will discuss whether recommendations should be published by scientific journals in the field and/or in a monograph. This might depend on whether the guidelines are restricted to just Differential Scanning Calorimetry (DSC) or extended to any other types of calorimetry/thermal methods where temperature modulation or temperature oscillation are nowadays becoming current practice. The same consideration stands for multifrequency (in fact high frequency) methods applied to thermal techniques.

7.3 *Electrolyte Solution Data* (J. Barthel)

Dr. Dymond reported that Prof. Barthel was working on Part 5 in the Electrolyte Data Collection on Electrolyte Solutions in Mixed Solvents for Applied Research (Part 5a: HEBs).

7.4 *Vapour-Liquid Critical Properties* (K.N. Marsh)

The manuscript for Part 11 on Multifunctional Organic Compounds is ready for submission to J. Chem. Eng. Data. Part 12 will be an up-date of earlier papers. Part 13 on Inorganics has been partly completed by Douglas Ambrose, who has now withdrawn from the Project. Prof. Marsh and Dr. Dymond plan to complete this Item.

7.5 *Ionic Liquids* (K.N. Marsh)

Two draft reports have been prepared. Part 1 has been sent to NIST and has to go through BERB review. Part 2 has been through the NIST BERB review. They will be submitted to Pure and Applied Chemistry. This will complete Project 2002-005-1-100.

7.6 *Heat Capacities of Liquids: Critical Review and Recommended Values for liquids with Data Published between 2000 and 2004* (V. Ruzicka)

Dr. Dymond reported that Project 2004-010-3-100 had been completed with the preparation of a manuscript to be submitted to Dr. Don Burgess, editor of J Phys Chem Ref Data. It would then go for external review. Ron Weir will provide the names of some possible reviewers.

7.7 *Establishing Recommended Data on Thermodynamic Properties of Hydration for Selected Organic Solutes* (V. Majer)

This project has come to an early end as Prof. Majer had moved to a position in Moscow and had no time to take care of the Project. Unfortunately he has been unable to find anybody to take over the lead. A report which was produced by Roberto Fernandez-Prini and his team is due to be published in the Journal of Solution Chemistry this coming October.

7.8 *Guidelines for Reporting of Phase Equilibria Measurements* (T.W. de Loos)

Discussions are taking place on specific points prior to producing a list of recommendations.

7.9 *Future Energy: Improved, Sustainable and Clean Options for our Planet* (T.M. Letcher)

This book will be published by Elsevier on 4 August 2008.

7.10 *Experimental Thermodynamics: Applied Thermodynamics of Fluids* (A.R.H. Goodwin)

This text, which includes 14 chapters, is compiled by an editorial team of A. R. H. Goodwin, J. V. Sengers and C. J. Peters. It will be the eighth in the series *Experimental Thermodynamics* and, published under the auspices of IUPAC (Project Number Project number 2008-014-1-100), by the Royal Society of Chemistry in December 2009.

The intent of *Applied Thermodynamics of Fluids* is to revise and at the same time update *Experimental Thermodynamics, Volume V, Equations of State for Fluids and Fluid Mixtures, Parts I and II*, albeit with a change in emphasis to the application of theory, without recourse to derivations of the constitutive equations, while retaining the fundamental aspects. It will also include topics omitted previously such as *nano* and *meso* scale thermodynamics, associating fluid theory, chemically reacting systems and non-equilibrium thermodynamics. The new volume is intended to address the needs of practitioners within academia, government and industry.

7.11 *Heat Capacities of Liquids, Solutions and Vapours* (T.M. Letcher)

The project is on-going and the book, with 21 chapters, is scheduled to be published by the Royal Society of Chemistry in the latter half of 2009.

7.12 *Extension of ThermoML – the IUPAC Standard for Thermodynamic Data Communications* (M. Frenkel)

The proposal has been discussed on a preliminary basis in August 2006 during Thermo International 2006 in Boulder, Colorado, USA. It was submitted for IACT review in August 2007, and obtained the endorsement from the Board in September, 2007. It was submitted to the IUPAC (Committee on Printed and Electronic Publications) in October, 2007. It has been officially approved by the IUPAC in January, 2008. Subsequently, the Team was organized into 3 subteams (General Review and Implementation Team, Biothermodynamics Team and Speciation

Team). The first meeting of the Team will be held in Warsaw, Poland during ICCT-2008. It is planned to complete the first phase of the project in 2009 (Biothermodynamics), the second one ("Speciation issues") in 2010, and third phase (Recommendations and Report) in 2011.

7.13 *Thermodynamic Study on Hydrogen Storage Materials: Metal Organic Frameworks and Metal or Complex Hydrides* (Li-Xian Sun)

This proposal was approved by the IACT Board in December 2007 and submitted to IUPAC in January 2008. The nine reviews were generally very favourable, but helpful suggestions had been made. These were discussed by Prof. Sun, Prof. Grolier and Prof. Frenkel in Dalian in May, 2008, and a final revision of the proposal would be made at a meeting of Task Group members during this Conference (ICCT-2008).

In the meantime, new metal organic frameworks and nano metal complex hydrides have been synthesized and the corresponding hydrogen storage performance and thermodynamic characteristics measured. Some results were reported at the CATS2008 in Dalian, China.

8. **Membership 2008-2010**

All participants at the 20th ICCT would be IACT members for 2008-2010. It was agreed that Dr. Goodwin would ask Prof. Frenkel if he could produce e-cards for members.

9. **IACT Website**

The website will be up-dated when the draft Minutes of the two Board meetings and the Business Meeting have been prepared. The list of Board Members, completed projects and the publication list will also be brought up to date. **ACTION: JD**

10. **Publications 2006-2008**

A publication list is appended to these Minutes.

11. **Relationship with EFCE**

There was concern that the European Federation of Chemical Engineers was planning to set up a group to discuss Thermodynamics and Transport Properties, without reference to IACT or to the International Association on Transport Properties. Their key projects were i) a survey of how Thermodynamics is taught to Chemical Engineers in Europe, and ii) a survey of the needs of chemical industry for data. It was agreed that we should seek to collaborate with them.

12. **Possible New Projects**

12.1 *Volume on Green Chemistry Thermodynamics*

Prof. Grolier commented that "clean-safe" would be a better description than "green", but said that this was a longer-term project. He suggested that a volume should be written on "Plant and food processing. **Action J-P G**

12.2 *Vapour Pressure of Low-Volatility Compounds*

There had been no progress towards consideration of the feasibility of a project on this topic.

Action RdaS/UD/MF

12.3 *pH-sensitive Nanostructured Copolymer Gels*

This topic is withdrawn for now.

13. **Next Meeting**

There will be meeting of the new Board on Friday, August 8th 2008.

IACT Publications 2006-2008

New Global Communication Process in Thermodynamics: Impact on Quality of Published Experimental Data. M.Frenkel, R.D. Chirico, V. Diky, C. Muzny, Q. Dong, K.N. Marsh, J.H. Dymond, W.A. Wakeham, S.E. Stein, E. Königsberger, A.R.H. Goodwin, J.W. Magee, M. Thijssen, W.M. Haynes, S. Watanasiri, M. Satyro, M. Schmidt, A.I. Johns and G.R. Hardin, *J. Chem. Inf. Mode.* 46, 2487-2493 (2006).

Vapour-Liquid Critical Properties of Elements and Compounds. 10. Organic Compounds containing Halogens, K.N. Marsh, A. Abramson, D. Ambrose, D.W. Morton, E. Nitikin, C. Tsonopoulos and C.L. Young, *J. Chem. Eng. Data* 52 1509-1538, 2007.

Developments and Applications in Solubility, Ed. T. Letcher, The Royal Society of Chemistry, (2007) 414 pp.

ILThermo: A Free-Access Web Database for Thermodynamic Properties of Ionic Liquids, Q. Dong, C. Muzny, Andrei Kazakov, Vladimir Diky, Joseph Magee, Jason Widegren, Rob Chirico, Kenneth Marsh, Michael Frenkel, *J. Chem. Eng. Data*, 52, 1151-1159 (2007).

Thermodynamics, Solubility and Environmental Issues, Ed. T. Letcher, Elsevier, (2007) 470 pp.

Ionic liquids database, K.R. Seddon, A.N. Burgess, M. Frenkel, M. Gaune-Escard, A. Heintz, J.W. Magee, K. N. Marsh and R. Sheldon, (ILThermo), <http://ilthermo.boulder.nist.gov>

Papers based on presentations at the 19th IUPAC Conference on Chemical Thermo-dynamics (ICCT-19), 30 July to 4 August 2006, Boulder CO, USA. Ed. J.H. Dymond, *Pure Appl. Chem.* 79, 1345-1462, (2007).

Articles in Chemistry International

Alexandra Navrotsky awarded the 2006 Rossini Lecture, *Chem. Int.* 28, No. 2, 17-18 (2006).

XML-based IUPAC standard for experimental, predicted, and critically evaluated thermodynamic property data storage and capture (ThermoML), M. Frenkel et al, *Chem. Int.*, Vol. 28, No. 3, 22 (2006). Letters in support of the ThermoML standard, M. Thijssen and J. Magee *ibid*.

Standards, calibration and guidelines in microcalorimetry. Part 2. Calibration standards for differential scanning calorimetry. G. Della Gatta, *Chem. Int.*, Vol. 28, No. 6, 27 (2006)

ThermoML: New IUPAC standard for thermodynamic data communications, M.Frenkel, *Chem. Int.*, Vol. 28, No. 5, 38 (2006).

Solubility and thermodynamics related to environmental issues, T.Letcher, *Chem. Int.*, Vol. 28, No. 5, 23 (2006)

The 19th Int. Conference on Chemical Thermodynamics, J.H. Dymond and M. Frenkel, *Chem. Int.* 29, No. 2, 24-26 (2007).

Developments and Applications in Solubility, Ed. T. Letcher, The Royal Society of Chemistry, *Chem. Int.* 29, No. 3, 27 (2007).

Jürgen Gmehling awarded the 2008 Rossini Lecture, *Chem. Int.* 29, No. 5, 17-18 (2007).

Guidelines for Modulated-Temperature Differential Scanning Calorimetry, *Chem. Int.* 29, No. 5, 20-21, (2007).

Chemical Thermodynamics, 3-8 August 2008, Warsaw, Poland, *Chem. Int.* 29, No. 5, 31 (2007).

Manuscripts in course of publication:

Thermodynamic and thermophysical properties (including mixtures) of the reference ionic liquid: 1-hexyl-3-methylimidazolium bis[(trifluoromethyl)sulfonyl]amide – Part 1. Experimental methods and results. *Prepared for publication in PAC* by Kenneth N. Marsh, Joan F. Brennecke, Michael Frenkel, Andreas Heintz, Joseph W. Magee, Cor J. Peters, Luis Paulo N. Rebelo, Kenneth R. Seddon.

Thermodynamic and thermophysical properties (including mixtures) of the reference ionic liquid: 1-hexyl-3-methylimidazolium bis[(trifluoromethyl)sulfonyl]amide. Part 2. Critical evaluation and recommended property values. (IUPAC Technical Report 200x), *Prepared for publication in PAC* by Robert D. Chirico, Vladimir Diky, Joseph W. Magee, Michael Frenkel, Kenneth N. Marsh.

Thermochemistry of Chemical Reactions: 1 Terminology and Symbols (IUPAC Recommendations 2008). *Prepared for publication in PAC* by Manuel A. V. Ribeiro da Silva.

Thermochemistry of Chemical Reactions: II. Experimental Methods for the Determination of Bond Energies (IUPAC Technical Report 200x). *Prepared for publication in PAC* by: Manuel A. V. Ribeiro da Silva.



International Association of Chemical Thermodynamics
IACT

Minutes of the Meeting of the Board of Directors

Conference Hall "Agat", Hotel Gromada,
Warsaw, Poland

Friday August 8th 2008 14.00 to 16.00

Present at the meeting:

Chairman	Dr. A.R.H. Goodwin
Past Chair	Prof. J.-P. E. Grolier
Secretary	Dr. J.H. Dymond
Treasurer	Prof. T.W. De Loos
Members	Prof. T. Atake Prof. J. Boerio-Goates Prof. M. Frenkel Prof. T.M. Letcher Prof. E. Vogel
Counsellors	Prof. S. Randzio
Observers	Dr. R. Chirico Prof. J. Fernández Prof. D. Jamragnath

1. Preliminary Matters, and any Announcements

The Chairman welcomed those present, and thanked Prof. Randzio for a most enjoyable and highly successful Conference. Prof. Randzio thanked Professor Grolier, the retiring Chair, and Dr. Dymond, Secretary, for all their work in connection with the Conference.

2. Apologies

Apologies were received from Prof. Li-Xian Sun, Prof. J.P.M. Trusler, Prof. A. Victorov, Prof. W.A. Wakeham and Professor Mary Anne White

3. Secretary's Business

The Secretary noted that a new Titular Member with expertise in the area of Thermodynamics would be required to serve on the IUPAC Physical and Biophysical Chemistry Division Committee from 2012-2015. This was advance notice for the election process, which will begin in 2010.

4. Treasurer's Report

The current Abbey bank balance is GBP 5317.34, but there are the following outstanding expenses:

- i) 50% of the costs of travel and subsistence for the Rossini Lecturer. It was recommended in the Report of the IACT Awards Committee in 2006 that IACT and ICCT share these costs.
- ii) the cost of the 5 Junior awards, at USD 500 each plus the cost of wire transfers.
- iii) £23.80 for the photocopying of 400 flyers for IACT.
- iv) the cost of framing the certificates which were awarded at this Conference.

It was agreed that the cash in hand of GBP 20.00 and USD 734.09 should be paid into the Abbey account, even though there would be a loss of money as a result of the currency change.

A further donation of USD 1000 has been promised by Elsevier, but apparently there had been problems in trying to pay this into the IACT bank account, because it is a Treasurer's account and does not have an IBAN number.

5. Sponsorship of IACT Activities

Prof. de Loos agreed to write to Elsevier with a list of Junior Award winners, to thank them for their donations and ask about future financial support. **ACTION: TdL**

Setaram and Exxon had been considered as possible sponsors of IACT activities, but nothing had come of these. Ideas for future consideration included:

- Prof. Ramjugernath's suggestion that IACT should consider corporate affiliation, whereby they could send one delegate free to each Conference.
- Prof. Frenkel's idea of having a company representative on the Board of Directors.
- The possibility of having the Rossini Lecture brought by a sponsor.
- Sponsorship of a reception

The Chairman undertook to set up a committee to consider fundraising activities. **ACTION: AG**

6. Book contracts

It was noted that IUPAC appears to have two main requirements for publishing a book with their name on it, namely: 4 % royalty, and more importantly, availability of the electronic version of the book after one year. Presumably the latter is for free, but that is not specified. It was agreed that authors/editors of books should seek to negotiate a 2% royalty for use of the IACT logo. Editors should also ensure that each author receives a free copy of the book, though it was appreciated that this might not be possible in the case of a multi-authored chapter.

7. ICCTs

7.1 21st ICCT, 2010, Tsukuba, Japan

Prof. Atake gave a PowerPoint presentation to show some of the facilities at the Conference site, Tsukuba International Congress Centre (Epochal Tsukuba), which is located in Tsukuba Science City. Further information can be obtained from <http://www.epochal.or.jp/english/index.html>. He also described some of the tourist attractions in the area, and noted that Tokyo was just 45 minutes away. The website for the Conference <http://www.icct2010.org> was launched on August 1st.

It was agreed that we should build up a large mailing list. Prof. Frenkel agreed to provide his list to Prof. Atake. **ACTION: MF**

7.2 22nd ICCT. Proposals from Brazil and Canada

The Secretary had prepared, and previously circulated, Summary Sheets from the information supplied in bid documents from the Proposers – Prof. Watson Loh (Bužios, Brazil) and Profs. John Shaw, Marco Satyro and Harvey Yarranton (Edmonton, Alberta, Canada). These sheets

listed the Conference venue, Conference dates, estimated number of participants, possible joint meetings, venue facilities, transportation from the international airport, weather, accommodation, registration fee, draft budget, composition of the executive committee, international advisory board and local organising committee, and draft scientific programme.

Professor Watson Loh gave a PowerPoint presentation in support of his bid. He was accompanied by 4 colleagues, including Dr Ricardo Belchior Torres, who had recently visited the Hotel and its conference center, and Prof. Frederico W Tavares, (Federal Univ of Rio de Janeiro) to answer queries specifically on local issues. Afterwards, he answered questions, pointing out that August 5-10 2012 was a less busy, and also less expensive, period and that the likely number of participants from Brazil, Argentina, and Mexico would be about 100. After this, the Brazilian delegation withdrew.

Unfortunately, none of the proposers of the Canadian bid was present, but the Secretary gave a presentation on their behalf, in which he highlighted the main points of their bid document.

After these presentations, Board members discussed the relative merits of the two bids. It was generally felt that the Canadian group could put on a very good Conference, but concern was expressed that Edmonton was booming and becoming a very expensive place to visit. Bužios in Brazil had the advantage there. The fact that ICCTs had been held previously in Canada, as recently as 2000 in Halifax, Nova Scotia, but they had not been held previously in Brazil, was decisive and Board Members were unanimous in approving the Bužios bid.

From the experience of this 20th ICCT, it was recommended that, as here, i) there should be no more than 3 or 4 parallel sessions, ii) top researchers should be invited to give plenary talks (Prof. Gubbins attracted a full hall for his lecture on Education) and iii) consideration should be given to a symposium on “energy”.

7.3 *Future ICCTs*

Prof. Ramjugernath offered to host an ICCT in Durban, South Africa. Other possibilities were Perth, Western Australia (Prof. Glenn Hefter), and Russia (St. Petersburg).

Enquiries had also been received from Barbara Howlett, Sydney Convention Bureau and Ulrike von Arnold of the Vienna Convention Bureau to see if IACT would consider holding an ICCT in their cities. It was agreed that the Secretary should write to them for further information.

ACTION: JD

7.4 **Revision of Guidelines for Organisers of ICCTs**

The information required from proposers of ICCTs in bid documents should be clearly presented, as given on the Summary Sheets.

ACTION: JD

In addition:

a) we should query the need to request assistance in finding speakers for a session that perhaps should simply be cancelled for lack of interest, b) any email message containing a general request for money should be cleared with IACT Chairman beforehand, and c) any proposal for an invited speaker who comes from the same institution as one of the session chairmen should be referred to the IACT Chairman.

8. **Publications Standards Committee**

Concern was expressed that there appeared to be no requirement for manuscripts of books that result from IUPAC projects to be reviewed by the IUPAC Interdivisional Committee on Terminology, Nomenclature & Symbols. There was unanimous approval to set up a Publications Standards Committee (PSC), chaired by Prof. Ken Marsh, to check compliance of all books in future with the Green Book.

ACTION: ALL AUTHORS OF BOOKS

9. **Rossini Lectureship Award**

Prof. Frenkel proposed that the process of voting and selecting the Rossini lecturer should be reconsidered as, at present, if we proceed to a short list of more than two candidates, then the winner may not have the support of the majority of the Board of Directors. It was agreed that the Secretary should write to all Board Members to seek their views on setting up an Award Committee, under the Past Chair, which would check the applications against listed requirements. These would include i) a long-term contribution to thermodynamics, ii) a recognised ability of public speaking, iii) a long association with ICCT's, and iv) no self-nomination. Those nominations which passed this check would then be considered by all the Board Members, who would each place them in rank order, with "one" being the highest preference. The Secretary would total these votes and the two candidates with least votes would go forward for a final election.

ACTION: JD

10. **Matters arising from the 20th ICCT**

a) Some Poster Prize winners left before the end of the Conference, and were not present at the final ceremony to collect their awards. It was agreed that, in future, when Poster Prizes are given by IUPAC (or other sponsors), arrangements should be made for posters to be put up early in the Conference so that they can be judged, and the winners advised as soon as the results are known. When winners plan to leave before the end of the Conference, arrangements must be made to present their prize beforehand.

b) It was agreed that, in view of the financial difficulties which had arisen at this Conference, due to circumstances beyond the organisers' control, a letter should be sent to the IACT Secretary with a clear explanation if it is not possible to pay a sum equivalent to USD 20 per participant.

ACTION: SR

11. **IACT Sponsorship of Conferences and Poster Awards**

Members agreed that we should wait for Conference organisers to approach IACT with a request for sponsorship. These requests would then be put before the Board.

12. **Any Other Business**

Although an email had been sent to all participants before the Conference, informing them that they were members of IACT as a result of paying their registration fee for the ICCT, and Prof. Grolier had mentioned this at the Opening Ceremony, it was apparent that many participants were unaware of this and uncertain as to whether or not they could attend the IACT Business meeting. Prof. Letcher suggested that membership might be extended from the present two-year period to four years. However, it was felt that this would introduce additional problems. The Secretary pointed out that if there was a wish to amend the Association Bylaw ARTICLE III, Section 3, a proposal should be sent to him in time for him to send this out to all members of the Board of Directors at least fourteen days before the Board meeting at which a ballot will be taken, as per the Constitution, ARTICLE VI, Section 2.

13. **Date of next Meeting**

The next meeting will be held on July 2nd 2009 in Santiago de Compostela, Spain, immediately after the European Symposium on Applied Thermodynamics.

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