



*International Association of Colloid
and Interface Scientists*

NEWSLETTER NO. 17

NOVEMBER 1990

COMPILED BY J. LYKLEMA

**INTERNATIONAL ASSOCIATION OF COLLOID
AND INTERFACE SCIENTISTS**

NEWSLETTER NO. 17

November 1990

**1 ABOUT THE NEWSLETTER/FROM YOUR NEWSLETTER
EDITOR**

The main purpose of the Newsletter is the same as that of IACIS, namely to promote international cooperation in colloid and interface science. It is hoped that through these letters colloid and interface scientists become better informed about forthcoming events, developments, and personal news from various countries.

So far, I have edited 17 Newsletters. Although the task is not too heavy and I receive much help from my secretary, it is still too much a one-man show. Response from IACIS members is limited to a score of faithful correspondents who supply me with useful new items. Many people around the world show from time to time their appreciation for the NL (which is appreciated in turn) but if each member would write me once a year with the information he/she has available, the NL could become more encompassing, complete and useful.

The conference agenda (item 5 of this NL) is not only meant to fill the travel agenda of IACIS members, but also assists planners to look ahead. To my knowledge several times over the past years the NL has been instrumental in the planning of new conferences. Nevertheless I sometimes note items where the synchronisation could be better. Hence, please keep

me posted and do so well in advance, even if the plans are only provisional.

With best wishes from your Newsletter Editor,

Hans Lyklema

2 STATUS OF THE NEWSLETTER, LIABILITY

The first two Newsletters (henceforth abbreviated as NL 1 and NL 2), dated September 1978 and July 1979 respectively, were written under the auspices of the IUPAC Commission on Surface and Colloid Science (Commission I.6) before IACIS was formally established. Starting with NL-3 in June 1980 the Newsletters appear under IACIS auspices.

Parts of this NL may be copied provided the source is acknowledged. Although everything is verified to the best of our knowledge, errors may occur; IACIS can not accept any responsibility for them.

Formal Correspondence address: Prof.dr. Hans Lyklema, Newsletter Editor, Department of Physical and Colloid Chemistry, Wageningen Agricultural University, P.O. Box 8038, NL-6700 EK Wageningen, The Netherlands, Telephone 31 (Netherlands) - 8370 (area code) - 82279 (extension); FAX 31-8370-84141; E-mail FYSKO@RCL.WAU.NL.

3 IACIS NEWS

3.1 Message from the Immediate Past President

In concluding my period as President of IACIS I would like to comment on some of the activities and developments during the past two years. An informal meeting of Council was held during the Thin Films meeting in September 1989, which was sponsored by IACIS, and a formal meeting took place during the Faraday Discussion on Colloid Dispersions in September 1990. The Minutes of this meeting are printed elsewhere in this Newsletter.

The most important development has been the extensive revision by Council of the Constitution and Rules of IACIS which now lay down in a more definite form the constitution, duties and responsibilities of Council, and the methods of election of Officers and Council. In particular we now have mechanisms which enable Council to ensure that IACIS is truly international, and represents colloid and surface scientists worldwide. The international status of IACIS has been enhanced by its acceptance as an Affiliated Organisation of the International Union of Pure and Applied Chemistry (IUPAC).

The problems of the payment of membership subscriptions have been eased. As a matter of convenience subscriptions can now be paid in Dutch guilders or dollars, or through the use of major credit cards. In this way many members will be able to avoid paying bank charges. For members in East Europe, an IACIS bank account has been opened in Hungary. At the moment it can accept payment in forints, but it remains to be seen whether, following the momentous changing taking place in Europe, it will be able to take payment in other currencies. Now that Germany is re-united, members in the former GDR will, of course, be able to make payment direct to Prof. Bijsterbosch.

Plans for future IACIS sponsored conferences are well in hand, as detailed in other sections of this Newsletter.

companies to ask them to join our association and offer some financial help to sponsor some of these activities. In the meantime, I will encourage conference organisers to waive registration fees for those scientists who are unable to pay. I believe that Colloid and Interface Science will play a major role in the near future, helping to solve major global problems related to the environment and providing new materials that are more safe and economic.

Let me take this opportunity for wishing you all a Merry Christmas and a Prosperous new year.

Tharwat F. Tadros

3.3 From the Honorary Secretary and Treasurer

3.3.1 Minutes of the IACIS Council Meeting, held in Bristol on 11 September 1990

1-2. All recently elected, just retired and continuing Council members attending the Faraday Discussion on Colloid Stability have been invited. Attending (in alphabetical order): Aveyard, Bijsterbosch, Everett, Hunter, Ise, Laughlin, Lyklema, Silberberg, Stenius, Tadros, Vincent and Van de Ven.

Immediate Past President Everett (presiding at the request of President Tadros) expresses a *word of welcome*, especially to five new Council members.

3. Referring to the *new Constitution and Rules*, Everett ascertains that some minor objections have been voiced, but that in general they seem to be appropriate. He suggests to see how it works for a period of some years and then decide whether adjustments are necessary. After some discussion, Council agrees.

Bijsterbosch explains why he had taken the initiative to have *IACIS incorporated* under Dutch law. According to the information he had obtained some two years ago, he

Suggestions are invited from members as to the location of the 9th International Conference due to take place in 1997.

In handing over the Presidency to Professor Tharwat Tadros, I wish him all success in his period of office. I also wish to express my deep appreciation of the outstanding work done by Professor Bijsterbosch and his office. The Association owes much to the efficient way in which he has discharged his duties as Secretary and Treasurer. Finally, we all have to thank Professor Hans Lyklema for compiling this Newsletter which plays such a major role in keeping our members in touch with activities in colloid and surface science throughout the world.

D.H. Everett

3.2 President's Message

I would like to start my message by thanking Professor Douglas Everett, the immediate Past President, for his dedication to the International Association of Colloid Scientists. Professor Everett's term has been full of international activities in which he played a major role. I will certainly seek his advice and guidance to lead the association into a successful future. I am certain that all members will join me in thanking Professor Everett for the work he carried out during his term of office.

Let me now thank all the members for electing me as the President of their association. My message to you is to promote international cooperation between colloid scientists across the world. We should not forget our fellow scientists who are less privileged as a result of economic restrictions and do our best to help them to attend our meetings. We are in an era where boundaries between various countries are vanishing and better understanding between nations is prevailing. We should follow suit in science and encourage exchange of ideas through international meetings. In order to enable such exchange, I will be soon writing to multinational

a result Council be will constituted by the following members:

expiration on 1 Sept.
of the year:

President:
Dr. Tharwat Tadros 1992
President-elect:
Prof.dr. Bob J. Hunter 1992
Immediate Past President:
Prof.dr. Douglas Everett 1992

Ordinary Council Members:
Dr. R. Aveyard 1994
Prof.dr. A.M. Cazabat 1992
Prof.dr. D. Exerowa 1994
Prof. S.E. Friberg 1994
Prof.dr. N. Ise 1994
Dr. R.G. Laughlin 1994
Prof.dr. B. Lindman 1992
Prof.dr. D.H. Napper 1992
Prof.dr. A. Scheludko 1992
Prof.dr. A. Silberberg 1992
Prof.dr. J.E.G. Sjöblom 1994
Prof.dr. P. Somasundaran 1992

Co-opted Council Members:
Prof.dr. B.H. Bijsterbosch 1992
(Honorary Secretary and Treasurer)
Prof. D.K. Chatteraj 1992
Prof. N.V. Churaev 1992
Prof. M. Clausse 1992
Dr. F. Csempešz 1992
Prof. A.K. Helmy (if he agrees) 1992
Prof.dr. H. Hoffmann 1992
Prof.dr. J. Lyklema
(Newsletter Secretary)
Prof. J. Ralston 1992
Prof. F. Rodriguez-Reinoso 1992

was running a personal risk in administering the finances of the Association. Council had agreed that he took the required steps. It then appeared that the structure of the Association is not in conformity with Dutch law, so that major changes would be necessary. In the mean time, however, it became also clear that, due to changes in Dutch law, Bijsterbosch' personal risk had been reduced to negligible proportion. He therefore proposes to discontinue the incorporation procedure. Council agrees.

For the moment there is no reason to adjust the annual *membership fee*, which is thus established again at (the Dutch equivalent of) \$15.00. Payment by credit card is officially agreed.

Council also agrees to have a "shadow account" in Hungary and stipulates that this account will have to be controlled in the same fashion as the regular accounts. Bijsterbosch will discuss this matter with Csempešz at short notice.

Everett mentions that IACIS has gained additional international status by becoming an IUPAC "Associated Organization".

As to recent *sponsoring of international meetings*, there appears to be some confusion about whether Prof. Neumann has obtained support for the Ottawa meeting in June 1990. Bijsterbosch promises to look this up in his accounts (the result of which is that Neumann did receive support in the amount of \$2,000).

Council agrees with the *appointment of the eight co-opted members* that have been proposed by the Standing Committee in the letter of the President to all Council Members of 18 July 1990. In addition, Lyklema is unanimously re-appointed as Newsletter editor. The representative of ECIS is not yet known at this stage. As

It is stipulated that co-opted members should always be appointed by the Council in its newly-elected constitution.

4. With regard to the arrangements for the 7th *International Conference in Compiègne*, July 1991, it is mentioned that preparations are in full swing, that the announcements (also via IUPAC channels) have been widely distributed and that Clausese appears to be doing an excellent job. All indications have it that a large attendance is to be expected.

Sjöblom has put in a request for *financial support* of the next Scandinavian Symposium on Surfactants in Bergen, Norway, 26-28 June 1991. This request is granted.

It is agreed that in *future support* will only be given if the organizers of a meeting agree to submit, afterwards, a report about topics, attendance (specifying the number of IACIS members) and accounting. In relation to sponsoring, some discussion ensues about possible *criteria*. In this connection are mentioned the number of participants, the part of the world where the meeting is to be held, and the possibility to provide sponsoring only when a deficit is expected. No actual decision is made; the decision remains with the President.

Council agrees that we should try to obtain *company-sponsoring* of IACIS. Tadros is going to address a number of them, asking for an annual contribution of \$500.00.

5. Hunter reports on the preparation of the 8th *International Conference in Adelaide*, 1994. Ralston has gained support from the governor of South Australia and from the mayor of Adelaide, so that here too the prospects are very good. The conference will probably be taking place 12-19 February.

Looking ahead to 1997, Latin America, Middle/Eastern Europe and Canada are being suggested as possible venues, but no decision is taken yet.

6. In relation to the new *Constitution* (which had also been discussed under 2) Laughlin has made some suggestions to the President as to how further accomplish our goals. He will send an abbreviated form to Lyklerna, for inclusion in this Newsletter.

It is also mentioned that Vincent is secretary of *Commission I.6 of IUPAC*. According to his information some ongoing projects are dealing with thin films, colloid science and environment, resp. colloid science and new materials.

Stenius suggests that *audiotapes* aids for colloid and interface science be produced. Very little material for teaching is available in this area.

Silberberg suggests that an *IACIS-prize* be initiated. The required amount of money does not have to be very large, but could e.g. be used to have a promising young scientist attending one of our International Conferences. President will set up a committee to further investigate this possibility.

7. After it has been established that the Immediate Past President will produce the President's Message for Newsletter 17, Everett hands the *presidency over* to Tadros, who compliments Everett with the enthusiasm, intensity and efficiency with which he has guided IACIS during the past two years.

It is agreed that the next *General Assembly* will be in Compiègne, next year.

The meeting is closed.

3.3.2 The IACIS accounts were examined by Dr. B. Vincent and Prof. dr. H.N. Stein and were found to be in order. A few minor recommendations as to future procedures were made.

Bert Bijsterbosch
Honorary Secretary and Treasurer

4 IACIS-SPONSORED MEETINGS

4.1 International Conference on Surface and Colloid Science (previously IUPAC-sponsored, now under auspices of IACIS)

History: 1st Conference, Budapest, Hungary, 1973
2nd Conference, Puerto Rico, 1976
3rd Conference, Stockholm, Sweden, 1979
4th Conference, Jerusalem, Israel, 1981
5th Conference, Potsdam - NY, U.S.A., 1985
6th Conference, Hakone, Japan, 1988
Future: 7th Conference, Compiègne, France, 1991,
July 7-12
8th Conference, Adelaide, Australia, 1994,
provisionally February 12-19.

4.2 Other conferences sponsored or co-sponsored by IACIS

In addition to the large international conferences, IACIS has supported and will support smaller meetings, all of this in the framework of its credo. Here follows a list of such smaller conferences:

- 1) September 1983 Paris (France) Physical Chemistry of Colloids and Interfaces: Biotechnology and Drug Research.
- 2) June 1984 Lund (Sweden) 8th Scandinavian Symposium on Surface Chemistry with international participation.
- 3) June 1984 Pittsburgh (U.S.A.) 58th Colloid and Surface Science Symposium ACS.
- 4) May 1986 Zakopane (Poland) IX European Chemistry at Interfaces Conference.

- 5) June - July 1986 Crveni Otok (Yugoslavia) 7th International Summer Conference on the Chemistry of Solid-Liquid Interfaces.
- 6) September 1987 Eindhoven (Netherlands) Polymers in Colloidal Systems: Adsorption, Stability and Flow.
- 7) May 1988 San Benedetto (Italy) X European Chemistry at Interfaces Conference.
- 8) June 1989 Åbo/Turku (Finland) EUCHEM Workshop on Adsorption of Surfactants and Macromolecules from Solution, and 10th Scandinavian Symposium on Surface Chemistry.
- 9) June 1990, Toronto (Canada) International Symposium on Contact Angles and Wetting Phenomena.
- 10) November 1990, Moscow (U.S.S.R.) International Conference on Surface Forces.
- 11) June 1991, Bergen (Norway) 11th Scandinavian Symposium on Surface Chemistry, with international participation.

5 CONFERENCES IN THE FIELD OF SURFACE AND COLLOID SCIENCE

NOTE 1. If information is already given in a previous Newsletter, it will be repeated here.

NOTE 2. I have refrained from including commercial courses, realizing that the distinction between them and non-subsidized (either/or not advanced) courses is not always unambiguous.

5.1 **Polymer Surfaces and Interfaces**, 29 October - 1 November 1990, Pacific Grove, CA, U.S.A. Contact: H. Yu, University of Wisconsin, Madison, WI, U.S.A.

5.2 **International Conference on Surface Forces**, 13-15 November 1990, Moscow, U.S.S.R. Organised by the Department of Surface Phenomena of the Institute of Physical

Chemistry of the U.S.S.R. Academy of Sciences. Sponsored by **IACIS**; members will be allowed a discount on the conference fee. Contact: B.V. Derjaguin or Dr. Z.M. Zorin, Department of Surface Phenomena, The Institute of Physical Chemistry of the U.S.S.R. Academy of Sciences, 31 Lenin Prospekt, Moscow 117915, U.S.S.R.

5.3 Bioadhesion, 6-9 November 1990, Groningen, The Netherlands. Contact: Congress Secretariat, Laboratory for Materia Technica, Antonius Deusinglaan 1, NL-9713 AV Groningen, The Netherlands.

5.4 IUPAC Symposium on Speciality Polymers, 7-9 November 1990, Singapore. Contact: Department of Chemistry, National University of Singapore, 10 Kent Ridge Crescent, Singapore 0511.

5.5 Future Directions in Surface Coatings, 15 November 1990, London, U.K. Contact: S. Lenon, ICI Paints Division plc, Wexham Road, Slough SL2 5DS, U.K.

5.6 3rd SPSJ International Polymer Conference IPC 90: Membranes and Interfacial Phenomena of Polymer, 26-29 November 1990, Nagoya, Japan. Contact: IPC 90 Secretariat, The Society of Polymer Science, 5-12-8 Ginza, Chuo-ku, Tokyo 104, Japan.

5.7 Functional and Polymeric Surfactants, 13-14 December 1990, London, U.K. Includes the Annual General Meeting of the Colloid and Interface Science Group of the Faraday Division of the Royal Society of Chemistry. Contact: B.H. Robinson, Department of Chemistry, University of East Anglia, Norwich, U.K.

5.8 Polyelectrolytes, 13-14 December 1990, Leiden, The Netherlands. Honouring Professor M. Mandel at the occasion of his 65th birthday. Contact: J.C. Leyte, Department of Physical and Macromolecular Chemistry, State University of Leiden, Gorlaeus Laboratories, 2333 CC Leiden, The Netherlands.

5.9 Molecular Transport in Confined Regions and Membranes, 17-18 December 1990, Oxford, U.K. (Symposium 26 of the Faraday Division of the Royal Society of Chemistry). Contact: Y.A. Fish, The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN, U.K.

5.10 Physical Chemistry of Interfaces, 28 December 1990, Bodh Gaya, India. Sponsored by the Indian Chemical Society. Contact: D.K. Chattoraj, Department of Food Technology and Biochemical Engineering, Jadavpur University, Calcutta 700 032, India.

1991

5.11 8th National Meeting of the Division of Colloid and Surface Science of the Royal Australian Chemical Institute, 21-24 January 1991, Canberra, Australia. Contact: R.M. Pashley, Department of Chemistry, The Faculties, Australian National University, Canberra, ACT 2600, Australia.

5.12 IUPAC International Symposium on Polymer Materials: Preparation, Characterization and Properties: Polymer 91, 10-15 February 1991, Melbourne, Australia. Contact: G.B. Guise, RACI Polymer Division, P.O. Box 224, Belmont, Victoria 3216, Australia.

5.13 National Conference on Chemical and Physical Aspects of Organised Biological Assemblies, 14-15 February 1991, Calcutta, India. Contact: B.B. Bhowmik, Department of Chemistry, Jadavpur University, Calcutta-700 032, India.

5.14 Polymer Reaction Engineering, 10-15 March 1991, Santa Barbara, CA, U.S.A. Sponsored by the Engineering Foundation and the American Institute of Chemical Engineers. Contact: Engineering Foundation, 345 East 47th Street, New York, NY 10017, U.S.A.

5.15 4th International Conference on Ceramic Powder Processing Science (a Memorial Conference for the 100th Anniversary of the Ceramic Society of Japan), 12-15 March 1991, Nagoya, Japan. Contact: Shin-ichi Hirano, Nagoya

ment of Chemistry, Imperial College, South Kensington, London SW7 2AY, U.K.

5.23 **201st ACS National Meeting**, 14-19 April 1991, Atlanta, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. Symposium items include:

- Advances in membrane minetic chemistry and its applications.
- Copolymerization.
- Electronically conducting polymeric materials (Division of Polymer Chemistry). Contact: A.D. English, Central Research and Development Department, E.I. du Pont de Nemours & Co., Experimental Station, Wilmington, DE 19880-0356, U.S.A., or C.W. Frank, Department of Chemical Engineering, Stanford University, Stanford, CA 94305-5025, U.S.A.
- History of synthetic fibres.
- Innovative rheological techniques.
- New polymerization reactions and reaction mechanisms.
- Photochemical and electrochemical surface science: Reactions at solid electrodes (Division of Colloid and Surface Chemistry). Contact: J.A. Chambers, Department of Chemistry, University of Tennessee, Knoxville, TN 37996, U.S.A.
- Preparation, properties and application of polymeric latexes. Contact: M.S. El-Aasser, Emulsion Polymers Institute, Lehigh University, Bethlehem, PA 18015, U.S.A.
- Protein interactions (Division of Colloid and Surface Chemistry). Contact: C.J. van Oss, Department of Microbiology
- Soluble polymer complexes.
- Solution thermodynamics of polymers: Fundamentals and applications.
- Stereochemistry and mechanism of homogeneous polymerization reactions.
- Tribology: Friction, wear and lubrication: Lubrication - molecules and mechanisms. Contact: B. Street, IBM

University, Department of Applied Chemistry, School of Engineering, Furo-cho, Chikusa-ku, Nagoya, 464-01 Japan.

5.16 **Aachener Membran-Kolloquium**, 19-21 March 1991, Aachen, Germany. Contact: GVC.VDI-Gesellschaft Verfahrenstechnik und Chemieingenieurwesen, Postfach 1139, D-4000 Düsseldorf 1, Germany.

5.17 **1st British Colloid and Surface Science Student Meeting**, 24-27 March 1991, Nottingham, U.K. Organised by the Surface Chemistry Group of the Society of Chemical Industry and the Colloid and Interface Science Group of the Royal Society of Chemistry. Contact: Society of Chemical Industry, 14/15 Belgrave Square, London SW1X 8PS, U.K.

5.18 **1st International Conference on Deformation and Fracture of Composites**, 25-27 March 1991, Manchester, U.K. Contact: Conference Department, The Plastics and Rubber Institute, 11 Hobart Place, London SW1W 0HL, U.K.

5.19 **3rd Symposium on Systems with Fast Ionic Transport**, April 1991, Holzhau near Dresden, Germany. Contact: H. Ullmann, Zentralinstitut für Kernforschung, P.O. Box 19, 8051 Dresden, Germany.

5.20 **Deformation, Yield and Fracture of Polymers VIII**, April 1991, Cambridge, U.K. Contact: The Plastics and Rubber Institute, 11 Hobart Place, London, SW1W 0HL, U.K.

5.21 **Macrolux '91**, 2-6 April 1990, Luxembourg. Contact: M.D. Purbrick, Kodak Ltd., Headstone Drive, Harrow, Middlesex HA1 4TY, U.K.

5.22 **150th Anniversary congress 1991 of the Faraday Division of the Royal Society of Chemistry**, 9-12 April 1991, London, U.K.

- Symposium on Electrochemical Sensors. Contact: W.J. Albery, The Master's Lodgings, University College, Oxford, U.K.
- Symposium on New Electronic Materials: Synthesis, Structure and Spectroscopy. Contact: R.G. Egdeil, Depart-

Physikalische Chemie und Elektrochemie, Lehrstuhl III, Universität (TH) Karlsruhe, Kaiserstrasse 12, D-7500 Karlsruhe, Germany.

5.32 **4th World Congress of Chemical Engineering**, 16-21 June 1991, Karlsruhe, Germany. Contact: DECHEMA, P.O. Box 97 01 46, D-6000 Frankfurt am Main 97, Germany.

5.33 **65th Colloid and Surface Science Symposium** (Division of Colloid and Surface Chemistry ACS), 17-19 June 1991, Norman, OK, U.S.A. Contact: J.F. Scamehorn, Chemical Engineering Department, University of Oklahoma, Norman, OK 73019, U.S.A. The sessions include:

- Surfactant-Based Separations
- Adsorption at Solid Interfaces
- Biomedical Applications of Surface and Colloid Science
- Colloid and Interfacial Aspects of Groundwater and Soil Cleanup
- Enhanced Oil Recovery
- General Papers
- Surface Science and Catalysis
- Interfacial Reactions
- Mixed Surfactants
- Novel Surfactants
- Polymer/Surfactant Interactions.

5.34 **3rd International Symposium on Polymer Electrolytes**, 17-21 June 1991, Annecy, France. Contact: M. Armand, ENSEEG, B.P. 75, 38402 Saint-Martin-d'Heres, France.

5.35 **Emulsions - A Fundamental and Practical Approach**, NATO Advanced Research Workshop, 24-25 June 1991, Bergen, Norway. Contact: J. Sjöblom, Department of Chemistry, University of Bergen, Allég 41, N-5007 Bergen, Norway.

Followed by

5.36 **11th Scandinavian Symposium on Surface Chemistry** with international participation, 26-28 June

Research Division, Almaden Research Center, 650 Harry Road, San Jose, CA 95120-6099, U.S.A.

5.24 **Advances in Particulate Technology**, 15-17 April 1991, Guilford, Surrey, U.K. Contact: J. Libaert, Department of Chemical and Process Engineering, University of Surrey, Guilford, Surrey GU2 5XH, U.K.

5.25 **Innovations in Advanced Flotation Technology**, May 1991, Chalkidiki, Greece (NATO Advanced Study Institute). Contact: K.A. Matis, Department of Chemistry, Aristotle University, Box 114, GR-54006 Thessaloniki, Greece.

5.26 **Zeolite Microporous Solids: Synthetics, Structure and Reactivity**, May 1991, Sintra-Estoril, Portugal (NATO Advanced Study Institute). Contact: E.G. Derouane, Facultés Universitaires, Notre Dame de la Paix, Rue de Bruxelles 61, B-5000 Namur, Belgium.

5.27 **179th Electrochemical Society Meeting**, 5-10 May 1991, Washington D.C., U.S.A. Contact: Electrochemical Society Inc., 10 South Main Street, Pennington N.J. 08534-2896, U.S.A.

5.28 **Journées d'Electrochimie 91**, 27-30 Mai 1991, Brest, France. Contact: M. l'Her, URA CNRS 322, Faculté des Sciences, 6 avenue V. Le Gorgeu, 29287 Brest cedex, France.

5.29 **Dynamics of Membrane Assembly**, June 1991, Cargèse, France (NATO Advanced Study Institute). Contact: J.A.F. Op den Kamp, Center for Biomembranes and Lipid Enzymology, University of Utrecht, Padualaan, NL-3584 CH Utrecht, The Netherlands.

5.30 **AKZO Ketjen Catalysts Symposium**, 2-5 June 1991, The Hague, The Netherlands. Contact: M. Wildemans, Gevers Deymootplein 30, 2586 CK The Hague, The Netherlands.

5.31 **5th International Fischer Symposium on Adsorbates, Intermediates and Inhibitors**, 16-20 June 1991, Bombannes, France. Contact: W.J. Lorenz, Institut für

Section B: Disperse Systems

- Nucleation Phenomena
- Aerosols
- Preparation and Characterization of Colloidal Particles
- Emulsions and Suspensions

Section C: Biosystems

- Biosurfactants
- Food Colloids
- Biological Macromolecules in Microcompartmentalized Media
- Interactions between Living Systems and Biomaterials.

5.42 **14th Discussion Conference on Rheology of Polymer Melts**, 15-18 July 1991, Prague, Czechoslovakia. Contact: P.M.M. Secretariat, c/o Institute of Macromolecular Chemistry, 162 06 Prague, Czechoslovakia.

5.43 **Polymer Surfaces and Interfaces II**, 21-26 July 1991, Durham, U.K. Contact: M.J. Richardson, National Physical Laboratory, Queens Road, Teddington, Middlesex, TW11 0LW, U.K.

5.44 **Equilibrium Structure and Properties of Surfaces and Interfaces**, August 1991, Maleme, Crete, Greece (NATO Advanced Study Institute). Contact: A. Gonis, Chemistry and Materials Science, Lawrence Livermore National Laboratory, L-268 Livermore, CA 94550, U.S.A.

5.45 **33rd IUPAC Congress**, 17-22 August 1991, Budapest, Hungary. Organised by the Hungarian Academy of Sciences. Contact: E. Pungor, Hungarian Academy of Sciences, Gellért tér 4, H-1111 Budapest, Hungary.

5.46 **202nd ACS National Meeting and 4th Chemical Congress of North America**, 25-30 August 1991, New York City, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Colloidal Particles: Colloidal Particles in External Fields - Electric, Magnetic and Hydrodynamic (Division of Colloid

1991, Bergen, Norway. Sponsored by **IACIS**; members will be allowed a discount on the conference fee. Contact: J. Sjöblom, Department of Chemistry, University of Bergen, Allégt 41, N-5007 Bergen, Norway.

5.37 **Progress in Membrane Science and Technology**, 25-28 June 1991, Enschede, The Netherlands. Contact: A. van den Boomgaard, Technical University Twente, Faculty CT, Room 1348, P.O. Box 217, 7500 AE Enschede, The Netherlands.

5.38 **Physics of Nanostructures**, July 1991, St. Andrews, U.K. (NATO Advanced Study Institute). Contact: A.R. Long, Department of Physics and Astronomy, University of Glasgow, Glasgow G12 8QQ, U.K.

5.39 **2nd International Conference on Inorganic Membranes**, 1-4 July 1991, Montpellier, France. Contact: L. Cot, ENSCM, 8 rue de l'Ecole Normale, 34053 Montpellier Cedex 1, France.

5.40 **Understanding Self-Assembly and Organization in Liquid Crystals**, 3-5 July 1991, Leeds, U.K., limited admission. Organised by the British Liquid Crystal Society and the Statistical Mechanics and Thermodynamics Group of the Royal Society of Chemistry. Contact: N. Boden or J.R. Henderson, Department of Chemistry, University of Leeds, Leeds LS2 9JT, U.K.

5.41 **7th International IACIS Conference on Colloid and Interface Science, 7-12 July 1991, Compiègne, France**. IACIS members will be allowed a discount on the conference fee. Contact: M. Clause, Université de Technologie de Compiègne, B.P. 649, F-60206 Compiègne cedex, France. The symposia include:

Section A: Molecules at Interfaces

- Surface and Supramolecular Self-Assemblies
- Characterization and Modification of Surfaces
- Wetting and Adhesion
- Chemical Processes on Solid Surfaces

and Surface Chemistry). Contact: R. Farinato, American Cyanamid Company, 1937 W. Main Street, Stamford, CT 06904, U.S.A.

Electrochemistry in Microheterogeneous Fluids (Division of Colloid and Surface Chemistry). Contact: R. Mackay, Detector Technical Division, Chemical Research and Development Center, Aberdeen Proving Ground, MD 21010-5423, U.S.A., or J. Texter, Photographic Research Laboratories, Eastman Kodak Company, Rochester, NY 14650-2109, U.S.A.

Diffusion processes in polymers.

Instrumental methods in polymer characterization (optical methods).

Photochemical and electrochemical surface science (Division of Colloid and Surface Chemistry):

- Polymers for photonic and optical applications.

- Tribology: Friction, wear and lubrication: Molecular basis of friction (Division of Colloid and Surface Chemistry). Contact: G. McClelland, IBM Research Division, Almaden Research Center, 650 Harry Road, San Jose, CA 95120-6099, U.S.A.

New directions in inorganic electrochemistry. Contact: M. Weaver, Department of Chemistry, Purdue University, West Lafayette, IN 47907, U.S.A.

Tunneling microscopy and related studies.

5.47 **5th International Conference on Langmuir-Blodgett Films**, 25-30 August 1991, Paris, France. Contact: A. Ruauadel, DLPC/SCM, B.P. 121, C.E.N. Saclay, 91191 Gif-sur-Yvette Cedex, France.

5.48 **42nd Meeting of the International Society for Electrochemistry**, 25-30 August 1991, Montreux, Switzerland. Contact: O. Dossenbach, Technisches-Chemisches Labor, ETH Zentrum, CH-8092 Zürich, Switzerland.

5.49 **4th Asian Chemical Congress**, 26-30 August 1991, Beijing, P.R. China. Topics include Polymer Science and

Catalysis. Contact: D. Zhang, Chinese Chemical Society, P.O. Box 2709, Beijing 100080, P.R. China.

5.50 **The Modification of Interfaces by the Adsorption of Surfactants and Polymers**, (provisionally) three days in September 1991, U.K. Organised by the Colloid and Interface Science Group of the Faraday Division of the Royal Society of Chemistry.

5.51 **6th IFF Research Conference on Exploration-Production: Physical Chemistry of Colloids and Interfaces in Oil Production**, 4-6 September 1991, Saint-Raphaël, France. Contact: H. Toulhoat and J. Lecourtier, Institut Français du Pétrole, B.P. 311, 92506 Rueil-Malmaison Cédex, France.

Tentative list of topics:

- Interfacial Phenomena
- Complex Fluids: Polymers and gels, surfactants, emulsions and foams, clay dispersions
- Colloids in Porous Media.

5.52 **2nd Conference of the European Ceramic Society**, in conjunction with the 5th International Trade Fair for the Ceramic Industry **Ceramtec '91**, 11-14 September 1991, Munich, Germany. Contact: Deutsche Keramische Gesellschaft e.V., Frankfurter Strasse 196, D-5000 Köln 90, Germany.

5.53 **The Chemistry and Physics of Small Particles**, 18-20 September 1991, London, U.K. (General Discussion 92 of the Faraday Division of the Royal Society of Chemistry). Contact: J.M. Thomas, Davy Faraday Research Laboratory, The Royal Institution, 21 Albemarle Street, London W1X 4BS, U.K.

5.54 **6th International Symposium on Colloid and Molecular Electrooptics and International School on Electro-optic and Related Phenomena in Colloids - Charge Distribution and Dynamics, Interactions, Stability**, 19-26 September 1991, Varna, Bulgaria. Contact: I.B. Petkanchin, Institute of Physical Chemistry, Bulgarian Academy of Sciences, 1040 Sofia, Bulgaria.

5.55 **35th Kolloidtagung**, 23-26 September 1991, Mainz, Germany. Contact: H. Möhwald, Physikalische Chemie, Universität Mainz, Jakob-Welder-Weg, D-6500 Mainz 1, Germany.

Coinciding with

5.56 **5th European Colloid and Interface Society (ECIS) Conference**, 23-26 September 1991, Mainz, Germany. Contact: H. Möhwald, Physikalische Chemie, Universität Mainz, Jakob-Welder-Weg, D-6500 Mainz 1, Germany.

5.57 **Properties and Applications of Molecular Sieves**, 30 September - 2 October 1991, Bath, U.K. Sponsored by the British Zeolite Association, the Industrial Division of the Royal Society of Chemistry, the Colloid and Surface Chemistry Group of the Society for Chemical Industry and the Carbon Group of the Faraday Division of the Royal Society of Chemistry. Contact: J.D.F. Ramsy, Chemistry Division, Harwell Laboratory, Oxfordshire OX11 0RA, U.K.

5.58 **Polymers in Marine Environment IV**, October 1991, U.K. Contact: M.J. Richardson, National Physical Laboratory, Queens Road, Teddington, Middlesex, TW11 0LW, U.K.

5.59 **180th Electrochemical Society Meeting**, 13-18 October 1991, Arizona, U.S.A. Contact: Electrochemical Society Inc., 10 South Main Street, Pennington NJ 08534-2896, U.S.A.

5.60 **The Preparation of Dispersions**, 14-16 October 1991, Eindhoven, The Netherlands. Contact: H.N. Stein, Eindhoven University of Technology, Department of Colloid Chemistry and Thermodynamics, P.O. Box 513, NL-5600 MB Eindhoven, The Netherlands.

5.61 **4th European Conference on Applications of Surface and Interface Analysis**, 14-18 October 1991, Budapest, Hungary. Contact: the Organizing Committee MTA ATOMKI, Pf. 51, H-4001 Debrecen, Hungary.

5.62 **4th International Conference on Separation Technology**, 20-25 October 1991, Hawaii, U.S.A. Contact: Engineering Foundation, 345 East 47th Street, New York, N.Y. 10017, U.S.A.

5.63 **International Symposium on Polymeric Microspheres**, 24-27 October 1991, Fukui, Japan. Contact: M. Nomura, Department of Materials Science and Engineering, Fukui University, Fukui, Japan.

5.64 **Emulsions**, provisionally December 1991, London, U.K. Organised by the Colloid and Interface Science Group of the Faraday Division of the Royal Society of Chemistry together with the Society of Chemical Industry.

1992

5.65 **19th Australian Polymer Symposium**, February 1992, Perth, Australia. Contact: G. Gerguson, Chemistry Centre, WA, 125 Hay Street, Perth, W. Australia 6000.

5.66 **Food Colloids and Polymers: Structure and Dynamics**, 8-10 April 1992, Lunteren, The Netherlands. Contact: P. Walstra, Laboratory of Dairying and Food Physics, Wageningen Agricultural University, Biotechnion, Bomenweg 2, 6703 HD Wageningen, The Netherlands.

5.67 **Nucleation**, provisionally Spring 1992, U.K., organised by the Colloid and Interface Science Group of the Faraday Division of the Royal Society of Chemistry.

5.68 **203rd ACS National Meeting**, 5-10 April 1992, San Francisco, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. Symposia include:

- Molecular dynamics.
- Photochemical and electrochemical surface science: Electrical double layer (Division of Colloid and Surface Chemistry). Contact: J. Lipkowski, Department of Chemistry, University of Guelph, Guelph, Ontario N1G 2W1, Canada.

- Polymer photophysics: Fundamentals and applications.
- Synthesis, purification and processing of polymers in microgravity.
- Tribology: Friction, wear and lubrication: New tools for tribology: Surface force balance to atomic force microscopy (Division of Colloid and Surface Chemistry). Contact: M.R. Philpott, IBM Research Division, Almaden Research Center, 650 Harry Road, San Jose, CA 95120-6099, U.S.A.
- 5.69 **4th International Conference on Fundamentals of Adsorption**, 17-22 May 1992, Kyoto, Japan. Contact: M. Suzuki, Institute of Industrial Science, University of Tokyo, 7-22-1 Roppongi, Minato-ku, Tokyo 106, Japan.
- 5.70 **181st Electrochemical Society Meeting**, 17-22 May 1992, Arizona, U.S.A. Contact: Electrochemical Society Inc., 10 South Main Street, Pennington N.J. 08534-2896, U.S.A.
- 5.71 **3rd CESIO International Surfactants Congress and Exhibition**, 1-5 June 1992, London, U.K. Contact: I. Shepherd, Gardiner-Caldwell Communications Ltd., The Old Ribbon Mill, Pitt Street, Macclesfield, Cheshire, SK11 7PT, U.K.
- 5.72 **66th Colloid and Surface Science Symposium** (Division of Colloid and Surface Chemistry ACS), 15-18 June 1992, Morgantown, WV, U.S.A. Contact: D.H. Smith, U.S. Department of Energy, Morgantown Energy Technology Center, Morgantown, WV 26507-0880, U.S.A.
- 5.73 **12th European Chemistry at Interfaces Conference**, 28 June - 2 July 1992, Lund, Sweden. Contact: B. Lindman, Physical Chemistry 1, Chemical Center, P.O. Box 124, S-221 00 Lund, Sweden, or G. Olofsson, Thermochemistry Chemical Center, University of Lund, P.O. Box 124, S-221 00 Lund, Sweden.
- 5.74 **34th International Symposium on Macromolecules**, 13-18 July 1992, Prague, Czechoslovakia. Contact: P. Cefelin, Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, Heyrovského n. 2, 162 06 Prague 6-Petriny, Czechoslovakia.

- 5.75 **6th International Conference on Magnetic Fluids**, 20-24 July 1992, Paris, France. Contact: V. Cabuil, Université Pierre et Marie Curie, Boite 740, 4 Place Jussieu, 75252 Paris Cedex 05, France.
- 5.76 **204th ACS National Meeting**, 23-28 August 1992, Washington DC, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include::
 - Electroactive polymers.
 - Photochemical and electrochemical surface science: electroanalysis and surfaces (Division of Colloid and Surface Chemistry). Contact: J. Osteryoung, Department of Chemistry, State University of New York at Buffalo, 3435 Main Street, 113 Acheson Hall, Buffalo, NY 14214, U.S.A.
 - Plasma polymerization.
 - Surfactants and associated colloids: solubilization (Division of Colloid and Surface Chemistry). Contact: A. Ward, Department of Chemistry, Clarkson University, Potsdam, NY 13676, U.S.A.
- 5.77 **43rd Meeting of the International Society for Electrochemistry**, August or September 1992, Argentina. Contact: A.J. Arvia, INIFTA, Casilla de Correo 16, Sucursal 4, 1900 La Plata, Argentina.
- 5.78 **Colloids in the Environment**, provisionally September 1992, U.K. Organised by the Colloid and Interface Science Group of the Faraday Division of the Royal Society of Chemistry.
- 5.79 **6th European Colloid and Interface Society (ECIS) Conference**, end September 1992, Graz, Austria. Contact: H. Hoffmann, Universität Bayreuth, Lehrstuhl für Physikalische Chemie, Postfach 3008, 8580 Bayreuth, Germany.

Preview 1993 and later

5.80 **205th ACS National Meeting**, 18-23 April 1993, Minneapolis, MN, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Photochemical and Electrochemical Surface Science: Immobilization of Biomolecules at Surfaces (Division of Colloid and Surface Chemistry). Contact: W. Heineman (513) 556-9208.
- Surfactants and Associated Colloids: Imaging in Interfacial Chemistry (Division of Colloid and Surface Chemistry). Contact: D. Fennell Evans, Department of Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN 55455, U.S.A.

5.81 **206th ACS National Meeting**, 22-27 August 1993, Chicago, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Photochemical and Electrochemical Surface Science: Vibrational Spectroscopy at Surfaces (Division of Colloid and Surface Chemistry). Contact: A. Campion (512) 471-3012.

5.82 **44th Meeting of the International Society for Electrochemistry**, 20-24 September 1993, Berlin, Germany. Contact: W. Pleth, Free University of Berlin, Institute of Physical and Theoretical Chemistry, Takustrasse 3, D-1000 Berlin 33, Germany.

5.83 **8th International IACIS Conference on Colloid and Interface Science, provisionally 12-19 February 1994, Adelaide, Australia**. IACIS members will be allowed a discount on the conference fee. Possible topics:

- Mineral science
- Self-assembly
- Dispersion stability

- Membrane technology
- Swelling amphiphiles.

Contact: J. Ralston, Department of Applied Chemistry, University of South Australia, Adelaide, S.A. 5095, Australia.

5.84 **207th ACS National Meeting**, with 5th Chemical Congress of North America, 10-15 April 1994, Mexico City, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Photochemical and Electrochemical Surface Science: Spectroscopy of Electrode Surfaces (Division of Colloid and Surface Chemistry). Contact: M.P. Soriaga (409) 723-4643.
- Surfactants and Associated Colloids: Microemulsions and Micellar Systems (Division of Colloid and Surface Chemistry). Contact: J. Puig, Universidad de Guadalajara, Boulevard Tlaquepaque 1451, Guadalajara, Jalisco 44430, Mexico.

5.85 **208th ACS National Meeting**, 21-26 August 1994, Washington D.C., U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Photochemical and Electrochemical Surface Science: Surface Electrochemistry (Division of Colloid and Surface Chemistry). Contact: J. Stickney (404) 542-1967.

5.86 **209th ACS National Meeting**, 2-7 April 1995, Anaheim, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Photochemical and Electrochemical Surface Science: Monomers and Polymers at Electrode Surfaces (Division of Colloid and Surface Chemistry). Contact: H. Zimmer (513) 556-9273.

5.87 **210th ACS National Meeting**, 27 August - 1 September 1995, Chicago, U.S.A. Contact: Th.A. Horbett, Chemical Engineering Department, University of Washington, Seattle, WA 98195, U.S.A. The symposia include:

- Photochemical and Electrochemical Surface Science: Micro-structure of Electrode Surfaces (Division of Colloid and Surface Chemistry). Contact: D.G. Frank (513) 559-1099.

5.88 ACS National Meetings

211th March 24-29, 1996, Salt Lake City, U.S.A.
 212th August 25-30, 1996, Boston, U.S.A.
 214th September 7-12, 1997, Las Vegas, U.S.A.

6. REGIONAL AND PERSONAL NEWS

6.1 Personal News

IACIS regrets to report the death of **Professor dr. Masao Nakamura**, Japan, at the age of 58, who has been a member of our Association for more than nine years. He has enjoyed being in our Association and appreciated the scholarly exchange with other members.

Professor Egon Matijevic of Clarkson University, Potsdam NY, U.S.A., former President of IACIS, has received an honorary doctorate of the Marie Curie-Sklodowskiej University in Lublin, Poland.

Dr. Kashmirl L. Mittal, senior chemist at IBM U.S. Technical Education in Thornwood NY, U.S.A., is the 1990 recipient of the Charles B. Dudley Award.

The following contribution was sent to us by Dr. B. Vincent; it is partly based on an obituary by Dr. J.F. Padday, J. Colloid Interface Sci. 53 (1975) 1.

Sir Eric Rideal: 100th Anniversary

Eric Keightley Rideal, was born on April 11, 1890 at Dulwich in South London. He was the eldest son of Dr. Samuel Rideal, himself a chemist. He studied at Oundle School and Trinity Hall, Cambridge, where he was later to return as a Fellow. At Cambridge he must surely have been influenced by such great men as Sir William Hardy, Lord Rayleigh and Sir J.J. Thompson. After graduating from Cambridge with first

class honours in chemistry, Rideal moved to Bonn, where he obtained his Ph.D. degree, his thesis being entitled "Das elektrochemische Verhalten des Urans und seine Verbindungen".

In 1913, Rideal returned to the U.K. to work with his father. With the outbreak of the First World War, he joined up, serving first with the Royal Army Medical Services at Imperial College, devising a respirator to handle poison gases. After being wounded in the Battle of the Somme Captain Rideal returned to work at the Munitions Inventions Board, where his lifelong interest in catalysis was initiated.

After the First War, Rideal temporarily took up a chair at the University of Illinois, where he was impressed by Langmuir's work on gas adsorption. He then returned to the U.K., to a lectureship in Physical Chemistry, at Cambridge, where his wide-ranging research interests in physical chemistry and surface chemistry in particular, blossomed. In 1930 he was appointed to a chair in Cambridge and for the next 15 years, under his guidance, the school of colloid science there grew enormously in prestige and influence, attracting many famous scientists from around the World. During this period he became a Fellow of the Royal Society, as well as President of the Faraday Society and of the Society of Chemical Industry. In 1958 he was the prime mover in setting up the "Surface Activity" group (later the "Surface and Colloid Chemistry" group) of the Society of Chemical Industry.

In 1946, Rideal left Cambridge for the Royal Institution in London where he accepted the Fullerton Professorship. He was never really at home there, however, and subsequently moved up the road to Kings College; shortly afterwards he received his knighthood. He stayed at Kings until his formal "retirement" in 1955. However, he continued to practice surface chemistry, now as an Emeritus Professor back in Imperial College, until his death, aged 84, on September 25 1974.

During the latter period of his life Sir Eric recognised the need for world-wide co-operation in surface and colloid science, and it was largely due to his efforts that IUPAC set up

its Commission on Colloid and Interface Science, including Catalysts. Indeed, he served as the first chairman of this Commission from 1961 to 1967, later continuing to serve as an associate member. The International Association of Colloid and Interface Scientists (IACIS) itself largely grew out of this IUPAC Commission, and Sir Eric would undoubtedly have been pleased to know that last year IACIS was formerly registered as an affiliated group within IUPAC.

Sir Eric Rideal can therefore be truly regarded as a "father" of surface chemistry, not only to those of us in the U.K. practising his subject, but indeed to the whole International Community of Colloid and Interfacial Scientists.

6.2 International and Regional News

Brazil

We are organizing a IACIS group in Brazil. As part of this effort a special session on Physical Chemistry of Interfaces was organized as part of the 13rd Annual Meeting of the Brazilian Society of Chemistry, last May. More than twenty contributions were presented in the area of Colloid and Interface Science. We expect some further developments in the forthcoming 14th Annual Meeting, to be held in Caxambu, Mina Gerais, Brazil on May 15-18 1991. Further details from Dr. G. Gonzalez, Petrobras Research Centre, Ilha do Fundao, Cidade Universitaria quadra 7, CEP 21910, Rio de Janeiro, Brazil.

Europe

Prof.dr. Mats Almgren is now President of the **European Colloid and Interface Society (ECIS)**. Prof.dr. P. Lagner (Graz, Austria) is Vice-president, and Prof.dr. H. Hoffmann (Lehrstuhl für Physikalische Chemie I, Universität Bayreuth, Bayreuth, Germany) is Secretary and Treasurer.

Japan

The **Division of Colloid and Surface Chemistry of the Chemical Society of Japan** has now 913 members including 45 corporate members. Chairman is Prof. H. Kuroda (Faculty of Science, University of Tokyo, Japan). Vice-Chairmen are Prof. M. Seno and Prof. T. Seimiya.

UK

Prof. R.H. Ottewill is President of the **Faraday Division of the Royal Society of Chemistry**. Honorary Secretary is Prof. J.P. Simons (Department of Chemistry, University of Nottingham, University Park, Nottingham NG7 2RD, U.K.)

For 1990 Dr. W.D. Cooper is chairman of the **Colloid and Interface Science Group of the Faraday Division of the Royal Society of Chemistry**. Honorary Secretary is Dr. R. Buscall (Corporate Colloid Science Group, ICI plc, The Heath, Runcorn, Cheshire, U.K.)

USA

As from January 1990 B.J. Kinzlg is chairman of the **Colloid and Surface Chemistry Division of the American Chemical Society**; Secretary is M.E. Labib (David Sarnoff Research Center, CN 5300, Princeton, NJ 08543-5300, U.S.A.)

The **American Filtration Society** established an Education Committee under Prof. S.H. Chiang of the University of Pittsburgh. At a meeting held August 10-11, 1990, the Committee decided to recommend that an optimal sequence of courses in fluid/particle processing and separation be introduced in established disciplines such as chemical, environmental, materials science, and mineral engineering. A four-course (12 semester credit hours) sequence which the Committee recommended consisted of:

- Interfacial Phenomena: Colloids, Surface chemistry, Dispersions, Adsorption, Flocculation, Light scattering, Particle sizing, Image analysis

- Fluid/Particle Mechanics: Rheology, Two-phase flow, Aerosols-hydrosols, Liquid-gas systems, Suspensions, Conveying, Mixing, Fluidization, Storage
- Porous Media: Microscopic description, Macroscopic equation, Single phase transport, Multi-phase transport, Incompressible media, Compactible media, Heat and mass transport, Soils
- Fluid/Particle Separation: Reverse osmosis, Membranes, Clarifiers - thickeners, Electrodialysis, Liquid-solid cyclones, Gas-solid cyclones, Deep bed filtration, Cake filtration, Centrifugation, Expression.

The Committee recommended that financing be sought to have a joint industry-government-university workshop devoted to analysis of the content of each course. Prof. F.M. Tiller, Chemical Engineering, University of Houston, Houston, TX 77204-4792, Fax 713-747-6323, was given the assignment of collecting problems and solutions which would be published by the American Filtration Society. He would appreciate receiving material from members of IACIS.

The Colloid Science of Swelling Amphiphiles - A Research Area in Need of New Ideas

Historically, a large fraction of the experimental and theoretical colloid and interface science of aqueous irreversible colloids has dealt with systems containing non-swelling dispersed phases (AgI, As₂S₃, CdS, clays, latexes, and the like). Colloidal systems containing dispersed phases which *do* swell with water are of considerable practical importance and scientific interest. Examples include monoglycerides and other food and cosmetic emulsifiers, cell membrane polar lipids, fabric softeners, and the like. While these compounds are not miscible with water, the reverse is *not* true; they often swell and react with water to form dispersed hydrated liquid, liquid crystal, or crystal phases.

When swelling occurs, the volume fraction of the dispersed phase, along with its composition, structure, and properties, are altered. All these parameters typically vary with temperature; these variations occur in both a continuous and a discontinuous fashion. As a result, a substantially higher level of complexity exists in the colloid science of

swelling amphiphiles than is true of colloids containing nonswelling dispersed phases.

A prerequisite to understanding the physical science of these systems is knowledge of their equilibrium phase behavior. When equilibration is rapid, defining the equilibrium phase diagram suffices for many purposes. When equilibration is slow, or is mechanistically complex, then knowledge of not only the equilibrium states, but of the kinetics and mechanisms of phase equilibration, is important.

A large body of phase information on swelling amphiphiles has been collected, mostly during the past 70 years, using principally isoplethal phase study methods (temperature variation at constant composition). However, recent investigations utilizing the new swelling methods have revealed serious flaws in these earlier data. In one instance the so-called "gel" and "coagel" states have been shown to consist of colloidally structured dispersions of stoichiometric crystal hydrates. Surprisingly, a binary phase diagram of a polar lipid-water system which adheres rigorously to the Phase Rule does not exist.

Our present knowledge of the phase equilibria, and necessarily of the colloid and interface science, of swelling amphiphiles is thus clearly unsatisfactory. Problems with the phase information are due in large part to the fact that the phase study methods available to earlier investigators are unequal to the task.

Two actions are proposed to address this issue:

1. A list of those investigators who are actively involved in the experimental phase science of swelling amphiphiles will be compiled, and this list shared among these people to foster communication. This will be done on a global basis. Anyone who is interested in being included on this list, or who knows of others who should be included, is invited to so advise the author. (Those who are not members of IACIS should perhaps be advised of the benefits of membership.)
2. A symposium will be proposed, as part of the February, 1994, IACIS meeting at Adelaide, Australia, to address this issue. It is suggested that this Symposium should include both a critical review of the methodologies of

phase science for these compounds, and an evaluation of the status of current data.

Those interested are invited to contact Dr. Robert G. Laughlin, Miami Valley Laboratories, The Procter and Gamble Company, P.O. Box 398707, Cincinnati, OH 45239-8707, U.S.A. Phone: 513/245-2248; telex: 6503262506; FAX: 513/245-1233.

7. NEW JOURNALS AND BOOKS

The main purpose of the following list is to inform IACIS members on new titles in the field of colloid and surface science. Mention of a given title is not a guarantee of its quality. Details can only be given if this information has been made available. Suitable titles for forthcoming newsletters can be sent to the author of this Newsletter. We cannot accept any responsibility for omissions or errors, although of course the information is checked to the best of our knowledge.

7.1 New Journals

Continuum Mechanics and Thermodynamics, K. Hutter and I. Müller, Eds., Springer Umuiden, The Netherlands, Vol. 2 (1990) four issues, DM 298.00 plus carriage charges.

Journal of Materials Science: Materials in Medicine, W. Bonfield and D.F. Williams, Eds., Chapman and Hall London etc., Vol. 1 (1990) four issues, £90.00 (European Community £80.00, U.S. and Canada US\$145.000).

Journal of Materials Science: Materials in Electronics, A. Willoughby, Ed., Chapman and Hall London etc., Vol. 1 (1990) four issues, £90.00 (European Community £80.00, U.S. and Canada US\$145.000).

Protein Expression and Purification, O.W. Griffith, Ed., Academic Press San Diego, U.S.A., Vol. 1 (1990) two issues, US\$80.00 (U.S. and Canada US\$70.00), Vol. 2 (1991) six issues, US\$140.00 (U.S. and Canada US\$70.00).

Sensors and Actuators A: Physical (continues the former *Sensors and Actuators*), S. Middelhoeck, Ed., Elsevier Lausanne, Switzerland, Vols. 20-25 (1990) 18 issues, SFRs. 1260.00 (approx. US\$755.00).

Sensors and Actuators B: Chemical, S. Middelhoeck, Ed., Elsevier Lausanne, Switzerland, Vols. B1 & B2 (1990) six issues, SFRs. 490.00 (approx. US\$294.00).

7.2 Books 1987

Austin, R., E. Bukhs, B. Chance, D. De Vault, D. Dutton, P.L. Fraunfelder and V.I. Codanski, Eds., **Protein Structure: Molecular and Electronic Reactivity** (Proceedings Conference April 1985), Springer New York etc., DM 98.00.

7.3 Books 1988

Benga, Gh., and J.M. Tager, Eds., **Biomembranes: Basic and Medical Research**, Springer Berlin etc., DM 128.00.

Bol'shakov, G.F. and V.I. Erofeev, Eds., **Physicochemical Properties of Disperse Systems and their Use** (Collection of Scientific Works, in Russian), Akad. Nauk. Sib. Otd. Tomsk, U.S.S.R.

Deglorio, V., Ed., **Trends in Colloid and Interface Science II** (Progress in Colloid and Polymer Science 76), Steinkopff Darmstadt, Germany.

Henisch, H.K., **Crystals in Gels and Liesegang Rings**, Cambridge University Press, U.K., £35.00.

Hummel, K. and J. Schurz, Eds., **Dispersed Systems** (Progress in Colloid and Polymer Science 77). Steinkopff Darmstadt, Germany.

Ohki, Sh., D. Doyle, Th. Flanagan, S.W. Hui and E. Mayhew, Eds., **Molecular Mechanism of Membrane Fusion**, Plenum New York-London, US\$114.00.

Milazzo, G., and M. Blank, Eds., **Bioelectrochemistry II: Membrane Phenomena**, Plenum New York-London, US\$117.00.

Smith, D.H., Ed., **Surfactant-Based Mobility Control: Progress in Miscible-Flood Enhanced Oil Recovery** (ACS Symposium Series 373), American Chemical Society, Washington DC, U.S.A.

7.4 Books 1989

Alger, M.S.M., **Polymer Science Dictionary**, Elsevier Barking, U.K., £98.00.

Anpo, M., and T. Matsuura, Eds., **Photochemistry on Solid Surfaces** (Studies in Surface Science and Catalysis 47), Elsevier Amsterdam etc., US\$184.50/Dfl.360.00.

Baranova, V.I., Ed., **Calculations and Problems in Colloidal Chemistry, Textbook for Chemical Technology Majors** (in Russian), Vysshaya Shkola Moscow, U.S.S.R.

Barbero, G., E. Miraldi, C. Oldano, A. Strigazzi, P. Taverna and L. Trossi, Eds., **Optics of Liquid Crystals: Optics and Interfacial Phenomena in Liquid Crystals and Polymers** (Proceedings 2nd International Topic Meeting, Torino Italy, October 1988), Gordon and Breach New York, U.S.A.

Baumgärtner, A., and C.E. Picot, **Molecular Basis of Polymer Networks** (Springer Proceedings in Physics 42), Springer Heidelberg, Germany, DM 80.00.

Bee, R., J. Mingins and P. Richmond, Eds., **Food Colloids**, Royal Society of Chemistry U.K./CRC Press U.S.A., £57.50.

Chuang, T.J. and T.N. Rhodin, Eds., **Proceedings 3rd Topical Meeting on the Microphysics of Surfaces, Beams, and Adsorbates** (Salt Lake City U.S.A., 1989), J. Vacuum Science and Technology, Triangle Park U.S.A.

Cubiotti, G., G. Mondio and K. Wandelt, Eds., **Auger Spectroscopy and Electronic Structure** (Proceedings First International Workshop, Messina Italy, September 1988; Springer Series in Surface Sciences 18), Springer Berlin, Germany, DM 99.00.

Dennis, R.B., **Blomembranes, Molecular Structure and Function**, Springer Berlin etc., DM 98.00.

Franks, F., Ed., **Water Science Reviews 4**, Cambridge University Press, U.K., £30.00.

Fukuda, K., and M. Sugi, Eds., **Langmuir-Blodgett Films 4** (Proceedings 4th International Conference, Tsukuba Japan, April 1989), Elsevier Barking-New York, £250.00/US\$450.00.

Harding, S.E., and A.J. Rowe, Eds., **Dynamic Properties of Biomolecular Assemblies**, Royal Society of Chemistry Letchworth, U.K., £45.00.

Hoffmann, H., Ed., **Thin Films: Trends and New Applications**, (Proceedings 2nd International Symposium, Regensburg Germany, February-March 1989), Elsevier Barking-New York, two volumes, £250.00/US\$450.00.

Johnson, A., G.L. Wayne Loper and T.W. Signon, Eds., **Laser and Particle-Beam Chemical Processes on Surfaces** (Materials Research Society Symposium Proceedings 129; Boston U.S.A., November-December 1988), Materials Research Society Pittsburgh, U.S.A.

Keldysh, L.V., D.A. Kirzhnits and A.A. Maradudin, **The Dielectric Function of Condensed Systems**, Elsevier Amsterdam-New York, US\$169.25/Dfl. 330.00.

Klafter, J., and J.M. Drake, Eds., **Molecular Dynamics in Restricted Geometries**, Wiley Chichester, U.K., £58.50-US\$88.25.

Maler, J.P., Ed., **Ion and Cluster Ion Spectroscopy and Structure**, Elsevier Amsterdam-New York, US\$169.25/Dfl. 330.00.

Margolis, J.M., Ed., **Conductive Polymers and Plastics**, Chapman and Hall London etc., £35.00.

Marshall, A.G., and F.R. Verdun, **Fourier Transforms in NMR, Optical, and Mass Spectrometry**, Elsevier Amsterdam-New York, hardback US\$112.75/Dfl. 220.00, paperback US\$48.75, Dfl. 95.00.

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8. NEWSLETTER IDEAS AND INFORMATION

All members are invited to send their suggestions on the scope and other aspects of these Newsletters. Contributions to fostering international contacts are specifically solicited but information on meetings is also very welcome!

Prof.dr. Hans Lyklema, Newsletter Editor, Department of Physical and Colloid Chemistry, Wageningen Agricultural University, (Dreijenplein 6) P.O. Box 8038, NL-6700 EK Wageningen, The Netherlands, Telephone 31 (Netherlands) - 8370 (area code) - 82279 (extension); FAX 31-8370-84141; E-mail FYSKO@RCL.WAU.NL.

Hans Lyklema