

# Julian Eastoe

## 1. Personal Information

|               |   |
|---------------|---|
| Name          | Julian Grahame Eastoe   |
| Date of birth | 12.1.65   |
| Family status | married – 18 years - with four children - 17, 15, 13 and 11 years old |

## 2. Present appointment

Personal Chair in Chemistry, School of Chemistry, University of Bristol since 01.08.04.  
Director of International Affairs since 01.10.05.

## 3. Previous appointments

|                |   |
|----------------|---|
| 1.8.98–31.7.04 | Reader in Physical Chemistry, School of Chemistry, University of Bristol.   |
| 1.4.93-31.7.98 | Lectureship, School of Chemistry, University of Bristol.  |
| 1.9.92-31.3.93 | Lectureship, Department of Chemistry, University of Durham.   |
| 1.6.91-30.9.92 | Physicist (Instrument Scientist)<br>Institut Max-von-Laue Paul-Langevin, Grenoble, France.<br>This included a one-year secondment to the ISIS Neutron Facility<br>Rutherford Appleton Laboratory UK |
| 1.4.90-1.6.91  | Senior Research Associate, School of Chemical Sciences,<br>University of East Anglia.   |

## 4. Academic qualifications

|      |  |
|------|--|
| 1990 | PhD - UEA - <i>Influence of Pressure on the Structure and Stability of Microemulsions</i>      |
| 1986 | BSc II(i) Chemistry, University of East Anglia.  |
| 1983 | A' Levels - Chemistry A - Physics A - Mathematics B.<br>Solihull 6 <sup>th</sup> Form College. |

In between finishing my B.Sc.(June 1986) and starting my Ph.D. (October 1987) I worked as an Analytical Chemist for Williams' Dyestuffs, Hounslow and also travelled extensively in Asia and Europe.

## 5. Special awards

In 1999 was awarded the *Clifford Wharton Prize for Excellence in Teaching in the School of Chemistry* in recognition of my efforts in Undergraduate and post-graduate teaching. The citation for this award is given as an Appendix.

In Oct 2002 I was made visiting professor at the China Research Institute for Daily Chemical Industry (RIDCI) Taiyuan China, and in Dec, 2003 in the College of Molecular and Chemical Sciences at the University of Wuhan, China.

## 6. Teaching

The main teaching achievements, demonstrated by the award of the *Wharton Prize*, are to deliver lectures with coherence and clarity, enthusiasm and energy.

Extensive back-up material is provided to facilitate the students' understanding. For each separate course I prepare an extensive hand-out containing a justification, summary, numbered figures, reading references, workshop/tutorial questions and revision questions. This material appears on the OHP during the course, and the numbered diagrams are linked in to the lecture notes, which I write up on the chalkboards. I take the full responsibility for all the lectures, workshops, tutorials and practicals associated with these units. In addition to hand-outs, I have also produced back up texts for all of the courses; these contain detailed the explanations and workings. Material associated with my lecture courses is available as tutorial papers in the Worsley Chemistry library.

### (i) Undergraduate and taught postgraduate units in Chemistry

| year            | title                           | lectures | contact hours | students | dates     |
|-----------------|---------------------------------|----------|---------------|----------|-----------|
| 3 <sup>rd</sup> | Self-Assembly                   | 6        | 12            | 120      | 1993-     |
| 2 <sup>nd</sup> | Chemical Kinetics               | 6        | 12 + 24 lab.  | 120      | 1994-     |
| 2 <sup>nd</sup> | Chemical Equilibria             | 6        | 12            | 120      | 1998-2002 |
| 1 <sup>st</sup> | Chemistry and Time Kinetics     | 6        | 6 + 18 lab.   | 300      | 1995-     |
| 1 <sup>st</sup> | Tutorials in Physical Chemistry |          | 24            | 12       |           |

Units in years 2 and 3 are supported by workshop sessions (6 x 50 min per course). My responsibility is to provide question sheets for the students, and answers for the other academic helper.

In addition I am involved in the weekly 2<sup>nd</sup> year and 3<sup>rd</sup> year Physical Chemistry Problem Classes – a recent innovation aimed at improving problem-solving skills. This includes setting general questions for the sheets and 10 - 12 contact hours per year.

### Practicals

Chemistry is an experimental subject and I put special effort into the laboratory classes. I am responsible for one of the eight 2<sup>nd</sup> year practicals in Physical Chemistry (Chemical Kinetics). Each week I spend about one and a half hours on an introductory talk, checking on the progress of the experiments, and giving a debriefing session to the group at the end of the day. The aim is to illustrate the close links between the experiment and its background theory. I have also marked all the scripts for this practical.

### Postgraduate courses

M.Sc. Surface Chemistry and Colloids (1993-99)

| title                 | lectures | contact hours | students | dates     |
|-----------------------|----------|---------------|----------|-----------|
| Self-assembly systems | 6        | 6             | 10       | 1993-1999 |
| Thin films            | 6        | 6             | 10       | 1993-1999 |

Postgraduate School of Chemistry (2000- present)

|   |   |   |    |       |
|---|---|---|----|-------|
| Adsorption and aggregation of surfactants | 4 | 4 | 10 | 2000- |
|---|---|---|----|-------|

## (ii) Major teaching responsibilities in previous years

| year            | title              | lectures | contact hours | students | dates  |
|-----------------|--------------------|----------|---------------|----------|--------|
| 1 <sup>st</sup> | Maths 1S (1994-96) | 10       | 10            | 20       | 1994-6 |

## (iii) Innovatory units or teaching methods

### Document “Good Teaching Practice in The School of Chemistry”

In 1998- 99 I was the chair of a Working group, and authored an 11-page document, identifying good teaching practices across the undergraduate programme in the School of Chemistry. The paper was not intended to be a rulebook, but rather to offer guidelines for all of those involved in teaching, be they academic staff members, post-doctoral workers or post-graduate students.

In 2003 I have revised and updated this document, and the new version is planned for release at the end of the year.

### Web-based multiple choice questions

In support of year 1 lectures (kinetics) a set of multiple-choice questions have been posted on the local TAL web-page. These questions are similar in format to one half of the end of year examination: incorrect attempts are offered a hint, to prompt the correct answer. Hence, they are not only a revision aid, but also provide training in “exam technique”.

### Memory aids

Earlier on in my Academic career, I was troubled that many students could not identify or recall certain equations that were central to the courses I delivered. It seemed that there was a lack of familiarity with these concepts, despite their cyclical use throughout the lecture/workshop units. As a test, I made up white T-shirts, bearing one of these equations on front and back, and wore the garments whilst lecturing. This unconventional method appeared to work, by constantly reminding the students of the key equations, their recall seemed to have measurably improved (especially in workshops and during examinations). Since then I have made a (limited) set of shirts, relevant for each different course, and the T-shirts remain a part of my lecturing technique.

## (iv) Contributions to continuing education

### 1. Bristol Spring School in Colloid Science - held annually

| unit title                   | lectures | delegates      |
|------------------------------|----------|----------------|
| Surfactants                  | 1        | 25-30 normally |
| Emulsions and Microemulsions | 1        | 25-30          |

### 2. Lecturer on Industrial courses given in the School by the Bristol Colloid Centre

|               |                                  |
|---------------|----------------------------------|
| 1994          | Emulsions and Foams              |
| 1994          | Surfactants and Wetting          |
| 1997 and 1999 | Total Colloid Stability          |
| 2002          | Fluid interfaces – awareness day |
| 2004          | Members’ awareness forum         |

### 3. Lecturer on an internal training course in colloid science at Unilever Port Sunlight. June 2003.

### 4. Lecturer on course *Introduction to Surface Chemistry* organised by Kruss GmbH. June 2001 and April 2006.

5. Lecturer on *Colloid Science and Pharmaceutical Formulations* an in-house course for Vectura a local spin-off SME at the University of Bath. May 2001.
6. Lecturer on course *School of Industrial Surface Chemistry* organised by Camtel Ltd. Oct. 1999.
7. Lecturer on a short course called *Particle Sizing and Surface Characterisation* held at University of East Anglia Norwich UK June 1995.

#### (v) Post-graduate supervision

| Ph.D. students                   | funding                             |           | status                                     | first destination |
|----------------------------------|-------------------------------------|-----------|--|-------------------|
| P.G.A.Rogueda <sup>+</sup>       | Kodak                               | 1993-96   | graduated Feb 1997                         | Astra Zeneca      |
| E.R.Crooks <sup>○</sup>          | EPSRC earmarked                     | 1994-97   | graduated July 1998                        | Thorn EMI         |
| K.J.Hetherington <sup>▪</sup>    | EPSRC quota                         | 1994-97   | graduated July 1998                        | Unilever          |
| J.Dalton <sup>▪</sup>            | EPSRC earmarked                     | 1995-98   | graduated July 1999                        | Post-doc ECC      |
| B.Warne <sup>+</sup>             | EPSRC earmarked                     | 1995-98   | graduated Feb 2000                         | Nanomagnetics     |
| A.Bumajdad <sup>○</sup>          | Kuwait Govt.                        | 1996-99   | graduated Feb 2001                         | Univ. Kuwait      |
| A.Downer <sup>+</sup>            | EPSRC CASE - Kodak                  | 1996-99   | graduated Feb 2001                         | PDRA Durham       |
| A.Paul <sup>○</sup>              | EPSRC earmarked                     | 1997-2000 | graduated Feb 2002                         | PDRA Cardiff      |
| A.Rankin <sup>▪</sup>            | EPSRC quota                         | 1997-2000 | graduated July 2002                        | computing         |
| S.Nave <sup>○</sup>              | University scholarship              | 1997-2000 | graduated Feb 2002                         | Astra Zeneca      |
| M.Summers <sup>▪</sup>           | EPSRC quota                         | 1998-2001 | passed July 2002                           | nuclear industry  |
| A.Dupont <sup>+</sup>            | University scholarship              | 2000-2003 | submitted Oct 2003                         | Patent Attorney   |
| M.Sanchez Dominguez <sup>○</sup> | Mexican Govt.                       | 2000-2003 | passed June 2002<br>joint with Dr. P.Wyatt | CNRS PDRA         |
| L.Martin <sup>▪</sup>            | EPSRC CASE – Kodak                  | 2001-2004 | passed July 2005                           |                   |
| S.Hicks <sup>○</sup>             | EPSRC CASE<br>Disperse Technologies | 2001-2004 | joint with Prof. T.Cosgrove                |                   |
| S.Rogers <sup>▪</sup>            | EPSRC                               | 2002-2005 | forth year                                 |                   |
| C.Seguín <sup>○</sup>            | Huntsman/Chemistry                  | 2003-2006 | forth year                                 |                   |
| S.Gold <sup>○</sup>              | DTA                                 | 2003-2006 | third year                                 |                   |
| L.Hudson <sup>○</sup>            | EPSRC industrial CASE               | 2004-2007 | third year                                 |                   |
| M.Hollamby                       | Kodak/Everett grant                 | 2005-2008 | second year                                |                   |
| K.Much <sup>○</sup>              | EPSRC                               | 2005-2008 | first year                                 |                   |
|                                  |                                     |           | first year                                 |                   |
|                                  |                                     |           | joint wit Dr. J vanDuijneveldt             |                   |

<sup>○</sup> - first degree from another University – recruited from outside Bristol

<sup>+</sup> - recruited from the Bristol M.Sc. in Colloid Science, but with a first degree from another University

<sup>▪</sup> - previously carried out an undergraduate research project at Bristol under my direction

I am currently second assessor to three other Ph.D. students

**M.Sc. students** - supervision of summer projects and research theses for the Colloids M.Sc.

|      |   |
|------|---|
| 1993 | P.G.A.Rogueda, S.R.Chatfield                            |
| 1994 | A.R.Cox, S.Stebbing, D.Crichton<br>examiner for T.Comyn |
| 1995 | Z.Bayazit, A.Lodhi, B.Cazelles                          |
| 1996 | A.Bumajdad, A. Hale                                     |
| 1997 | M.Eskici  |

I have acted as second assessor for more than ten other M.Sc. students at the University of Bristol.

#### Undergraduate students

Like most research group leaders in the School of Chemistry I supervise an average of 3 undergraduate research projects per year. Hence, I have been responsible for research training of around 36-40 students. Six of these have stayed on in my group as PhD students.

## 7. Research

My research is in the general area of Colloid Science, specifically in surface and interfacial aspects involving novel surfactants and polymers. Key advances have been made in green chemistry, nanotechnology, surface characterisation and functionalisation, as well as fundamental aspects of surfactant science.

The group develops new functionalised surfactants for various applications. Therefore, molecular design, synthesis, NMR and Mass Spectroscopy are important aspects. A wide variety of techniques are employed to probe interfacial and self-assembly properties. Tensiometric methods are key, and my group has available a wide range of equipment (drop shape analysis, drop volume, maximum bubble pressure, spinning-drop and duNouy-Wilhelmy equipment, as well as a custom-built surface light scattering rig). Neutron scattering methods are important, and regular use is made of national and international facilities.

Collaborations have been fostered in the School of Chemistry (Dr. Paul Wyatt – Organic, Prof. Terence Cosgrove – Physical, Prof. Robert Richardson - Physics), and elsewhere in the UK (Dr. David Steytler - UEA Norwich, Prof. Colin Bain –Durham , Dr. Andrew Beeby – Durham, Prof. Graham Hutchings – Cardiff, Dr. Peter Griffiths – Cardiff, Dr. Richard Heenan – ISIS, Prof. Steve Armes - Sussex). Worldwide, links have been established with groups in Austin, Göttenbourg, Nagoya, Nice, Strasbourg and Avignon, Rome, Cork and Köln. Visitors have come to work in the group from Mexico, Kuwait, India, China, Sweden, Japan, Germany, and France.

The research has attracted interest from Industrial companies and I have current, or recent, contracts with Kodak, Unilever, Disperse Technologies, Infineum, Omnova, Eli Lilly, Syngenta and Huntsman Surface Science. In addition I have been invited to act as a consultant for Unilever, Odeco Nalco, Huntsman Surface Science, Eli Lilly, Infineum, Astra Zeneca, Aveica, Glaxo, AEE Technologies and Enterprise Ireland.

### **Research in external laboratories**

I believe that it is essential to foster links with external groups, especially overseas. This means that one must be prepared to travel, and I particularly want my Ph.D. students to appreciate this. A good example is in carrying out experiments in external laboratories, such as the Institute-Laue-Langevin in France, where there is an important need to get it right, first time. This requires good preparation, also foresight and a perception of the difficulties that may be encountered.

## **(i) Publications**

### **Authored book**

“Surfactant Science” – Wuhan University Press, December 2005.

This book is based on lectures I gave in October 2002 in Taiyuan China. The book includes Chinese translations of the English chapters. Chinese colleagues carried out the translation.

### **Official reports**

1. Report on Irish Centre for Colloid Science and Biomaterials - Academic and Scientific Aspects  
Dr. Julian Eastoe and Prof. Brian H. Robinson October 2000.

More detail about this activity is given below under section 7 *iv Indications of external recognition - External evaluations editorial boards and international committees.*

2. In July 2005 I was commissioned by CCLRC, with two other Professors (Manchester and UCL) to prepare a report on “The potential of neutron scattering to enhance research training in the UK”. This was completed in November 2005, and contributed towards a bid for a new generation neutron scattering centre in UK, to be assessed by the UK Minister for Science and Innovation Lord Sainsbury.
3. In December 2005 submitted a 6-page report to the Science Faculty of Kuwait University on the on the activities of the Chemistry Department in Kuwait.

## Academic journal papers (refereed), conference contributions (refereed) and review articles

The majority of these publications are refereed academic journal papers; conference contributions (refereed) and review articles are identified in the sub-heading. The starred author, as appears in the journal, is indicated.

For publications since 1998 a format code, defined above the section for 1998, identifies the level of my contribution.

### 1988

1. *Microemulsions in Near-Critical and Supercritical Fluids* – conference contribution

D.C.Steytler\*, J.Eastoe, B.H.Robinson, D.C.Lovell, P.Moulson and P.Richmond, Int.Symp.Supercritical Fluids, Soc.Fr.Chem, 1988, 67-69.

### 1990

2. *Influence of Pressure and Temperature on Microemulsion Stability*

J.Eastoe, B.H.Robinson\* and D.C.Steytler, J.Chem.Soc. Faraday Trans., 1990, 86, 511-17.

3. *Scattering Studies of Microemulsions in Low Density Alkanes*

J.Eastoe, B.H.Robinson\*, D.C.Steytler and W.K.Young, J.Chem.Soc.Faraday Trans., 1990, 86, 2883-89.

4. *A Study of Microemulsion Stability* – conference contribution

J.Eastoe, B.H.Robinson\* and D.C.Steytler, in "The Structure, Dynamics and Equilibrium Properties of Colloidal Systems", eds. D.M.Bloor, E.Wyn-Jones, NATO ASI Series C Vol.324, 1990, 295-28.

5. *Structure and Interactions of Microemulsions in a Plastic-Crystalline Phase*

J.Eastoe, B.H.Robinson\*, D.C.Steytler and J.C.Dore, Chem.Phys.Letts., 1990, 166, 153-58.

### 1991

6. *Rotational Dynamics of AOT Reversed Micelles in Near-Critical and Supercritical Alkanes*

J.Eastoe, B.H.Robinson\*, A.J.W.G.Visser and D.C.Steytler, J.Chem.Soc. Faraday Trans., 1991, 87, 1899-1903.

7. *Steric Interactions Between Microemulsion Droplets in a Plastic-Crystalline Phase*

J.Eastoe, B.H.Robinson, D.C.Steytler\* and J.C.Dore, in Food Polymers, Gels and Colloids, ed. E.Dickinson, RSC Special Publication No. 82, 1991, 469-76.

8. *Structural Studies of Aerosol-OT Microemulsions* – review article

J.Eastoe, B.H.Robinson\* and D.Thorn-Leeson, Adv.Col.Int.Sci, 1991, 36, 1-31.

### 1992

9. *Variation of Surfactant Counterion and Effect on the Structure and Properties of Aerosol-OT Based Water-in-Oil Microemulsions*

J.Eastoe, B.H.Robinson\*, G.Fragneto, T.F.Towey, R.K.Heenan and F.J.Leng, J.Chem.Soc. Faraday Trans., 1992, 3, 461-73.

10. *SANS From Novel AOT Microemulsions* – conference contribution

J.Eastoe\*, R.K.Heenan, B.H.Robinson, G.Fragneto and D.C.Steytler, Physica B, 1992, 180/181, 555-57.

11. *SANS From Dilute Didodecyldimethylammonium Bromide Water-in-Oil Microemulsions - Evidence for Polymer-like Aggregates*

J.Eastoe\*, Langmuir, 1992, 8(6), 1503-06.

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\* leading author

## 1993

12. *Structures of Metal bis,2-ethylhexylsulphosuccinate Aggregates in Cyclohexane*  
J.Eastoe\*, B.H.Robinson, T.F.Towey, J.Williams and R.K.Heenan, *J.Phys.Chem.*, 1993, 97, 1459-63.
13. *Effects of Solidification of the Oil Phase on the Structure of Colloidal Dispersions*  
J.Eastoe, B.H.Robinson, D.C.Steytler\*, I.P.Macdonald, K.Ibel and J.C.Dore, *Langmuir* 1993, 9, 903-11.
14. *Water-in-Oil Microemulsions Formed by Ammonium and Tetrapropylammonium Salts of Aerosol-OT*  
J.Eastoe\*, B.H.Robinson and R.K.Heenan, *Langmuir*, 1993, 9, 2820-24.

## 1994

15. *Pressure-induced Structural Changes in Water-in-Propane Microemulsions*  
J.Eastoe\*, D.C.Steytler, B.H.Robinson and R.K.Heenan, *J.Chem.Soc.Faraday Trans.*, 1994, 90, 3121-7.
16. *Water-induced Structural Changes Within the L<sub>2</sub> Phase of DDAB/Cyclohexane/Water Systems*,  
J.Eastoe\* and R.K.Heenan, *J.Chem.Soc. Faraday. Trans* 1994, 90, 487-92.
17. *Lamellar Aggregates in the L<sub>2</sub> Phase of a Non-ionic Silicone Surfactant (L77-OH)*  
D.C.Steytler\*, D.L.Sargent, B.H.Robinson, J.Eastoe and R.K.Heenan, *Langmuir*, 1994, 10, 2213-2318.
18. *Structure of Cobalt Aerosol-OT Reversed Micelles Studied by Small-angle Scattering Methods*  
J Eastoe\*, D.C.Steytler, B.H.Robinson, R.K.Heenan, A.N.North and J.C.Dore, *J.Chem.Soc.Faraday Trans.*, 1994, 90, 2497-504.
19. *Effect of Counterion Radius on Surfactant Properties in Winsor II Microemulsion Systems*  
J.Eastoe\*, S.Chatfield and R.Heenan, *Langmuir*, 1994, 10, 1650-1653.
20. *Solubilisation of C<sub>60</sub> in Aqueous Micellar Solution*  
A.Beeby, J.Eastoe\* and R.K.Heenan, *J.Chem.Soc.Chem.Comm.*, 1994, 10, 173-175.
21. *Properties of a Di-Chain Sugar Surfactant*  
J.Eastoe\*, P.Rogueda, Bill J.Harrison, A.M.Howe and A.R.Pitt., *Langmuir*, 1994, 10, 4429-43.

## 1995

22. *Formation of PbS Nanoclusters Using Reversed Micelles of Lead- and Sodium Aerosol-OT*  
J.Eastoe\* and A.Cox, *Coll. Surf*, 1995, 101, 63-76.
23. *Structure and Photophysics in C<sub>60</sub>-Micellar Solutions*  
J.Eastoe\*, E.Crooks, A.Beeby and R.K.Heenan, *Chem.Phys. Lett.*, 1995, 245, 571-77.
24. *Small-angle Neutron Scattering and Neutron Reflection – review article*  
J.Eastoe\*, Chapter 12 in *New Physico-Chemical Techniques for the Characterisation of Complex Food Systems*. ed. E.Dickinson, Blackie, Glasgow 1995 .
25. *Surface light scattering from mixed surfactant-oil monolayers*  
J.Eastoe\* and D.Sharpe, *Langmuir*, 1995, 11, 4636-4638.

## 1996

26. *Structure in Microemulsions of Di-chain Surfactants*  
J Eastoe\*, J.Dong, K.Hetherington, D.C.Steytler and, R.K.Heenan, *J.Chem. Soc Faraday Trans.* 1996, 92, 65-72.
27. *Droplet Structure in a Water-in-CO<sub>2</sub> Microemulsion*  
J.Eastoe\*, D.C.Steytler, Z.Bayazit, S.Martell, R.K.Heenan, *Langmuir*, 1996, 12, 1423-25.
28. *Structure of Reversed Micelles Formed by Metal Salts of Bis(ethylhexyl) Phosphoric Acid*  
D.C.Steytler\*, T.R.Jenta, B.H.Robinson, J.Eastoe, R.K.Heenan, *Langmuir*, 1996, 12, 1483-89.

29. *Mixing of Alkanes with Surfactant Monolayers in Microemulsions*  
J.Eastoe\*, J.Dong, K.J.Hetherington, D.Sharpe, D.Steytler, R.K.Heenan, Langmuir, 1996, 12, 3876-880.
30. *Properties of New Glucamide Surfactants*  
J.Eastoe\*, P.Rogueda, A.M.Howe, A.R.Pitt., R.K.Heenan, Langmuir, 1996, 12, 2701-705.
31. *Properties of Surfactant Monolayers Studied by Surface Light Scattering*  
D.Sharpe and J.Eastoe\*, Langmuir, 1996, 12, 2303-307.
32. *Interfacial Properties of a Catanionic Surfactant*  
J.Eastoe\*, P.Rogueda, J.Dalton, J.Dong, D.Sharpe, J.R.P.Webster, Langmuir, 1996, 12, 2706-711.
33. *Micelles of Assymetric Chain Catanionic Surfactants*  
J.Eastoe\*, P.Rogueda, D.Shariatmadari, R.K.Heenan, Coll. Surf. A 1996, 117, 215-225.
34. *Nanoparticle Synthesis in Microemulsions – review article*  
J.Eastoe\* and B.Warne, Curr.Op.Coll.Sci, 1996, 800-805.
35. *Preparation of Colloidal Cobalt using Reversed Micelles*  
J.Eastoe\*, S. Stebbing, J.Dalton and R.K.Heenan, Coll.Surf A, 1996, 119, 123-31.
36. *Measurement of Interparticle Forces from the Osmotic Pressure of Partially-Frozen Dispersions – conference contribution*  
J.Eastoe, B.H.Robinson, D.C.Steytler\*, I.P.Macdonald, K.Ibel and J.C.Dore, J.Phys.Cond.Matt 1996, 8, 953-56.
37. *Remarkable Stability of  $C_{60}^-$  In Micelles*  
A.Beeby\*, J.Eastoe, E.Crooks, J.Chem.Soc. Chem.Comm, 1996, 901-02.
- 1997**
38. *Bending Energies of Di-chained Surfactant Films in Microemulsions – conference contribution*  
J.Eastoe\*, D.Sharpe and R.K. Heenan, Prog. Coll.and Polym Sci., 1997, 105, 340-45.
39. *Dynamic Surface Tensions of Non-ionic Surfactant Solutions*  
J.Eastoe\*, J.S.Dalton, P.G.A.Rogueda, E.R.Crooks, A.R.Pitt and E.A.Simister, J.Coll.Int.Sci., 1997, 188, 423-30.
40. *Microemulsions with Didodecyldimethylammonium Bromide Studied by Neutron Contrast Variation*  
J.Eastoe\*, K.J.Hetherington, J.S.Dalton, D.Sharpe, J.R.Lu and R.K.Heenan, J.Coll.Int.Sci, 1997, 190, 449-55.
41. *Droplet Structure in Phosphocholine Microemulsions*  
J.Eastoe\*, K.J.Hetherington, D.Sharpe, D.C.Steytler, S.Egelhaaf and R.K.Heenan, Langmuir, 1997, 13, 2490-93.
42. *Rigidities of Cationic Surfactant Films in Microemulsions*  
J.Eastoe\*, D.Sharpe, S.Egelhaaf and R.K.Heenan, J.Phys.Chem., 1997, 101, 944-48.
43. *Properties of Phosphocholine Microemulsions and the Film Rigidity Model*  
J.Eastoe\* and D.Sharpe, Langmuir, 1997, 13, 3289-94.
44. *Films of Di-chained Surfactants in Microemulsions – conference contribution*  
J.Eastoe\*, K.J.Hetherington, D.Sharpe, J.Dong, D.C.Steytler, and R.K.Heenan, Coll. Surf. A. 1997, 128, 209-15.
45. *Photoexcited Fullerene Species in Triton-X100 Micelles*  
J.Eastoe\*, E.R.Crooks and A.Beeby, J.Chem.Soc. Faraday Trans. 1997, 93, 4131 - 4136.
46. *Lanthanide-containing Reversed Micelles: A Structural and Luminescence Study*  
J.Eastoe, A.Beeby\*, B.Warne, I.M.Clarkson and S.Faulkner, Langmuir, 1997, 13, 5816 - 5819.

47. *Interparticle Forces from Osmotic Pressure Measurements in Frozen Dispersions* – conference contribution

J.Eastoe, B.H.Robinson, D.C.Steytler\*, I.P.Macdonald, K.Ibel and J.C.Dore, contribution to *Surfactant Science Series* ed. D.O.Shah, Marcel Dekker 1997, p 363 - 386.

48. *Invasive and Non-invasive Measurements of Dynamic Surface Tensions*

S.Manning-Benson, C.D.Bain\*, R.Darton, J.Eastoe, D.Sharpe and P.Reynolds, *Langmuir*, 1997, 13, 5808 - 5810.

49. *Water-in-CO<sub>2</sub> Microemulsions Studied by Small-angle Neutron Scattering.*

J.Eastoe\*, B.M.H.Cazelles, D.C.Steytler, J.D.Holmes, A.R.Pitt, T.J.Wear and R.K.Heenan, *Langmuir*, 1997, 13, 6980 - 6984.

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## Publications since 1998

There have been 53 refereed publications and 3 non-refereed articles.

The majority of publications have been in high quality international journals like *Langmuir*, *Journal of the American Chemical Society*, *Chemistry of Materials and Macromolecules* (30), *Journal of Colloid and Interface Science* (5) and *Physical Chemistry Chemical Physics* or *Faraday Transactions* (4). There have been 4 refereed reviews and 5 refereed conference contributions. For each publication the following code identifies my level of contribution.

**principal investigator** – I instigated the research, raised the necessary funds, and/or was awarded the neutron beam time, designed the experiments, was involved in some experimental work carried out and/or advised on data analysis. I managed the project including instruction of Post-Docs and Ph.D. students. I was responsible for writing the paper, submitting it to the journal and responding to Referees' comments.

equal contributor – The research was a collaboration between different groups, financial inputs, research tasks, and author responsibilities were shared. The level of contribution varies on a case-by-case basis, and so it is reasonable to apportion the effort equally between all authors.

normal type face – other authors were the major contributors

## 1998 – seven refereed publications

50. *Characterisation of water-in-oil microemulsions formed in silicone oils.*

D.C.Steytler\*, P.Dowding, B.H.Robinson, J.D.Hague, J.H.S.Rennie, C.A.Leng, J.Eastoe, R.K.Heenan, *Langmuir*, 1998, 14, 3517 - 3523.

51. *Evidence for activated-diffusion controlled dynamic surface tension with a non-ionic surfactant*

**J.Eastoe\***, J.S.Dalton, P.G.A.Roquedra and P.C.Griffiths, *Langmuir*, 1998, 14, 979-981.

52. *Mixing in cationic surfactant films studied by small-angle neutron scattering*

**J.Eastoe\***, A.Bumajdad, R.K.Heenan, J.R.Lu, D.C.Steytler and S.Egelhaaf, *J. Chem. Soc. Faraday Transactions*, 1998, 94, 2143-2150.

53. *Percolation in non-ionic microemulsion systems*

G.Ilgenfritz\*, S.Lipgens, D.Schubel, L.Schlicht, J.Eastoe and R.K.Heenan, *Langmuir*, 1998, 14, 1041 - 1049.

54. *Dynamic surface tensions and micelle structures of di-chained phosphatidylcholine surfactant solutions*

**J.Eastoe\***, J.S.Dalton and R.K. Heenan, *Langmuir*, 1998, 14, 5719 - 5724.

55. *Breakdown kinetics of fluorocarbon micelles studied by stopped-flow small-angle X-ray scattering*  
**J. Eastoe\***, J.S.Dalton, A.Downer, G.Jones and D. Clarke, *Langmuir*, 1998, 14, 1937 - 1939.
56. *Surface Light Scattering from Cationic Surfactant Films* – refereed conference contribution  
**J.Eastoe\*** and D.Sharpe, *Coll.Surf. A.*, 1998, 143, 261-271.

### 1999 – seven refereed publications

57. *Raman scattering spectra of Aerosol-OT homologous sodium dialkylsulfosuccinates and the environment of their hydrophobic chains*  
 Y. Nagasoe, N. Ichiyanagi, H. Okabayashi\*, S. Nave, J. Eastoe, C.J. O'Connor, *Colloid and Polymer Science*, 1999, 277, 947-956.
58. *Infrared absorption spectra of Aerosol-OT homologous sodium dialkylsulfosuccinates and the effect of crystal polymorphism on the environment of the succinate segment.*  
 Y. Nagasoe, N. Ichiyanagi, H. Okabayashi\*, S. Nave, J. Eastoe, C.J. O' Connor, *Colloid and Polymer Science*, 1999, 277, 1051-1057.
59. *Effects of hydrophobic chain structure on adsorption of fluorocarbon surfactants with either CF<sub>3</sub>- or H-CF<sub>2</sub>-terminal groups*  
 A. Downer, **J. Eastoe\***, A.R. Pitt, E.A. Simister, J. Penfold, *Langmuir*, 1999, 15, 7591-7599.
60. *Raman and IR spectroscopic studies of the interaction between counterion and polar group in self-assembled systems of AOT-homologous "sodium dialkyl sulfosuccinates"*  
 Y. Nagasoe, N. Ichiyanagi, H. Okabayashi\*, S. Nave, J. Eastoe, C.J. O' Connor, *Phys. Chem. Chem. Phys.*, 1999, 1, 4395-4407.
61. *Adsorption and micellisation of partially- and fully-fluorinated surfactants*  
 A. Downer, **J. Eastoe\***, A.R. Pitt, J. Penfold, R.K. Heenan, *Colloids and Surfaces A*;, 1999, 156, 33-48.
62. *Interfacial compositions and phase structures in mixed surfactant microemulsions*  
 A. Bumajdad, **J. Eastoe\***, P. Griffiths, D.C. Steytler, R.K. Heenan, J.R. Lu, P. Timmins, *Langmuir*, 1999, 15, 5271-5278.
63. *Oligo- and polyethylene glycols in water-in-oil microemulsions. A SANS study.*  
 D. Schubel, O.D.Bedford, G. Ilgenfritz\*, J. Eastoe, R.K. Heenan, *Physical Chemistry Chemical Physics*, 1999, 1, 2521-2525.

### 2000 – ten refereed publications – one non-refereed publication

64. *Dynamic surface tension and adsorption mechanisms of surfactants at the air-water interface* – refereed review article  
**J.Eastoe\*** and J.S.Dalton, *Adv.Coll.Int.Sci*, 2000, 85, 103-144.
65. *Adsorption of fluorosurfactants at air-water and water-CO<sub>2</sub> interfaces* – refereed conference contribution  
**J. Eastoe\***, A.M.Downer, A.Paul, D.C.Steytler\* and E.Rumsey, *Prog.Colloid.Polym.Sci.*, 2000, 115, 214.

66. *Studies of cationic and non-ionic surfactant mixed microemulsions by Small-Angle Neutron Scattering and Pulsed Field Gradient NMR* – refereed conference contribution  
M.Giustini\* , G. Palazzo, A.Ceglie, J.Eastoe, A.Bumujdad and R.K.Heenan.  
Prog.Colloid.Polym.Sci., 2000, 115, 25-30.
67. *Adsorption of ionic surfactants at the air-solution interface*  
**J.Eastoe\***, S.Nave, A.Rankin, A.Paul. A. Downer, K.Tribe and J.Penfold, Langmuir, 2000, 16, 4511-4518.
68. *Droplet interfacial structure studied by SANS contrast variation* – refereed conference contribution  
J.Eastoe and R.K.Heenan\*, J.Appl.Cryst, 2000, 33, 749-752.
69. *Vibrational spectra of Aerosol-OT homologous sodium dialkylsulfosuccinates - normal coordinate analyses of sodium diethylsulfosuccinate and sodium dimethylsulfosuccinate and their application to longer homologues.*  
Y.Nagasoe, H.Okabayashi\*, M.Abe, J.Eastoe, and C.J.O'Connor, Vibrational Spectroscopy, 2000, 23, 151-168.
70. *Fluoro-surfactants at air/water and water/CO<sub>2</sub> interfaces.*  
**J.Eastoe\***, A.Downer, A.Paul, D.C.Steytler, E.Rumsey, J.Penfold, and R.K.Heenan, Phys.Chem.Chem.Phys., 2000, 2, 5235-5242.
71. *What is so special about Aerosol-OT? 1. Aqueous systems.*  
**J.Eastoe\***, S.Nave and J.Penfold. Langmuir, 2000, 16, 8733-8740.
72. *What is so special about Aerosol-OT? 2. Microemulsion systems.*  
**J.Eastoe\***, S.Nave, R.K.Heenan, D.C.Steytler and I.Grillo, Langmuir, 2000, 16, 8741-8748.
73. *Control over phase curvature using mixtures of polymerisable surfactants.*  
**J.Eastoe\***, M.Summers and R.K.Heenan, Chem.Mat.Communications, 2000,12, 3533-3537.
74. *Mixed surfactant microemulsions* – non-refereed review article  
**J.Eastoe\*** and A.Bumajdad  
Recent Research Developments in Physical Chemistry, 2000, 4, 337-350.

## 2001 – eight refereed publications

75. *Micellisation of hydrocarbon surfactants in supercritical carbon dioxide.*  
**J.Eastoe\***, A.Paul, S.Nave, D.Steytler\*, E.Rumsey, M.Thorpe, B.H.Robinson, R.K.Heenan, J.Am.Chem.Soc. Comm., 2001, 123, 988-989.
76. *The remarkable "flip-flop" self-assembly of a diblock copolymer in aqueous solution*  
V.Butun, S.P.Armes\*, N.C.Billingham, Z.Tuzar, A.Rankin, J.Eastoe\* and R.K.Heenan, Macromolecules, 2001, 34, 1503-1511.
77. *Surfactant adsorption dynamics* – refereed review article  
**J.Eastoe\***, A.Rankin, R.Wat and C.D.Bain  
International Reviews in Physical Chemistry, 2001, 20, 1-30.
78. *Water-in-carbon dioxide macroemulsions and miniemulsions with a hydrocarbon surfactant*  
K.P.Johnston\*, D Cho, S.R.P. DaRocha, S.E.Webber, J.Eastoe, A.Dupont, D.C.Steytler, Langmuir, 2001, 17, 7191-7193.
79. *Polymerisation of cationic surfactant phases*  
**J.Eastoe\***, M.Summers, S.Davis, Z. Du, R.M.Richardson, R.K.Heenan, D.Steytler, I.Grillo, Langmuir, 2001,17, 5388-5397.

80. *Phosphate surfactants for water-in-CO<sub>2</sub> microemulsions*  
D.C. Steytler\*, E.Rumsey, M.Thorpe, J.Eastoe\*, A.Paul, R.K.Heenan,  
Langmuir, 2001, 17, 7948-7950.
81. *Fluorinated non-ionic surfactants bearing either CF<sub>3</sub>- or H-CF<sub>2</sub>- terminal groups: adsorption at the surface of aqueous solutions*  
**J.Eastoe\***, A.Paul, A.Rankin, R.Wat, J.Penfold, J.R.P.Webster  
Langmuir, 2001, 17, 7873-7878.
82. *Polymerisation of cationic surfactant films in microemulsions*  
**J.Eastoe\***, M.Summers, R.K.Heenan, D.Steytler, I.Grillo,  
J.Disp.Sci.Tech, 2001, 22, 597-606.

## 2002 – seven refereed publications – one non-refereed publication

83. *Interaction between a Novel Gemini Surfactant and Cyclodextrin: NMR and Surface Tension Studies*  
S. Abrahmsén-Alami\*, E. Alami, J. Eastoe, T. Cosgrove  
Journal of Colloid and Interface Science, 2002, 246, 191-202.
84. *Adsorption properties of novel gemini surfactants with non-identical headgroups*  
E.Alami\*, K.Holmberg and J.Eastoe  
Journal of Colloid and Interface Science, 2002, 247, 447-455.
85. *What is so special about Aerosol-OT? Part III – glutaconate versus sulfosuccinate headgroups and oil-water interfacial tensions*  
S. Nave, **J.Eastoe\***, R.K. Heenan, D.Steytler, I.Grillo, Langmuir , 2002, 18,1505-1510.
86. *Effects of fluorocarbon surfactant chain structure on stability of water-in-carbon dioxide microemulsions. Links between aqueous surface tension and microemulsion stability.*  
**J.Eastoe\***, A.Paul, A.Downer, D.C.Steytler and E.Rumsey, Langmuir, 2002, 18, 3014-3017
87. *Formation of BaSO<sub>4</sub> nano-particles in microemulsions with polymerised surfactant shells*  
M. Summers, **J. Eastoe\*** and S. Davis, Langmuir, 2002, 18, 5023-5026.
88. *Water-in-carbon dioxide microemulsions stabilised by fluoro-surfactants – conference contribution – not refereed*  
**J.Eastoe\***, A.Paul, D.Steytler, E.Rumsey, R.K.Heenan, J.Penfold  
Adsorption and aggregation of surfactants in solution, 2002, Marcel Dekker, (Eds. K.Mittal & D.O.Shah), chapter 16, 299-326,
89. *Properties of a stilbene-containing gemini photo-surfactant: light triggered changes in surface tension and aggregation*  
**J.Eastoe\***, M.Sanchez-Dominguez, P.Wyatt\*, A.Beeby, R.K.Heenan, Langmuir, 2002, 18, 7837-7844.

This paper featured on the journal cover

90. *Interactions between non-ionic gemini surfactant and cyclodextrins investigated by small-angle neutron scattering.*  
E. Alami\*, S. Abrahmsén-Alami, J.Eastoe, I.Grillo, R.K.Heenan, J.Coll.Int.Sci., 2002, 255, 403-409.

## 2003 – fifteen refereed publications and one non-refereed publication

91. *Applications of polymerizable surfactants* – refereed review article  
M. Summers and **J.Eastoe\***, Adv.Coll.Int.Sci, 2003, 100-102, 137-152.
92. *Design and performance of surfactants for carbon dioxide*– refereed conference contribution  
**J. Eastoe\***, A. Dupont, A. Paul, D. C. Steytler\* and E. Rumsey, ACS Symposium Series. Separations and Processes Using Supercritical Carbon Dioxide.
93. *Neutron reflection and small-angle neutron scattering studies of a fluorocarbon telomer surfactant*,  
A.Dupont, **J.Eastoe\***, P.Barthelemey, B.Pucci, J.Penfold and R.K.Heenan, J.Coll.Int Sci, 2003, 261 184-190.
94. *Micellisation of commercially viable surfactants for CO<sub>2</sub>*,  
J.Eastoe\*, A.Dupont, D.C.Steytler, M.Thorpe, A.Gurgel and R.K.Heenan, J.Coll.Int Sci, 2003, 258, 367-373.
95. *Photosurfactants new and old* – non-refereed review article  
M.Sanchez-Dominguez, P.Wyatt and **J.Eastoe\***, Self-Assembly, IOS Press Amsterdam, Nov.2003. Editor B.H.Robinson.
96. *Dynamic surface excess of fluorocarbon surfactants*  
J.Eastoe\*, A.Rankin, R.Wat, C.D.Bain, D.Strykas and J.Penfold, Langmuir 2003, 19, 7734-7739.
97. *Measurement of the dynamic surface excess of the non-ionic surfactant C<sub>8</sub>E<sub>4</sub>OMe by neutron reflection and ellipsometry*  
D. Valkovska, K. M. Wilkinson, R.A. Campbell, C.D. Bain\*, R. Wat and J. Eastoe, Langmuir 2003, 19, 5960-5962.
98. *pH Switching' for the Selective Extraction of Metal Ions into Supercritical CO<sub>2</sub>*  
J. P. Hanrahan, K. J. Ziegler, J.D. Glennon, D. C. Steytler, J. Eastoe, A. Dupont and J.D. Holmes\*, Langmuir 2003, 19, 3145-3150.
99. *Compositions of mixed surfactant layers in microemulsions determined by small-angle neutron scattering*  
A.Bumajdad, **J.Eastoe\***, S. Nave, D.C. Steytler, R. K. Heenan and I. Grillo, Langmuir, 2003, 19, 2560-2567.
100. *Fluorinated surfactants in supercritical CO<sub>2</sub>* – refereed review article  
**J.Eastoe\***, A. Dupont and D.C.Steytler, Current Opinions in Colloid and Interface Science, 2003, 8, 267-273.
101. *Concentrated polymerized cationic surfactant phases*  
M. Summers, **J. Eastoe\*** and R.M.Richardson, Langmuir, 2003, 19, 6357-6363.
102. *Photoresponsive microemulsions*  
**J.Eastoe\***, M.Sanchez-Dominguez, P.Wyatt, H.Cumber, G.Burnett, R.K.Heenan, Langmuir, 2003, 19, 6579-6581.
103. *Properties of mixed alcohol-zwitterionic surfactant films in quaternary microemulsions*  
A. Bumajdad\*, **J. Eastoe**, R.K.Heenan, Langmuir, 2003, 19, 7219-7225.
104. *Investigation of microstructure and dynamics of novel Gemini surfactant micelles by small-angle neutron scattering (SANS) and NMR self-diffusion*  
E. Alami\*, S. Abrahmsén-Alami, J.Eastoe, R.K.Heenan, Langmuir, 2003, 19, 18-23.
105. *Microemulsion formation in 1,1,1,2 tetrafluoroethane (R134a)*  
D.C.Steytler\*, M.Thorpe, J.Eastoe, A.Dupont, R.K.Heenan, Langmuir, 2003, 19, accepted July 2003.

106. *Determination of the dynamic surface excess of a homologous series of cationic surfactants by ellipsometry*  
T. Battal, G.C.Shearman, D.Valkovska, C.D.Bain\*, R.C.Darton, J.Eastoe, Langmuir, 2003, 19, 1244-1248.
107. *Frozen dispersions*  
D.C.Steytler\*, B.H.Robinson, J.Eastoe, J.D.Holmes and J.C.Dore. Self-Assembly, IOS Press Amsterdam, Nov.2003. p 112-120. Editor B.H.Robinson.

#### **2004 – eleven refereed publications**

108. *Conductivity of mixed surfactant water-in-oil microemulsions*  
A.Bumajdad\* and J.Eastoe, Phys.Chem.Chem.Phys. 2004, 6, 1597-1602.
109. *Light-sensitive microemulsions*  
J.Eastoe\*, M.Sanchez-Dominguez, P.Wyatt, H.Cumber, R.K.Heenan, Langmuir, 2004, 20, 1120-1125.
110. *Adsorption of Ionic Surfactants at an Expanding Air–Water Interface*  
C.D.Bain, R.C.Darton, G.C.Shearman, D.Valkovska, J.Eastoe, Langmuir, 2004, 20, 4436-4445.
111. *Conductivity of water-in-oil microemulsions stabilised by mixed surfactants.*  
A.Bumajdad\* and J.Eastoe, J.Coll.Int.Sci., 2004, 274, 268-276.
112. *Surfactant-Free “Emulsions” Generated by Freeze-Thaw*  
G.R. Burnett, R. Atkin, S.Hicks **J. Eastoe**, Langmuir, 2004, 20, 5673-5678.
113. *UV causes dramatic changes in aggregation with mixtures of photo-active and inert surfactants*  
**J. Eastoe**, M. Sanchez Dominguez, P.Wyatt, A, Orr-Ewing, R.K.Heenan, Langmuir, 2004, 20, 6120-6126.
114. *Hybrid fluorocarbon-hydrocarbon CO<sub>2</sub>-philic surfactants. 1. Synthesis and properties of aqueous solutions.*  
**J. Eastoe\***, A. Dupont, M. Murray, L. Martin, F. Guittard, E.Taffin de Givenchy, R. K. Heenan, Langmuir, 2004, 20, 9953-9959.
115. *Hybrid fluorocarbon-hydrocarbon CO<sub>2</sub>-philic surfactants. 2. Formation and properties of water-in-CO<sub>2</sub> microemulsions.*  
**J. Eastoe\***, A. Dupont, L. Martin, D.Steytler, F. Guittard, E.Taffin de Givenchy, R. K. Heenan, Langmuir, 2004, 20, 9960-9967.
116. *A photo-responsive organogel*  
**J. Eastoe\***, M Sánchez-Dominguez, P, Wyatt. R.K. Heenan, Chem. Comm, 2004, 2608-2609.
117. *Adsorption kinetics of ammonium perfluorononanoate at the air–water interface*  
*M. Sekine , R. A. Campbell , D. S. Valkovska , J. P. R. Day , T. D. Curwen , L. J. Martin , S. A. Holt, J. Eastoe and C. D.Bain, Phys.Chem. Chem Phys. 2004, 6, 5061-5065.*
118. *Microemulsion-based synthesis of CeO<sub>2</sub> powders with high surface areas and high-temperature stabilities*  
A. Bumajdad, M.I Zaki\*, J.Eastoe and L.Pasupulety, Langmuir, 2004, 20, 11223-11233.

## 2005 – six refereed publications and three book chapters

119 *Self-assembly in green solvents*

**J. Eastoe\*** and S. Gold, *Phys.Chem.Chem.Phys.*, 2005, 7, 1353-1362.

120 *Photo-stabilised microemulsions*

**J. Eastoe\***, M. Sánchez-Dominquez, A. Vesperinas, A. Paul, R.K. Heenan and I. Grillo, *Chemical. Communications*, 2005, 2785-2786.

121 *Ionic liquid-in-oil microemulsions*

**J. Eastoe\***, S. Gold, A. Paul, T. Welton, R.K. Heenan and I. Grillo, *J.Am.Chem.Soc*, 2005, 217, 7302-7303.

122. *Dynamics of adsorption of cationic surfactants at air-water and solid-liquid interfaces*

Rob Atkin Julian Eastoe\*, Erica J. Wanless and Colin D. Bain, in “*Dynamics of Self Assemblies of Surfactant and Amphiphilic Block Copolymers: Micelles, Vesicles and Microemulsions*” edited by R. Zana, Surfactant Science Series vol 125, CRC press, Taylor & Francis, Chapter 8 p379-418.

123. *What is so special about Aerosol-OT? Part IV – phenyl-tipped surfactants*

**J. Eastoe\***, S. Nave, A. Paul, A. R. Pitt and R.K. Hennen, *Langmuir* 2005, *asap pages Sept 3 2005*

124. *Self-assembly of light-sensitive surfactants*

**J. Eastoe\*** and A. Vesperinas, *Soft Matter*, 2005, 1, 338-347.

This paper featured on the journal cover

125. *Surfactant aggregation and adsorption at interfaces*

J. Eastoe, Chapter 4, p50-74, *Colloid science: principles, methods and applications*, edited T. Cosgrove Blackwell Publishing, Sept 2005. ISBN-10-4051-2673-6.

126. *Microemulsions*

J. Eastoe, Chapter 5, p77-96, *Colloid science: principles, methods and applications*, edited T. Cosgrove Blackwell Publishing, Sept 2005. ISBN-10-4051-2673-6.

127 *Photo-responsive surfactants in microgel dispersions*

M. Bradley\*, B. Vincent, N. Warren, J. Eastoe, A. Vesperinas, *Langmuir*, 2005, 21 *asap pages* 30 Nov. 2005.

## 2006

128 *Photodestructible vesicles*

**J. Eastoe\***, A. Vesperinas, A-C. Donnewirth, P. Wyatt, I. Grillo, R.K. Heenan, S. Davis, *Langmuir*, 2006, 22, *asap pages* Jan. 2006

129 *Electron density matching as a guide to surfactant design*

R.F. Tabor, S. Gold, **J. Eastoe\***, *Langmuir*, 2006, 22, *asap pages* Jan 2006

130 *Alternative non-aqueous water-miscible solvents for surfactants*

C. Segiun, **J. Eastoe\***, R. Clapperton, R.k. Heenan, I. Grillo, *Colloids and Surfaces A:*, accepted Nov 2005.

131 *Nanotechnology in action: Overbased nanodetergents as lubricant oil additives*  
L. K. Hudson, **J. Eastoe\***, P. Dowding, *Advances in Colloid and Interface Science*, 2006,  
accepted Oct 2005.

132 *Recent advances in nanoparticle synthesis with reversed micelles*  
**J. Eastoe\***, M. J. Hollamby, L. K. Hudson, *Advances in Colloid and Interface Science*, 2006

133 *Photodestructible surfactants in microemulsions*  
**J. Eastoe\***, *Progress in Colloid and Interface Science*, 2006

## **Other publications - patent**

### **2000**

1. *Liquid dry cleaning system comprising carbon dioxide and surfactant.*  
J.Eastoe and D.C.Steytler. British patent no. 0027240.4. Filing date 10.11.00.

### **(iii) Research grants**

#### **1993**

1. SERC (GR/J/79218) *Properties of Fullerenes in Structured Surfactant Phases* - £26,000 plus an ear-marked studentship.
2. Kodak UK helped fund a Ph.D. studentship (1993-96).

#### **1994**

3. AFRC (F01702) *New Phospholipid Microemulsions* - £100,000 - incl. 2 year Post-Doctoral Researcher. This established a surface laser light scattering facility at Bristol for studying properties of fluid interfaces.
4. EPSRC (GR/K64774) *Dynamics of Surfactant Adsorption* - £72,000 plus earmarked studentship - joint with Dr. Beeby, Chemistry Durham who was also awarded £40,000 and a studentship.
5. EPSRC (GR/K04804) *New Magnetic Surfactant Phases* - £21,000 plus earmarked studentship - joint with Dr. Richardson in Chemistry.
6. Royal Society (13608) *Bilayer Bending Energies* - £10,000.
7. CIBA Trust - Award for Collaboration with Europe - to work with Prof. Ilgenfritz, in Chemistry at the University of Cologne 1994-96 - £3000. (see publications 53 and 63). CIBA is a chemical company.

#### **1995**

8. British Council - £3,500 for consumables to support visiting scholar Ms. Dong 1995.

#### **1996**

9. EPSRC Realising Our Potential Award (GR/K85247) *Interfacial Rheology of Flowing monolayers* - £98,000 - incl. 2 year PDRA - joint with Dr. Reynolds of the Bristol Colloid Centre.

#### **1997**

10. EPSRC (GR/L05532) *Water-in-CO<sub>2</sub> Microemulsions* - £168,000 to Bristol including ear-marked studentship - joint with Dr. Steytler in Chemistry at the University of East Anglia, who was also awarded a similar sum.
11. Royal Society (17985) *Liquid Interfacial Tensions* - £10,000.
12. Astra Charnwood - agreed a £3,000 contract for research on novel surfactants.

#### **1999**

13. EPSRC (GR/M83780) *Surfactants at expanding liquid surfaces* - £102,329 to Bristol, as part of a £0.3M programme including neutron beam time. This is a joint award with Dr. C.Bain (Oxford).

#### **2001**

14. CASE studentship with Kodak to support Laura Martin - £15k
15. CASE studentship with Disperse Technologies to support Stuart Hicks - £20k. A joint project with Prof. T.Cosgrove at Bristol.
16. Glaxo - agreed a £4, 500 contract for research on novel surfactants.
17. British Council Alliance collaborative awards with Dr. Guittard University of Nice France - £8000

#### **2002**

18. EPSRC ACORN Nanotechnology grant *Polymerisable surfactants* - £100,000
19. Eli Lilly – contract research - £20,000.
20. Krüss Germany – new equipment £20,000
21. University of Kuwait – Nanostructured catalysts. I am a non-resident Co-Principal Investigator on a grant awarded to Dr. Ali Bumajdad; value \$150,000. Although this is not direct income to the University of Bristol, I was instrumental in initiating the project, I helped Dr. Bumajdad write the proposal, and reply to referees comments. In 2004 he spent a 1-year sabbatical in my laboratory working on collaborative aspects of this project. Research paper 118, listed above, is the first publication to arise for this joint grant.

## 2003

22. Krüss Germany – new equipment £15,000
23. Japan Society for the Promotion of Science - £1,500.
24. Huntsman Surface Science – joint funded studentship - £33,000.
25. Syngenta - joint funded studentship - £39,000

## 2004

26. EPSRC Industrial CASE PhD studentship with Infineum - £54,000 + £33,000 top-up.
27. Omnova (US coating firm) - £6,000
28. Kodak joint funded studentship - £33,000 – commencing 2005.
29. EPSRC Responsive mode grant *Polymer induced interactions in self-assembled systems* – joint with Dr. Jeroen van Duijneveldt - £90,000.

## 2005

30. EPSRC *Oxidation of hydrocarbons in supercritical media* – joint with Prof Graham Hutchings Cardiff. £100,000 for Bristol and £100,000 for Cardiff.
31. Jointly-funded studentship with Kodak to fund Martin Hollamby - £33,000
32. Royal Society China fellowship to fund Dr. Aihua Zou - £25,000

## Peer review facilities time

Beam time awarded has steadily risen from 16 days in 1998 to 34 days in 2003.

Facilities access is central to my research. I feel it is reasonable to include the value of this beam time, since competitive International peer-review committees award the grants, and these facilities are funded from the UK National Science Budget.

For ISIS experiments this beam time at has been valued using EPSRC “ticket” costs (a method employed from 1997-2001, during which the cost per day rose from £9.6k to £13k). For awards post 2001 the full commercial cost, charged to external companies, has been used (currently £15k).

For ILL experiments this beamtime at has been valued in terms of the equivalent commercial cost charged to external companies (currently £9k)

Based on these nominal values beam time awarded to me has steadily risen in value from £160k in 1998 to £460k in 2003.

33. EPSRC ISIS Neutron Facility Rutherford Appleton Laboratory. Around 200 peer reviewed beam days, with a value over £2.0 M, and £60,000 for consumables have been awarded.
34. Institut Max-von Laue - Paul Langevin, Grenoble, France. 45 beam days valued at approximately £450,000.
35. Synchrotron Radiation Source (SRS) Daresbury 4 beam days. Grants for consumables and travel approximately £3,000.

## Overseas PhD students

In addition, PhD students supported by overseas governments have joined my research group.

### 1997

Kuwait Government - £62k - Mr.A.Bumajdad.

### 2002

Mexican government - £60k to support M. Sanchez-Dominguez – jointly supervised with Dr. P Wyatt.

## Post-doctoral researchers

|                |               |           | destination           |
|----------------|---------------|-----------|-----------------------|
| Dr. D.Sharpe   | BBSRC         | 1994-1996 |                       |
| Dr. D.Sharpe   | EPSRC         | 1996-1997 | Seagate               |
| Dr. S.Stebbing | EPSRC         | 1997-1998 | Crosfield             |
| Dr. R.Wat      | EPSRC         | 1999-2002 | Pharametrics          |
| Dr. G. Burnett | EPSRC         | 2003-     | GlaxoSmithKline       |
| Dr. A. Paul    | EPSRC         | 2004-2005 | Fellowship at Cardiff |
| Dr. S. Rogers  | EPSRC         | 2005-2007 |                       |
| Dr. A. Zou     | Royal society | 2006-2007 |                       |

#### (iv) Indications of external recognition

##### External presentations

|  |       |      |
|--|-------|------|
| 1. <i>Conference Presentation</i> - (*) Invited Speaker –<br>American Chemical Society National Meeting Atlanta  | Mar.  | 2006 |
| 2. <i>Research and teaching lectures</i> (4) – (*)<br><i>Department Seminar</i> – (*) Chemistry – Kuwait university  | Nov   | 2005 |
| 3. <i>Department Seminar</i> – (*) Physical chemistry, University of Hull  | Nov   | 2005 |
| 4. <i>Department Seminar</i> – (*) Physical chemistry, University of Oxford  | Nov   | 2005 |
| 5. <i>Schools lecture</i> – (*) Royal Institution, London  | Nov   | 2005 |
| 6. <i>Schools lecture</i> – (*) Rutherford Appleton Labs., Oxford  | Nov   | 2005 |
| 7. <i>Schools lecture</i> – (*) University of Bristol  | Nov   | 2005 |
| 8. <i>Research and teaching lectures</i> (4) – (*)<br><i>Department Seminar</i> – (*) Chemistry – Wuhan University – China<br>and 3 postgraduate seminars on Colloid science and presentation skills | Oct   | 2005 |
| 9. <i>Research and teaching lectures</i> (4) – (*) China Research Institute for Daily<br>Chemical Industry (RIDCI) Taiyuan China   | Oct   | 2005 |
| 10. <i>Research presentation</i> – (*) Syngenta, Bracknell   | Oct   | 2005 |
| 11. <i>Research presentation</i> – (*) Huntsman, Birmingham  | Oct   | 2005 |
| <i>Conference Presentation</i> (*) Plenary Speaker<br>42 <sup>nd</sup> meeting of the German colloid Society – Aachen  | Sept. | 2005 |
| 12. <i>Conference Presentation</i> (*) Invited Speaker<br>European Colloid and Interface Science conference –Norway  | Sept. | 2005 |
| 13. <i>Conference Presentation</i> - (*) Invited Speaker –<br>European Colloids and Interfaces Conference, Loughborough  | July  | 2005 |
| 14. <i>Department Seminar</i> – (*) Chemistry – Keio University, Tokyo   | June. | 2005 |
| 15. <i>Research presentation</i> – (*) Siseido Research Centre - Yokohama  | June  | 2005 |
| 16. <i>Conference Presentation</i> - (*) Invited Speaker –<br>American Chemical Society Colloids Meeting Potsdam NY  | June. | 2005 |
| 17. <i>Research presentation</i> – (*) ICI paints, Slough  | April | 2005 |
| 18. <i>Conference Presentation</i> - (*) Invited Speaker –<br>American Chemical Society National Meeting San Diego   | Mar.  | 2005 |
| 19. <i>Conference Presentation</i> - (*) Invited Speaker –<br>Advances in non-aqueous colloids Royal Society of Chemistry London   | Dec.  | 2004 |
| 20. <i>Conference Presentation</i> - (*) Keynote Speaker -<br>CNRS Nanoparticles conference Paris  | Oct.  | 2004 |
| 21. <i>Conference Presentation</i> (*) Invited Speaker<br>European Colloid and Interface Science conference – Spain  | Sept. | 2004 |
| 22. <i>Department Seminar</i> – (*) Chemistry – Wuhan University – China<br>and 3 postgraduate seminars on Colloid science and presentation skills   | July  | 2004 |
| 23. <i>Research and teaching lectures</i> (4) – (*) China Research Institute for Daily<br>Chemical Industry (RIDCI) Taiyuan China  | July  | 2004 |
| 24. <i>Conference Presentation</i> - (*) Invited Speaker - Structure, properties and applications<br>of surfactants Royal Society of Chemistry London  | May   | 2004 |
| 25. <i>Conference Presentation</i> - (*) Keynote Speaker -<br>Nanoparticles 2004 Orlando   | Mar.  | 2004 |
| 26. <i>Department Seminar</i> – (*) Chemistry – Wuhan University – China   | Dec.  | 2003 |
| 27. <i>Department Seminar</i> – (*) Zhengzhou University of Light Industry China   | Dec.  | 2003 |
| 28. <i>Research and teaching lectures</i> (4) – (*)<br>Zhengzhou University of Light Industry China  | Dec.  | 2003 |
| 29. <i>Department Seminar</i> – (*) Physics - University of Kyoto  | Oct.  | 2003 |
| 30. <i>Research presentation</i> – (*) Siseido Research Centre - Yokohama  | Oct.  | 2003 |
| 31. <i>Department Seminar</i> – (*) Chemistry - Tokyo Metropolitan University  | Oct.  | 2003 |
| 32. <i>Department Seminar</i> – (*) Chemistry - Tokyo Science University   | Oct.  | 2003 |
| 33. <i>Department Seminar</i> – (*) Institute for Solid State Physics - Tokyo Univ.  | Oct.  | 2003 |

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\* denotes invited lecture, those not marked are contributed talks

34. *Conference Presentation* (\*) – Keynote Speaker -  
European Colloid and Interface Science conference – Florence. Sept. 2003
35. *Conference Presentations* (2) –  
International Association of Colloid Scientists (IACIS) Brazil Sept. 2003
36. *Summer school* – Unilever Port Sunlight June 2003
37. *Conference Presentations* (2) - American Chemical Society Colloid group meeting  
two lectures – Georgia Tech. Atlanta June 2003
38. *Research presentation* – (\*) Society for Chemical Industry, Founder’s Symposium  
SCI headquarters, London April 2003
39. *Research presentation* – (\*) Royal Society of Chemistry “Nanoparticle Systems”  
Royal Institution, London Mar. 2003
40. *Research and teaching lecture* - (\*) Royal Institution, London Mar. 2003
41. *Department Seminar* – (\*) Chemical Engineering, Loughborough University Feb. 2003
42. *Department Seminar* – (\*) University Pisa, Italy Dec. 2002
43. *Conference Presentation* –(\*) REFILL conference, Grenoble France Oct 2002
44. *Research and teaching lectures* (4) – (\*) China Research Institute for Daily  
Chemical Industry (RIDCI) Taiyuan China Oct. 2002
45. *Research presentation* – (\*) Syngenta, Jealot’s Hill UK Sept. 2002
46. *Conference Presentations* (2) – Surfactants in Solution – Barcelona June 2002
47. *Department Seminar* – (\*) University of Sydney, Australia April 2002
48. *Conference Presentation* – (\*) Self-assembly conference, Tuscany April 2002
49. *Conference Presentation* – (\*) ACS Spring meeting Orlando April 2002
50. *Department Seminar* – (\*) - Adelaide University, Australia Nov. 2001
51. *Research presentation* – (\*) Disperse Technologies, Guildford Nov. 2001
52. *Department Seminar* - (\*) Massachusetts Institute of Technology  
Department of Chemical Engineering April 2001
53. *Tele-conference seminar* - (\*) University of North Carolina-Chapel Hill and  
North Carolina State University April 2001
54. *Conference Presentation* - (\*) Keynote Speaker - American Chemical Society national  
meeting - San Diego April 2001
55. *Research Seminar* – (\*) Eli Lilly - Indianapolis Indiana Mar. 2001
56. *Department Seminar* - (\*) University College Cork, Ireland Mar. 2001
57. *Conference Presentation* - (\*) Keynote Speaker -  
Nanoparticles 2001 Orlando Feb. 2001
58. *Conference Presentation* - (\*) Workshop on Fluorinated Surfactants  
sponsored by the US Army Research Office, Avingon, France Jan. 2001
59. *Department Seminar* - (\*) University of Hull Dec. 2000
60. *Conference Presentation* - (\*) Workshop on Decontamination sponsored by  
the US Army Research Office Jackson Hole, Wyoming Oct. 2000
61. *Conference Presentation* – (\*) Plenary Speaker – Fast Reactions in Solution Group  
Royal Society of Chemistry, University of Durham Sept. 2000
62. *Seminar* - research presentation to University of Bristol Convocation July 2000
63. *Conference Presentation* – (\*) Keynote Speaker - Surfactants in Solution,  
University of Florida June 2000
64. *Conference Presentation* - (\*) Keynote Speaker – COSMO2000, Amman, Jordan  
June 2000
65. *Conference Presentation* – (\*) meeting of Recent Appointees in Polymer Science held  
at Unilever Port Sunlight, UK April 2000
66. *Conference Presentation* – (\*) Royal Society of Chemistry meeting Adsorption to Interfaces  
Univ. Surrey April 2000
67. *Conference Presentation* – (\*) Society for Chemical Industry symposium (Founder’s Lecture) London  
April 2000
68. *Conference Presentation* – (\*) Keynote Speaker -  
European Colloid and Interface Science conference – Dublin Ireland Sept. 1999
69. *Conference Presentations* (2) - American Chemical Society Colloid group meeting  
- Massachusetts Institute of Technology June 1999
70. *Conference Presentation* (\*) “Infineum Industry-Academic Conference” - Oxford  
April 1999

71. *Conference Presentation* (\*) "Scattering Techniques" -  
Society for Chemical Industry London March 1999
72. *Royal Society of Chemistry Lecture* (\*) - Cardiff University Jan. 1999
73. *Conference Presentation* - Royal Society of Chemistry  
Colloid and Interface Science Group Meeting  
"Novel Surfactants" North East Wales Institute Wrexham Sept. 1998
74. *Departmental Seminar* - (\*) Imperial College, Chemistry, London May 1998
75. *Departmental Seminar* - (\*) Nottingham, Chemistry March 1998
76. *Departmental Seminar* - (\*) Bath, Chemistry March 1998
77. *Departmental Seminar* - (\*) University College London, Physics Oct. 1997
78. *Scientific Highlight Lecture* - (\*) 1997 Neutron Beam Users' Meeting  
Rutherford Appleton Laboratory Sept. 1997
79. *Conference Presentation* - Royal Society of Chemistry  
Colloid and Interface Science Group Meeting  
"Polymers and Surfactants" North East Wales Institute Wrexham Sept. 1997
80. *Conference Presentations* (2) - American Chemical Society Colloid group meeting  
University of Delaware Newark Delaware July 1997
81. *Departmental Seminar* - (\*) Oak Ridge National Laboratory - Tennessee July 1997
82. *Group Seminar* - University of North Carolina Chapel Hill June 1997
83. *Departmental Seminar* - (\*) Rutherford Appleton Laboratory ISIS June 1997
84. *Scientific Highlight Lecture* - (\*) 1996 Neutron Beam Users' Meeting  
Rutherford Appleton Laboratory Sept. 1996
85. *Conference Presentation* - 11<sup>th</sup> International Surfactants in Solution  
Jerusalem June 1996
86. *Departmental Seminar* - (\*) Southampton, Chemistry March 1996
87. *Conference Presentation* - International Symposium on Micelles, Florida Aug. 1995
88. *Evening Lecture* - (\*) Society for Chemical Industry at London HQ Dec. 1994
89. *Conference Presentation* - (\*) "New Physico-Chemical Techniques in  
Food Science" Leeds University Sept. 1994
90. *Departmental Seminar* - (\*) Max-Planck Institute for Colloid  
and Surface Science - Berlin July 1994
91. *Departmental Seminar* - (\*) University of Cologne - Chemistry July 1994
92. *Departmental Seminar* - University of Bristol - Chemistry Dec. 1993
93. *Conference Presentation* - Royal Society of Chemistry  
Colloid and Interface Science Group Meeting  
"Pure and Applied Aspects of Surfactant Behaviour", Strasbourg April 1993
94. *Departmental Seminar* - (\*) Rutherford Appleton Laboratory ISIS 1992
95. *Conference Presentation* - 8<sup>th</sup> International Surfactants in Solution, Florida June 1990
96. *Conference Presentation* - NATO Advanced Study Institute on  
Colloidal Systems, Aberystwyth Sept. 1989
97. *Conference Presentation* - Reversed Micelles Workshop, Wageningen  
Netherlands March 1989
98. *Departmental Seminar* - (\*) Ramkhamhaeng University, Bangkok, Thailand Jan. 1989

In addition, my PhD students and Post-Docs have regularly made oral contributions at International conferences, including recently International Association of Colloid Scientists (IACIS) Brazil Sept. 2003 and Bristol 2000; Surfactants in Solution, University of Florida June 2000; American Chemical Society Colloid group meeting - Massachusetts Institute of Technology June 1999. I require that all of my students attending research conferences present at least a poster: over 45 such presentations have been made.

I have been invited to chair sessions at International conferences, recently ACS National and Group meetings (Georgia 2003, San Diego 2002, Delaware 1997), European Colloid and Interface Scientists meetings (Florence 2003), a CNRS conference (Paris 2004) and the XVIIth European Chemistry at Interfaces Conference in 2005.

## Ph.D examinations

|          |                  |                            |       |      |
|----------|------------------|----------------------------|-------|------|
|          | External         |                            |       |      |
|          | P. Taylor        | Hull                       | June  | 2005 |
|          | K.Wilkinson      | Oxford                     | Nov.  | 2004 |
|          | M.Porter         | Hull                       | May.  | 2004 |
|          | M.Wright         | UEA Norwich                | May   | 2004 |
|          | M.Wan            | Melbourne Australia        | April | 2004 |
|          | A.Cheung         | Cardiff                    | Oct.  | 2003 |
|          | A.Jackson        | Oxford                     | Sep.  | 2003 |
|          | K.Flook          | Durham                     | Mar   | 2003 |
|          | R.Atkin          | Univ. Newcastle, Australia | Sept  | 2002 |
|          | J-P Curtois      | Univ. Surrey               | July  | 2002 |
|          | H.Gazzaz         | UEA Norwich                | June  | 2001 |
|          | N.Warren         | Oxford                     | July  | 1999 |
|          | A.Hussain        | Imperial College           | June  | 1997 |
|          | R.Thompson       | Hull                       | April | 1997 |
|          | M.Johal          | Cambridge                  | Jan.  | 1997 |
|          | B.J.Khoo         | Imperial College           | May   | 1996 |
| Internal | E. Stattersfield |                            | July  | 2005 |
|          | W. Tawepreedra   |                            | July  | 2005 |
|          | Y.Hennequin      |                            | July  | 2004 |
|          | G Pastor Moreno  |                            | Sept  | 2002 |
|          | A.Parker         |                            | Nov.  | 2001 |
|          | J.Joseph         |                            | Nov.  | 2001 |
|          | E.Kaneva         |                            | Oct.  | 2001 |
|          | M.Lei            |                            | Jan.  | 2001 |
|          | N.Jenkins        |                            | Nov.  | 2000 |
|          | M.Chadwick       |                            | March | 1999 |
|          | S. Calpin-Davies |                            | Nov.  | 1998 |
|          | A.Loxley         |                            | June  | 1998 |
|          | D.Teare          |                            | Dec.  | 1997 |
|          | S.Froggatt       |                            | Nov.  | 1997 |
|          | I.M.Hedgecock    |                            | July  | 1994 |
|          | M.Ito            |                            |       | 1994 |
|          | M.J.Lloyd        |                            | March | 1994 |

## Conference organisation

1. I organised a workshop on *Colloid Synthesis and Characterisation* in Bristol (1998) for CERC3 (Chairmen of European Research Councils' Chemistry Committees). This involved participation of 30 young scientists from throughout Europe, who were sponsored by their respective Governments.
2. In September 1999 I was asked by EPSRC to organise and chair the Large Scale Structures session of the annual meeting of UK Neutron Users, which was held in the University of Durham. This involved arranging scientific talks, discussing the current state of the facilities with the user community, and making an oral report, summarising the meeting, to the entire conference.
3. I was on the local organising committee, responsible for the scientific programme, for the International Association of Colloid and Interface Scientists meeting in Bristol in July 2000. The meeting attracted around 700 delegates.
4. I organised the Society for Chemical Industry's 2000 Founder's Lecture Mini-symposium at Imperial College London April 2000.

5. I was on the scientific organising committee for an international conference *Self-assembly: the future* held in Tuscany, Italy April 2002. This involved fund-raising (Army Research Office – USA, EU and ACS), and arranging the scientific programme consisting of talks for 60 or so international scientists. The other organisers were all Professors; B.H. Robinson (UEA, Norwich), T.A.Hatton (MIT, Cambridge MA), and P.Baglioni (Florence, Italy). A book of the proceedings from this conference is to be published in late 2003.
6. I was on the local organising committee for the XVIIth European Chemistry at Interfaces Conference at Loughborough, with responsibilities of publicising the meeting and organisation of the scientific programme.

### **External evaluations editorial boards and international committees**

7. From Jan 2006 I have been appointed a co-editor on Journal of Colloid and Interface Science. This involves handling about 200 manuscripts per year through the Elsevier web-based submission site. Members of my research group are involved (voluntarily and for remuneration) in this activity.
8. I have been appointed external examiner in Physical Chemistry at the University of Hull UK from Oct. 2005. This is a 3-year post, and involves pre-screening examination questions, evaluating standards of examination marking by faculty and giving *viva voce* examinations to appropriate students at the end of the process to decide on final degree categories.
9. In July 2005 I was commissioned by CCLRC, with two other Professors (Helliwell, Manchester and McEwan, UCL) to prepare a report on “The potential of neutron scattering to enhance research training in the UK”. This will be completed by the end of September 2005, and contribute towards a £10 billion bid for a new generation neutron scattering centre in UK, to be assessed by the UK Minister for Science and Innovation Lord Sainsbury.
10. In 2000 was invited by the Irish Government agency Enterprise Ireland to assess the first four year phase of the Irish Centre for Colloids and Biomaterials. This work involved visiting the two main research centres, in Dublin and Belfast, and preparing a detailed report (~ 30 pages) evaluating the work of the groups. Recommendations for future funding were made on the basis of this report.
11. Between Jan 1998 and Jan 2001 I was on an International scientific panel for deciding on beam-time applications to the Institut Max-von-Laue Paul-Langevin neutron facility in Grenoble, France. This drew on my expertise in both colloid science and neutron scattering. There were two meetings a year in Grenoble, and the committee dealt with around 100 proposals a time.
12. Invited member of the “Large-scale structures” neutron beamtime proposal selection committee at ISIS, Rutherford Appleton Laboratory UK. (June 2002 – June 2004). This involves similar workload as described in the section above.
13. Elected member of Langmuir editorial board since Jan. 1997. *Langmuir* is the American Chemical Society journal for Colloids and Surfaces, and based on the citations index it is now the premier Physical Chemistry journal. This involves refereeing important and controversial contributions, as well as arbitrating in contested cases. I have been invited to perform this duty for a fourth successive three-year term.
14. From 2003-2005 I served on the editorial board, as the local UK co-ordinator, for the international journal *Colloid and Polymer Science*.

15. Elected member of EPSRC peer review college from Jan. 1997-2002, and from 2005. This involves refereeing research grants, final reports and applications for Advanced Fellowships etc. I am also a referee for American Oil Chemists' Society, Medical Research Council, Enterprise Ireland, Research Council of Norway and Leverhulme Trust grant applications.
16. Non-visiting External Examiner in the Department of Chemistry, University of Malta. June 1997.
17. I have refereed over 400 academic papers to date, mainly for *Science*, *Journal of the American Chemical Society*, *Langmuir*, *Journal of Physical Chemistry*, *Colloids & Surfaces* and *Royal Society of Chemistry* publications.

### **Visiting professorships and fellowships**

18. I have been appointed Visiting Professor at Kuwait University from November 2005. This involves delivery of advanced courses and examinations in colloid science, and reporting to Kuwait University Science Faculty on the Department of chemistry there.
19. In Oct 2002 I was made Visiting Professor in surfactant science at the China Research Institute for Daily Chemical Industry (RIDCI) Taiyuan China, and at the University of Wuhan China in Dec 2003. These are two recognised centres of excellence for Colloid Science in China.

There I gave a course on surfactant science, and a book of my lecture notes, which have been translated into Chinese, is being published in China. The book will appear in a unique "mirror image" format, with a page of Chinese text on the left hand side, which maps on directly to the right hand page in English. The aim of the book is to broaden the appeal of colloid and surface science in China, and it is hoped that the English-Chinese page format will help attract students to the area, by enhancing both scientific understanding and also communication.

20. I was Visiting Professor in surfactant science at the ZhengZhou Institute for Chemistry, China in Dec 2003.
21. In Dec 2002 I was awarded a visiting fellowship from the Japan Society for the Promotion of Science to visit Dr. Seto (Kyoto) and Prof. Okabayashi (Nagoya). The fellowship was held in October 2003.

### **Contributions to neutron scattering**

22. The point above, concerning the preparation of a report to a UK government Minister is relevant here.

23. In 2003 was tasked with “championing” bids for new instrumentation at the Target Station II project for the ISIS facility Rutherford Appleton Laboratories. This is a £100M programme (announced spring 2003) to provide optimised neutron beams, which can be employed in colloid and interface science. My role, in collaboration with one other co-coordinator, involved technical evaluation and selection from a number of instrument bids, as well as generating support for these proposals from the wider neutron and colloids scientific community. The summary findings were presented to an external Science Advisory Committee (SAC) in June 2003: this SAC then recommended a “day one” instrument suite to the Project Board. The small-angle neutron scattering instrument SANS2b, one for which I was champion, was identified by SAC as one for four top priority instruments from the possible list of eleven different bids. The nominal value of this SANS2b equipment is £2M representing a significant investment for the future of a technique central to my research activities.
24. Data from the quinennial review (end date 2002) of the ISIS neutron source at the Rutherford Appleton Laboratories show that my group has generated the largest number of publications based on results from the LOQ station (small-angle neutron scattering): 45 publications out of the total instrument total of 318 representing 14% of the total publications. On average my group produces one publication every 1.2 days of beam time: the instrument average is 3.6 days per publication. The entire publication output from ISIS in this period was some 4000 papers, hence these 45 publications represent over 1% of the institute total.
25. I have served on two important neutron beamtime allocation panels, as detailed in the above section ***External evaluations editorial boards and international committees.***

## Overseas visitors

|                 |                                   |           |
|-----------------|-----------------------------------|-----------|
| J.Dong          | P.R. China                        | 1995-1996 |
| T.K.Sen         | India                             | 1998      |
| S.Yamamoto      | Nagoya Univ. Japan                | 1998      |
| Z.Du            | P.R. China                        | 1999-2000 |
| Dr. E-O.Alami   | Chalmers Univ. Sweden             | 1999-2000 |
| K.Debbadi       | Univ. Nice France                 | 2002      |
| C.Jansyk        | Univ. Nice France                 | 2003      |
| Dr. A.Bumajdad  | Kuwait University                 | 2003-2004 |
| R.Grilli        | Perugia University                | 2004      |
| A-C. Donnawirth | Lyon University                   | 2005      |
| Dr. A. Zou      | South Eastern University<br>China | 2006-2007 |

## 8. Administration and management

### (i) Contributions to faculty/departmental/academic groups in the university and external committees and working groups

#### M.Sc. in Colloid Science 1993-1997

I was responsible for administration, pastoral care, examinations, mark-sheets, time-tabling and admissions for the M.Sc. in the period 1993-1997. Amongst my successes during this period was the recruitment of two overseas applicants. Both of them chose to stay in Bristol for their Ph.D. research, and this represents around £80,000 in tuition fees for the University. Until the course closed in 1999 I assisted the new tutor, Dr. van Duijneveldt, in an advisory role.

Current

Chemistry Teaching, Admissions.  
Committees

Past Chemistry Staff-student liaison (1993-1995), House (1995-2002)  
Committees

Chemistry Good Teaching Practice (chair) 1998-99  
Working parties Unification of 1<sup>st</sup> year teaching labs. 1999-2000  
Maths provision in Chemistry 2001.

#### Open day lecture

As part of my work on Chemistry Admission committee from 1999-2002 I was responsible for delivering a general interest chemistry lecture on University Preview Day. This important duty was to demonstrate to prospective students, and accompanying parents, a high quality of teaching and communication. The lecture is on *Films, Foams and Swarming Molecules*. The format is a Powerpoint-based presentation, supplemented by plenty of live displays, which include a Boy-in-a-bubble trick and a full-screen projection of nematic liquid crystals viewed through a polarising light microscope.

#### Mentor

At his request I took on the role of 'Teaching Mentor' for a new staff member Dr. van Duijneveldt Sept. 1997.

#### Interview Panel

In Dec. 1999 I was a member of an interview panel charged with appointing a Reader in Physical Chemistry.

#### Director of International Affairs

From October 2005 I have been appointed Director of International Affairs in the School of Chemistry. This role is to promote the International Profile, by raising awareness of research and training excellence of the School of Chemistry. Goals are to increase the quality and number of overseas students signing up for post-graduate and undergraduate degree programmes, and to capitalize on opportunities for international grant income and research output.

## **(ii) Professional activities outside the University**

External Society for Chemical Industry - Bristol section committee 1993-1997.  
*Colloid and Surface Chemistry* national group committee  
from summer 1998 to present.

There are numerous important external administrative and management tasks I am/have been responsible for. These activities are essentially research-oriented, and demonstrate that my expertise is widely sought by external bodies. These are covered under section **7 Research (iv)**

**Indications of external recognition**, and include :

- a. Editorial duties
- b. Co-ordination of a large national proposal on neutron scattering facilities
- c. External examining and evaluation duties
- d. International conference organisation
- e. International review panel and journal editorial board memberships,
- f. International neutron beam time allocation panel memberships
- g. External PhD and International postgraduate examinations
- h. Refereeing for journals and research councils.

## **(iii) Community and widening participation activities**

1. In Nov 2005 I delivered a schools lecture in the Faraday Lecture theatre at the Royal Institution in London. The aim of the lecture is to inspire younger scientists to choose a career as a research chemist.
2. "The secret chemistry of the mobile phone" is a 1-hour presentation, appropriate for 6<sup>th</sup>-form audiences, written with and given jointly with Dr. Jason Riley (School of Chemistry). My contribution centres on the chemistry of the liquid crystal displays, Dr. Riley's section is about the batteries. The lecture involves interactive demonstrations, which are passed out to the audience during the lecture. The presentation was first given in March 2004, and will be rolled out to local schools and colleges in the coming years. In 2005 we gave this lecture at the Rutherford Appleton Laboratories (twice in November).
3. Starting in 1995 my research group has regularly contributed a 'live' display to the Science to the People exhibitions held in the Bristol Galleries shopping centre (SET95, SET96, SET98 and SET 2000, SET 2002). In the 2002 exercise my research group, demonstrating "mega bubble" blowing, appeared in a photo feature in the local Bristol Evening News paper.
4. During Science Week in 2003 I lectured on "Chemistry in Action" to 300 sixth form students in the Faraday Theatre at the Royal Institution. This presentation was in the broad area of Nanotechnology, and of course, included numerous demonstrations that were designed so audience members could participate.
5. During National Chemistry Week, in Nov. 2001 I gave a presentation on issues in modern Chemistry to 1000 pupils at Bristol Grammar School during morning assembly.
6. I have lectured to Bristol science pupils on open days in the School of Chemistry under the "Young and Gifted Scheme" in 2002 and 2003. The subject was chosen to be (hopefully) relevant and have interest to teenagers: the chemistry of liquid crystal displays used in mobile phones.
7. I have made "science day" presentations at a local Bristol School (Ashley Down Infants/Juniors).

## Appendix

### The 1999- 2000 Clifford Wharton Prize – Citation

Julian Eastoe is this year's winner of the Clifford Wharton prize for excellence in teaching in the School of Chemistry. This prestigious prize is awarded mainly on the basis of student feedback, especially through the questionnaires. This year Julian has given four Honours lecture courses, one Chemistry 1S course plus two MSc taught courses in Colloid Science, all given with typical enthusiasm and thoroughness. He has given the same commitment to his Chemistry 1A tutorials, workshops and laboratory sessions. He has achieved outstanding questionnaire results this year, building on previous excellence.

His enthusiasm for his subject is made abundantly clear in all his teaching activities; he is forever producing new ideas, changing his approach and teaching material accordingly. He expects the same commitment from the students. He is a great populariser of chemistry. He is to be seen at the forefront on preview days with a general interest lecture, or blowing soap bubbles in the quadrangle; or he can be seen up to his armpits in colloidal slime at public displays in the Galleries (Shopping Mall).

Julian is an enthusiastic member of the Teaching Committee and of the Teaching Advisory Board. Recently he and several colleagues produced a valuable Guideline for Good Teaching Practice in the School of Chemistry. The aim of this ongoing document is to set and improve teaching standards within the School. Julian has proved to be a good mentor to some of his less experienced colleagues.

Julian's nomination for the award has been heartily endorsed by the students on the Staff/Student Liaison Committee.

Many congratulations to Julian: the award and cheque for £500 will be presented at the beginning of the new teaching year in October.

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