

Chemical Intelligence

Newsletter of The Society for the History of Alchemy and Chemistry
No. 2 December 2009

Happy new year! The past year saw the launch of several new ventures by SHAC, intended to foster research into the history of alchemy and chemistry worldwide. These included the founding of the Graduate Network for junior scholars, the SHAC Award Scheme, and the first issue of *Chemical Intelligence*. The fruits of these ventures appear, appropriately enough, in this second issue, with reports from the first recipients of SHAC's 'New Scholar' awards.

In 2010 the Society commemorates its 75th anniversary with a special November meeting at the Royal Institution. SHAC is also delighted to announce that from early 2010 members will receive online access to the full back archive of *Ambix* included in their subscription. *Ambix*, the leading journal in the field of history of alchemy and chemistry, was first published in 1937 and includes 57 volumes. Digitisation of this substantial back archive is currently in progress. Keep an eye out for further announcements in *Ambix*.

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1. Calendar

1.1 SHAC meetings

8 January **SHAC Graduate Workshop on the History of Alchemy and Chemistry**
10am – 4.30pm, Department of History and Philosophy of Science, University of Cambridge, Free School Lane, Cambridge CB2 3RH

Organised as part of the SHAC Graduate Network. For the full programme and details of registration, see section 4.1 below.

17 March **SHAC Council Meeting**
30 Russell Square, Birkbeck College, London

June
(date tbc) **SHAC General Meeting:**
'Chymistry and mechanism in the 17th and 18th century'
Université de Lille 3, Lille

This will be the second meeting of a Lille–London colloquium organised by Stephen Clucas (Birkbeck, University of London) and Bernard Joly (Université de Lille 3). Enquiries may be made to Stephen Clucas, at s.clucas@english.bbk.ac.uk.

19 November **SHAC 75th Anniversary Meeting**
12pm, The Royal Institution, London

The 75th anniversary of the founding of SHAC will be celebrated on Friday 19 November with a meeting at the Royal Institution in London. In the afternoon a series of papers by leading historians will discuss the development of the history of chemistry since 1935. This will be followed by a public lecture delivered by Professor Simon Schaffer (University of Cambridge), sponsored by SHAC and the RI. A dinner will conclude the day's events. Further details will be available in the next issue of *Chemical Intelligence*.

1.2 SHAC-supported events

12 January **AD HOC – History of Chemistry Discussion Group at UCL**
6pm – 7.30pm (monthly), Malet Place Engineering 1.13, University College London, Bloomsbury, London

Ad Hoc is a history of chemistry reading and discussion group, organised by Hasok Chang. It meets once a month, usually on the first Tuesday of the month, at the UCL campus in Bloomsbury. Each month several readings on a particular topic are selected. The readings are circulated 1–2 weeks in advance of the meeting. The group has been running for five years, with subjects for reading and discussion ranging from medieval alchemy to quantum chemistry. Participants range from advanced undergraduate students in chemistry with an interest in history to professional historians and philosophers of science with an interest in chemistry.

The group would welcome members of SHAC who would like to join the discussions and who are able to attend on a regular basis. Please contact the group's secretary Rosie Coates at r.coates@ucl.ac.uk.

February **'Reflections on Water'**
5.15pm, Room 202 (Rosemary Cramp Lecture Theatre), Calman Learning Centre, Durham University (Science Site)

A year-long interdisciplinary lecture series on the theme of 'Water' held at Durham University. The 2010 programme comprises:

- 3 February Jonathan Lowe (Philosophy, Durham University), 'Water as an example in philosophical literature'.
 - 10 February David Brown (Theology, St Andrews University), 'Water in Religious Art and Architecture'.
 - 17 February Peter Coates (History, University of Bristol), 'Going Swimmingly: Rivers of Rebirth and Recreation'.
 - 24 February Sir Arnold Wolfendale, FRS (Physics, Durham University), 'Water, water everywhere – finding ourselves when all at sea: navigators, astronomers and clockmakers'.
- February – **Oxford History of Chemistry Seminar 2009: 'Mastering Nature? Chemistry in History'**
May

- 25 February **New Researchers**
3pm – 5pm, History Faculty, Old Boy's High School, George Street, Oxford OX1 2RL
- Georgette Taylor (University College, London), 'Pedagogical progeniture or tactical translation? George Fordyce's additions and modifications to William Cullen's philosophical chemistry'.
 François Pepin (Université Paris-Ouest), 'Diderot and chemistry: a model of experimental philosophy'.
- 11 March **New Researchers**
3pm – 5pm, History Faculty, Old Boy's High School, George Street, Oxford OX1 2RL
- Catherine Jackson (University College, London), 'Chemistry as the defining science: training and discipline in 19th century chemical laboratories'.
 Erik Langlinay (EHSS, Paris), 'Scales and spaces of the chemical industry in France, 1890-1930'.
- 29 April **Chemistry in the Low Countries in the 19th and 20th centuries**
3pm – 5pm, Maison Française, Norham Road
- Ernst Homburg (University of Maastricht), title tbc.
 Brigitte van Tiggelen (Catholic University of Louvain), title tbc.
- This seminar will be followed by a reception and presentation of the Morris Award of the Society for the History of Alchemy and Chemistry to Professor Ray Stokes, University of Glasgow, for his work on the history of the German chemical industry. Professor Stokes will then give a lecture.
- 13 May **Chemistry and pharmacy in the colonial world**
3pm – 5pm, Centre for the History of Medicine, Oxford Brookes, Headington
- Floriane Blanc (Université de Lyon), 'The Dakar Faculty of Medicine and Pharmacy, part of a global plan?'
 Stuart Anderson (London School of Hygiene and Tropical Medicine), 'Setting the Standard: The British Pharmacopoeia as an instrument of imperialism, 1864-1932'.
- 27 May **Chemical adventures: the search for natural products**
3pm – 5pm, Maison Française, Norham Road
- Hal Cook (Wellcome Trust Centre for the History of Medicine, UCL), title tbc.
 Laurent Sorcelle (journalist, Paris), will discuss his novel, *Le trésor de Los Mangos*, on the search in Mexico by a young chemist for a rare periwinkle with therapeutic properties.
- Convenors: Pietro Corsi, John Christie, Robert Fox, Muriel Le Roux, John Perkins, Viviane Quirke. Further details, including directions, can be found at <http://www.history.ox.ac.uk/hsmt/histchem>, or contact Prof. Corsi's secretary, Stephanie Jenkins, History Faculty, Oxford, 01865 615027, stephanie.jenkins@history.ox.ac.uk.

1.3 Other activities worldwide

18 January **Science and Literature Reading Group**
7.30pm, Homerton College, Cambridge

This spring, the fortnightly Science and Literature Reading Group will be focusing on chemistry, beginning with English alchemical poetry: readings selected from Ashmole's *Theatrum Chemicum Britannicum* (London 1652). For information and readings, see the group's blog: <http://www.sci-lit-reading-group.blogspot.com>. To join the group's mailing list, email Melanie Keene, mjk32@cam.ac.uk.

January – **Séminaire 'Histoire de la chimie aux XVII^e et XVIII^e siècles'**
May **UMR 'Savoirs, Textes et Langages' (CNRS, universités de Lille 3 et de Lille 1):**
Tuesdays, 5pm – 7pm, Université de Lille 3, salle Corbin (locaux de STL, bâtiment B)

Programme 2009-2010: 'Un siècle de chimie à l'Académie royale des sciences de sa création (1666) à l'arrivée de Lavoisier (1768)'

Le laboratoire alchimique, qui passe volontiers pour le lieu privilégié de l'élaboration de la chimie ancienne, symbolisait à la fois le caractère privé, si ce n'est secret, de cette science et sa nécessaire articulation avec une pratique qui lui donnait son sens: il ne s'agissait pas seulement de trouver la pierre philosophale, mais aussi de fabriquer médicaments et substances chimiques répondant aux demandes sociales. L'introduction de la chimie parmi les 'classes' de l'Académie royale des sciences va transformer son statut en lui donnant à la fois le caractère public et abstrait d'un savoir qui se développe désormais au fil des communications et des débats publics, opposant les chimistes entre eux, mais les confrontant aussi aux théories et aux contestations des autres sciences, et en particulier de la physique mécaniste qui prend peu à peu une place dominante dans les débats.

En un siècle, qui conduit des derniers paracelsiens aux premiers travaux de Lavoisier, la chimie s'est profondément transformée, poussée à la nouveauté à la fois par le dépassement de ses contradictions internes et par la nécessité de s'inscrire dans les schémas scientifiques qui structurent la pensée de son temps. La fidélité à la tradition n'empêche pas les ruptures radicales. Ce sont ces transformations qui seront étudiées à travers les travaux de quelques figures marquantes de l'Académie, Du Clos, Homberg, Lémery père et fils, les frères Geoffroy, Hellot, Macquer... mais aussi Fontenelle dont l'attitude ambiguë à l'égard de la chimie témoigne bien des difficultés de cette science au XVIII^e siècle.

Responsables: Bernard Joly et Rémi Franckowiak.

12 January John Perkins (Oxford Brookes University), 'L'Académie des Sciences face à l'impressionnant développement de la chimie en France entre 1750 et 1790'.

9 February Luc Peterschmitt (Université de Lille 3), 'L'esprit de la chimie selon Fontenelle'.

2 March François Pépin (Université Paris-Ouest), 'Fontenelle et le devenir scientifique de la chimie'.

- 16 March Christine Lehman (Université Paris X), 'L'art de la teinture à l'Académie royale des sciences au XVIIIe siècle'.
- 30 March Patrice Bret (CNRS), titre à préciser.
- 27 April Lawrence Principe (Johns Hopkins University), 'La chimie helmontienne a l'Académie Royale des Sciences'.
- 18 May Marco Beretta (Università di Bologna), 'La chimie de Lavoisier de 1762 à 1768'.

19 March **Royal Society of Chemistry Historical Group:
'The Rise and Fall of ICI'**
10.15am – 5.15pm, Chemistry Centre, Royal Society of Chemistry, Burlington House, Piccadilly, London W1J 0BA

Registration takes place from 10am. Lunch is not provided but there are many cafés and bars close by. For RSC Historical Group members, the AGM of the Group will be held at 1.45pm. The programme includes:

Frank James (Royal Institution), 'Ludwig Mond & other Mondes (Science & the Arts)'.

David Edgerton (Imperial College), 'Imperial Chemical Industries in the Second World War'.

Viviane Quirke (Oxford Brookes University), 'From Dyestuffs to Pharmaceuticals: ICI and the British drug industry, ca 1940s-1970s'.

Martyn Twigg (Chief Scientist, Johnson Matthey) and Pelham Hawker (Metalysis), 'Catalysis - a lost opportunity'.

Julian Phillips (ICI Agricultural Division), 'Things fall apart'.

Followed by general discussion and concluding remarks by Jack Betteridge.

There is no charge for the meeting but seating is limited. Please register by e-mail to w.griffith@ic.ac.uk, before Friday 12 March; e-mails will be acknowledged. If registering by post please send the form below to Prof. W. P. Griffith, Department of Chemistry, Imperial College, London, SW7 2AZ, enclosing an SAE, by Monday 8 March. For the full programme, see the Society's website: <http://www.chem.qmul.ac.uk/rschg/>.

24–26 June **Scientific Objects and their Materiality in the History of Chemistry Workshop**
Max Planck Institute for the History of Science, Berlin

For both experimental inquiry and technical application, the sciences depend on working with material things and processes. In this respect, chemistry is arguably the material science par excellence, primarily through the crucial role of the synthesis of chemical compounds, and the strong interactions with technological institutions and industry. In terms of the representation of its objects of inquiry, chemistry has a peculiarly materialized semiology in a long-standing tradition of graphic formulae and three-dimensional structural models, as well as a rich heritage of ordering systems such as the periodic

table. In the middle-ground between representation and intervention there stand certain kinds of principles and entities, some of them invisible, that are both objects of experimental inquiry and theoretical speculation. Concepts such as the atom, element, or phlogiston have laid the groundwork for chemical research in defining the units of ordering systems, constituting the goals for material production, serving as limitations to the extent of chemical practice, or having crucial heuristic roles. And all of them have experienced variation, re-definition, development, suppression, and sometimes even extinction in the course of history. It is the aim of this conference to track down the history of such superordinated scientific concepts and objects, and to contribute to the understanding of their working modes.

Commonly, the materiality of scientific objects has been described by two, arguably conflicting, dimensions: First, by studies of materially-intervening practice – the ways in which 'real things' are involved in and condition such practice. Second, by the significance and meaning ascribed to things in discursive practice. These two dimensions are not necessarily in contradiction, and their tension can be used in productive and innovative ways. The proposed conference will build on these traditions and their tensions, focusing multi-disciplinary efforts on a single science and its concepts and objects of inquiry. However, it most importantly seeks to yield new directions in history of chemistry, concentrating on the relation of the concepts of this science, their embodiment in experimental techniques, instruments, and material substances, their representations, and their subsequent re-definition. Moreover, although the conference is based on cutting-edge themes in history of science and wishes to contribute to their development, its projected audience escapes the boundaries of this field, and extends into history, science studies, philosophy of science, and of course chemistry itself.

The workshop will consist of ca. 15 pre-circulated papers. Enquiries should be sent by email to carsten.reinhardt@uni-bielefeld.de. Organised by Michael Gordin (Princeton), Ursula Klein (Berlin), and Carsten Reinhardt (Bielefeld).

8–11 July

International workshop: 'On the Fringes of Alchemy'

Medieval Studies Department, Central European University, Budapest

The history of alchemy has been subject to an intensified interest in the past few decades as testified by a growing number of related conferences and publications. These studies, however, focus largely on Western Europe and the central territories of the Habsburg Monarchy and on major figures in the history of science, while traces of alchemical experimentation, prince-practitioners and new sites of knowledge production were demonstrably present in less studied geographical areas. Also, many new and relevant studies are published only in national languages and hence not widely accessible. This is partially due to a more traditional orientation in East-Central European historiography, which did not invite research on non-canonical subjects like alchemy. The situation, however, is changing, and the aim of this workshop is to promote a fresh look on old, and the search for hitherto neglected or unknown, sources related to alchemy.

The workshop explores the fringes of alchemy, both in a disciplinary and a geographical sense. What counts as alchemy in the late medieval and early modern period? Who were the alchemists? Where and how did they practice their art? While the concepts of center and periphery are no longer considered historically justified, it remains a fact that there are very few publications,

especially in English, on alchemy in territories on the fringes of late medieval and early modern Europe. Therefore, we will also address the issue of the transfer of alchemical knowledge between various regions, religions and cultures, between East and West, North and South, Arabic-Islamic and Judeo-Christian traditions.

Further details and provisional programme are available from the organiser, Dóra Bobory (Collegium Budapest Institute for Advanced Study) at dora.bobory@gmail.com. The final programme will appear in the next issue of *Chemical Intelligence*.

2. Calls for papers

19-22 July **Durham University Centre for Seventeenth-Century Studies
Thirteenth International Conference**
Durham Castle, Durham

Proposals are invited for the thirteenth Conference of the Durham Centre for Seventeenth-Century Studies, which will focus on the general theme 'Ideals and Values'.

It is expected that this theme will be approached from a very wide range of disciplinary and methodological perspectives, including history of science. Contributions which span national and disciplinary boundaries are, as always, particularly welcome. Papers should be of 20 minutes' reading time. Each session will have ample time for discussion. Offers to chair sessions are welcomed from participants who are not reading papers.

Proposals for papers should be of approx. 100-200 words, and should be sent to the Director, Prof. Richard Maber (email: r.g.maber@durham.ac.uk) as soon as possible, but no later than **26 February 2010**. Proposals for themed panels are also welcomed.

The conference will take place in the magnificent setting of Durham Castle, from Monday 19 to Thursday 22 July. Residential delegates will depart after lunch on 22 July; it will also be possible to book overnight accommodation for nights before and after the conference if required.

22-25 July **BSHS Annual Conference, 2010**
University of Aberdeen, Scotland

The British Society for the History of Science Annual Conference will start late in the afternoon of 22 July with a plenary lecture and reception. The main venue is the Conference Centre at the heart of the sixteenth-century campus of King's College in Old Aberdeen, with the conference dinner to be held in the impressive Elphinstone Hall. The programme will include parallel themed sessions, plenary lectures, education and outreach activities, an opportunity to explore the rich resources available in Aberdeen for historians of STM and a conference dinner and ceilidh. An inclusive conference package will be available.

The Programme Committee invites papers or sessions from historians of science, technology and medicine and their colleagues in the wider scholarly community on any theme, topic or period. Proposals are welcomed from

researchers of all nationalities at all stages of their careers. Participation is in no way limited to members of the Society although members will receive a discount on the registration fee.

Session proposals should normally consist of three or four papers, with or without a commentator. Sessions will be 90 minutes to 2 hours long. Proposals for alternative types of session (e.g. round-table or witness seminar) are strongly encouraged. Please discuss this with us in advance of the Call for Papers deadline: bshs2010programme@bshs.org.uk.

Proposals for individual papers should include an abstract of no more than 250 words. Abstracts should not contain footnotes and should be comprehensible to a non-specialist audience.

Full details on how to submit session proposals and individual abstracts will be available on the BSHS website, <http://www.bshs.org.uk/bshs/conferences/index.html>

The deadline for submitting a session or abstract is **22 January 2010**.

9–11 August **International Society for the Philosophy of Chemistry:
Summer Symposium 2010**
University College, Oxford

Abstracts should be sent before **1 July 2010** to Michael Akeroyd at m.akeroyd@bradfordcollege.ac.uk, or Rom Harré at harre@linacre.ox.ac.uk.

The programme includes plenary sessions and the Distinguished Chemist's Lecture on Monday 9 August, banquet on Tuesday 10 August, and a tour of the Museum of the History of Science on Wednesday 11 August. Further details at the Society's website: <http://ispc.sas.upenn.edu/>

3. Prizes, grants, fellowships

3.1 SHAC grants and prizes

The Partington Prize 2011

Deadline for entries: 31 December 2010.

The Society for the History of Alchemy and Chemistry has established the Partington Prize in memory of Professor James Riddick Partington, the Society's first Chairman. It is awarded every three years for an original and unpublished essay on any aspect of the history of alchemy or chemistry. The prize consists of five hundred pounds (£500).

The competition is open to anyone with a scholarly interest in the history of alchemy or chemistry who, by the closing date of 31 December 2010 has not reached 35 years of age, or if older, has completed a doctoral thesis in the history of science within the previous three years. Scholars from any country may enter the competition, but entries must be submitted in English and must not have been previously submitted to another journal. The prize-winning essay will be published in the Society's journal, *Ambix*. One hard copy of the entry, word processed on one side of the paper, should

be submitted, along with a copy of the entry on disc. We prefer files to be in Microsoft Word XP, if possible. Essays must be fully documented using the conventions used in the current issue of *Ambix*. Essays must not exceed 10,000 words in length, including references and footnotes. All entries must be submitted with a word count.

All entries should be sent to John Perkins, Hon Treasurer, Centre for Health, Medicine and Society, Oxford Brookes University, Gipsy Lane, Headington, Oxford OX3 0BP, with the words 'Partington Prize' written clearly on the envelope. Each entry should contain a **separate** title page giving the author's name, institution, postal address, email address and date of birth (and if relevant the date of completion of their thesis). The author's name and contact details **must not** appear on the pages of the essay as the identity of the author will not be made available to the judges. Essays (no more than one from each competitor) must be received no later than 31 December 2010.

The decision of the judges appointed by the Council will be final. The Society reserves the right to divide the prize between two or more entries of equal merit, or not to award a prize should no essay be deemed of suitable standard.

The name of the winner will be announced by 30 April 2011, and all essays will be returned to competitors soon after that date.

The John and Martha Morris Award 2009

The Society for the History of Alchemy and Chemistry has awarded the first John and Martha Morris Award for the History of Modern Chemistry and the Chemical Industry to Professor Raymond G. Stokes, Director of the Centre for Business History in Scotland and Professor of Business History at the University of Glasgow. Professor Stokes has been given this award for his pioneering work on the history of the modern German chemical industry.

The award will be presented in Oxford at the SHAC-supported Oxford Seminar on 29 April 2010. Professor Stokes will give a short lecture and be presented with his award immediately after the Seminar. The event will be followed by a reception.

Society for the History of Alchemy and Chemistry Award Scheme

1. Award Scheme 2009

The Society for the History of Alchemy and Chemistry made six awards in 2009, the first year of the Scheme. Reports on the winning projects may be found under 'Reports' (section 5.2, below) in this and the next issue of *Chemical Intelligence*.

New Scholars awards were made to:

Dr Ximo Guillem-Llobat, University of Valencia

'New sites for a new concept of pure food: municipal laboratories in France and Spain (1878-1910)' (report below).

Arjan Linthorst, PhD student, University of Maastricht

'The history and scientific development of green chemistry'.

Reino Mocellin, PhD student, University of Nanterre Paris-Oeust

'The development of Guyton de Morveau's chemistry course in Dijon'.

Efthymia Priki, MLitt student, University of Glasgow
'The archives of the Bibliotheca Philosophica Hermetica in Amsterdam' (report below).

Jennifer Rampling, PhD student, University of Cambridge
'Alchemical manuscripts in Viennese archives' (report below).

A **Subject Development** award was made to:

Dr Danielle Fauque, University of Paris-Sud
'The historical printed collections of the Maison de la Chimie'.

2. Award Scheme 2010

The Society for the History of Alchemy and Chemistry invites applications for the 2010 Award Scheme. Two types of award are available: support for research into the history of chemistry or history of alchemy by **New Scholars** and support for **Subject Development** of either history of chemistry or history of alchemy.

The **New Scholars** Award is open to postgraduate students (both masters and doctoral students) and those who have obtained a PhD within five years of 1 January of the year in which the application is made. Awards of up to £500 will be made to cover research expenses, including travel, accommodation, subsistence, the reproduction of documents, and library fees. Applications may also include the costs of reproducing images for publication. The scheme will not fund the purchase of equipment or course fees.

In addition, postgraduate students only may apply for the costs of travel to conferences and accommodation, but only in order to give a paper. The scheme will not pay conference registration fees.

Subject Development awards of up to £1000 will be made to support activities including, but not limited to, seminars, workshops, colloquia, lecture series, conference sessions, conferences, exhibitions and outreach activities that support either the history of chemistry or history of alchemy as academic subjects.

Only members of the Society, both those in the UK and those overseas, may apply. Members must be in good standing at the time of making an application, and, if successful, throughout the period of an award. For more information, and an application form, please contact the Hon Secretary to the Society, Dr Georgette Taylor, at g.taylor@ucl.ac.uk. Membership enquiries to the Hon Treasurer of the Society, John Perkins at shacperkins@google-mail.com.

Application forms will be available from 1 March 2010. The closing date for applications is **31 May 2010**.

3.2 Other prizes, grants and fellowships

Liebig-Wöhler-Freundschaft-Preis 2009

Christoph Meinel, Professor of History of Science at the University of Regensburg, was the recipient of the 2009 Liebig-Wöhler-Freundschaft-Preis. This annual prize has been awarded since 1994 by the Göttingen University Chemical Society in association with the Lewicki-Stiftung, for work in the history of chemistry, particularly relating to the work of Justus von Liebig and Friedrich Wöhler. Professor Meinel was awarded the prize on 6 June 2009 for his several contributions to Liebig and Wöhler studies.

Long and short term fellowships, Chemical Heritage Foundation, Philadelphia

Generous pre- and postdoctoral fellowships are available for research on the history of chemistry, broadly construed. Fellowships are available for the academic year 2010-11, for periods of 1 to 9 months, and will be spent in residence at CHF in Philadelphia. Travel grants are available for shorter research projects.

Projects funded in the past range from the history of Arabic alchemy and agricultural improvement to nanotechnology, pharmaceutical industry and trans fats. Research proposals detailing the importance of CHF's wide-ranging collections for the proposed project will be considered with particular care.

The deadline for all long-term and short-term fellowship applications is **15 February 2010**. Applications for fellowships can be submitted only through the online form, at <http://www.chemheritage.org/research/research-nav4.html>.

You may not apply for both a long-term and a short-term fellowship at the same time. If applying for a short-term fellowship, you must indicate how many months you wish to be in residence at CHF. If applying for a long-term fellowship, you must indicate whether you are applying for a postdoctoral or a dissertation fellowship. Postdoctoral fellowships can only be awarded to scholars who have their PhD in hand before July 2009.

You must also submit:

- a research proposal of less than 1,500 words (Word or PDF file)
- a curriculum vitae of 3 pages or less (Word or PDF file)
- contact information for two people submitting reference letters on your behalf.

For further details, see <http://www.chemheritage.org/research/research.html>.

Travel grants, Chemical Heritage Foundation, Philadelphia

There is no deadline for travel grant applications. Travel grant applications can be submitted at any time and are assessed by an internal CHF review committee. A travel grant application must contain:

- A research proposal that also details how the applicant will make use of CHF's collections (1 page)
- A curriculum vitae (up to 3 pages)
- One reference letter (applicants are responsible for references submitting letters directly to CHF via the e-mail address below)

Travel grant applications must be submitted electronically, as Word or PDF files, to: travelgrants@chemheritage.org.

4. SHAC Graduate Network

The SHAC Graduate Network aims to stimulate research into the history of alchemy and chemistry worldwide, by providing research training, grants and networking opportunities for postgraduate students and postdoctoral researchers working in these fields. As part of this scheme, postgraduates and early career researchers are eligible to apply for grants towards the cost of research (the **New Scholars** Award,

section 3.1 above). In January 2010 the Society holds its first graduate student workshop on methods, sources and approaches in the history of alchemy and chemistry, to take place in Cambridge (see below). It is intended that this event will alternate with a postgraduate symposium held every other year.

For further details on the Graduate Network and planned events, please contact Jennifer Rampling at jmr82@cam.ac.uk.

4.1 Graduate Network events

SHAC Postgraduate Workshop in the History of Alchemy and Chemistry

10.15am – 4pm, Friday 8 January. Department of History and Philosophy of Science, University of Cambridge, Free School Lane, Cambridge CB2 3RH

This one day workshop, aimed particularly at postgraduates and early career researchers, introduces and explores historiographical and methodological issues unique to the history of alchemy and chemistry. We will investigate the practical challenges of researching chemistry over different periods, from pre-modern matter theories and artisanal practices, to the shaping of chemistry as a formal discipline in the eighteenth and nineteenth centuries, and the increasing permeability of chemistry's boundaries with other disciplines, including physics and the biosciences, in modern times. Participation is welcomed both from scholars already working on related topics, and those interested in exploring points of intersection between the history of chemistry and their own research.

Discussion will be framed by presentations from junior and established scholars, including:

Hasok Chang (University College, London), 'Why has chemistry become unfashionable for historians of science?'

Jennifer Rampling (University of Cambridge), 'Interpreting alchemy: text, image and practice.'

Karin Ekholm (Indiana University, Bloomington), 'Some problems in the history of seventeenth-century chemistry.'

John Perkins (SHAC/Oxford Brookes University), 'Searching for chemists in eighteenth-century France.'

Pieter Thyssen (Catholic University of Leuven), 'The Replication Method in the history of chemistry: resolving a nineteenth-century priority dispute.'

Viviane Quirke (Oxford Brookes University), 'Chemistry, the pharmaceutical industry, and medicine in the twentieth century: drugs as "boundary objects."'

Lunch is provided. There is no charge for attendance, but registration is required. Bursaries may be available towards the cost of travel and accommodation. Please email Jennifer Rampling (jmr82@cam.ac.uk) for further details, or to register.

4.2 Graduate Network awards

Conference grants: 7th ICHC, Sopron

SHAC awarded four conference grants to support the attendance of postgraduate students at the 7th International Conference on the History of Chemistry (7th ICHC) in Sopron, Hungary, from 2–5 August 2009.

Awards were made to Ms Malika Basu (Kolkata), Ms Agnes Kovacs (Budapest), Mrs Flora Papparou (Athens), and Mr Pieter Thyssen (Leuven).

5. Reports

5.1 SHAC events

May 2009: 'Pharmacy in History'

SHAC, the Royal Society of Chemistry Historical Group, and the Faculty of the History and Philosophy of Medicine and Pharmacy

On Tuesday 12th May 2009, the Society held a joint meeting with the Royal Society of Chemistry Historical Group and the Faculty of the History and Philosophy of Medicine and Pharmacy at Apothecaries Hall, Black Friars Lane, London. The subject of the meeting was 'Pharmacy in History', and around 70 people attended. After a brief introduction by Major General Alan Hawley OBE (Faculty President), the first speaker was Dr Peter Pormann (Warwick University) on the subject of 'Medieval Arabo-Islamic Pharmacology: Between Continuity and Change'. Dr Pormann explained that, like Islamic medicine more generally, the pharmacological tradition in Arabic heavily relied on Greek models. But the medicinal plants and substances available, for instance, in tenth-century Baghdad differed considerably from those found in classical Athens or Imperial Rome. Moreover, the physicians themselves innovated in a number of ways. Therefore, the story of Islamic pharmacology can paradoxically be told as one of both continuity and change.

He expanded on this by reference to a comparison of Dioscorides and Galen. Pedianus Dioscorides of Anazarbos (in modern Turkey), who lived in the middle of the first century AD, composed a work entitled *On Medicinal Substances* in five books. He organised his material according to types, and attributed certain qualities to each substance. Galen wrote a substantial monograph on the same subject, with the title *On the Powers of Simple Drugs*. Dr Pormann showed how Galen often took his cue from Dioscorides, but introduced an important innovation, classifying the qualities of Dioscorides into degrees according to their strength. Both these works were translated into Arabic in the ninth century and formed the basis of Islamic pharmacology. Dr Pormann also demonstrated change and innovation in the pharmacological literature that developed in the lands of Islam. On a theoretical level, the ninth-century polymath al-Kindi refined the classification system of Galen further. When Galen spoke of qualities in the first, second, third and fourth degrees, he had not specified how these qualities interacted with each other in compound drugs. Dr Pormann showed that al-Kindi devised a system in which the power of the qualities grew exponentially (1, 2, 4, 8) and theorised how these different degrees of quality interacted in specific compound drugs. On the level of practice, he indicated, many new ingredients entered the formularies written in Baghdad during the ninth and tenth centuries, with ingredients from India proving especially popular. In this way,

both new pharmacological ideas and new ingredients were incorporated into the Greek system, which was thus expanded and enhanced.

The second speaker was Dr Anna Simmons (The Open University), who spoke on 'Extracts, Experiments and Education: Chemistry at the Society of Apothecaries in the Nineteenth Century'. Dr Simmons gave a brief account of the foundation and expansion of the Society of Apothecaries, which by the nineteenth century was one of the largest manufacturers of pharmaceutical substances. Despite its long history of chemical activity, the Society is most familiar for its role in medical licensing in the nineteenth century and its activities as a livery company. This emphasis led to the importance of chemistry for the institution being overlooked. Chemistry was essential to the operation of the pharmaceutical trade at Apothecaries' Hall. This had developed out of a laboratory founded in 1672 to manufacture chemical medicines and at the beginning of the nineteenth century the Society was one of the largest drug manufacturers in Britain, holding valuable monopolies with the Navy and the East India Company. The centre of chemical activity at Apothecaries' Hall in the nineteenth century was the Great Laboratory. Constructed in 1822 to expand the Hall trade's manufacturing capacity, this was an impressive building fifty feet long by thirty feet wide by thirty feet tall where all of the chemical operations requiring intense heat were performed.

Dr Simmons proceeded to show that, in addition to chemistry's practical importance in drug manufacturing, the subject had many other uses for the Society. Through the research and consulting activities of the chemists working at Apothecaries' Hall, the subject helped to shape the Society's institutional profile. Chemistry also had an educational function as part of the curriculum for the Licence of the Society of Apothecaries (LSA) and a rhetorical function in raising the Society's scientific status and intellectual authority. Additionally, through projects such as lectures and libraries, chemistry linked together the spaces and objectives of the Society's three roles. The way in which chemistry supported the Society's intellectual and institutional aims was particularly important as the early nineteenth century was a demanding time for the Society of Apothecaries. Following the new responsibilities given to it in the 1815 Apothecaries' Act, the Society faced criticism that its drug trade detracted from its licensing role. Its activities in chemistry could be used to counter these.

However, Dr Simmons explained, the Society's attempts to use chemistry in these ways did not necessarily have the desired impact. Using a description of Apothecaries' Hall which appeared in *Household Words* in 1856, she showed that, to many visitors, Apothecaries' Hall seemed "composed of two distinct parts", with the manufacturing premises where chemistry was utilised on one hand and the spaces used for the licensing and livery functions on the other. It is also difficult to determine the impact that the Society's chemical activities had on the various audiences of its members, medical students and the wider London medical community. Nevertheless, Dr Simmons concluded, in using media compatible with the culture of public science prevalent at the time, the Society demonstrated the wide-ranging applications of chemistry. The subject was thus crucial to the Society's institutional identity as it sought to raise its status as a learned organization.

The third speaker, Professor Tilli Tansey (UCL) gave a talk entitled 'Adventures in Pharmacy, by a Freeman of the Society of Apothecaries'. This talk centred on the life and career of Sir Henry Dale (1875–1936), Nobel Laureate in Physiology or Medicine in 1936. He was awarded the Society of Apothecaries' highest honour, its Gold (Galen) Medal in 1932, and was made a Freeman of the Society in 1951.

Henry Dale was born and brought up in North London, attending a local school, and taking the exams of the independent examining board, the College of Preceptors when he was 14, coming second in the entire country. He earned a £20 prize from Barclays Bank, and a career in the financial world beckoned. However, his father attended the annual Methodist conference that year, at which he met Dr F W Moulton, a noted Biblical scholar, who was also the headmaster of the Leys school in Cambridge. Moulton, hearing of the younger Dale's exam success, suggested that he apply for a scholarship to continue his education at the school. This he did, and he entered the school in 1891. There he studied the sciences, and was influenced by visiting speakers from the University, to read Natural Sciences at Cambridge. Unable to remain in Cambridge after graduation to do research, as he wished, he returned to London to complete his medical qualifications at St Bartholomew's Hospital. Just as a career in clinical practice seemed likely, a rare Scholarship in physiology, the George Henry Lewes studentship, became available. Dale applied for, and was awarded, the position, which enabled him to work with Professor Ernest Starling and his brother-in-law William Bayliss at University College London. In 1904 Starling was asked by the pharmaceutical manufacturer Henry Wellcome to recommend a suitable man to work in his private laboratories, the Wellcome Physiological Research Laboratories (WPRL). Starling nominated Dale, who accepted the post, despite being warned by friends that he would be contaminated by association with a 'tradesman'.

At the WPRL Dale began the research work that was to inform his entire career. At Wellcome's suggestion he started to work on the pharmacology of ergot of rye, then in use as an obstetric preparation to speed up recalcitrant labours. He worked closely with chemists, particularly George Barger and Arthur Ewins. They isolated and refined numerous compounds from ergot, which Dale then tested physiologically. During the 10 years that Dale worked at the WPRL, he was associated with the discoveries of histamine, tyramine and acetylcholine, none of these substances being previously known to occur naturally. His work contributed to the discovery of several compounds that were marketed for obstetric use, and he also revealed that some chemicals mimicked the effects of sympathetic nervous stimulation, for which he coined the word 'sympathoimetic'. In addition, Dale was the first to report the oxytocic effects of extracts of the posterior pituitary, and elucidated some of the mechanisms of anaphylaxis.

In 1914 he was elected a Fellow of the Royal Society, a clear indication that association with a 'tradesman' did not preclude the production of first class science. He was the first person associated with the pharmaceutical industry to achieve this honour, and many of his Wellcome colleagues, including both Barger and Ewins, were also elected to the Fellowship in later years. 1914 was also the year in which Dale left the WPRL to join the newly created Medical Research Committee (later Council, the MRC) as Head of the Biochemistry department of their National Institute for Medical Research (NIMR). Based in Hampstead after the first world war, he continued the lines of work he began at the WPRL, and once again collaborations with chemists were extremely important. Working with one such, Harold Dudley, Dale discovered acetylcholine as a natural constituent of the animal body in 1929. The discovery focused much of his research on the physiology and pharmacology of this substance, and in 1936 he shared the Nobel Prize for Physiology or Medicine for elucidating acetylcholine's role in nervous transmission. In 1942 he retired from the NIMR. By this time he was also President of the Royal Society, in which capacity he served as Scientific Secretary to the War Cabinet. He was one of the first Trustees of the Wellcome Trust, and was admitted to the Order of Merit in 1944. He died in 1968, having been awarded most distinctions and honours available to a scientist.

During the tea interval, Mrs D Cook, Archivist of the Society of Apothecaries, gave a short talk, 'A brief History of the Society of Apothecaries and its Hall'. She touched, amongst other things, on the origins of the Society of Apothecaries in the Pepperers' and Spicers' companies, the reason why the Society is the only livery company calling itself a 'Society', and the disputes between the Society and the College of Physicians. She also gave those present an informative account of the history of Apothecaries Hall, including a variety of fires, one great and many small (so many that the Society had its own fire brigade and fire engine), its ceremonial barge, the origins of Chelsea Physic Garden, much of which related to the Hall as it was rebuilt after the Great Fire in 1668 and 1672, and as it remains today as the oldest extant livery company hall in the City of London.

The final, and keynote speaker was Dr Robert Bud (The Science Museum and Queen Mary University of London), who spoke on 'Wonder Drugs, Technical Fixes and Modernity'. He began with the claim that modernity is hard to live in, and that change is always challenging. The description 'Miracle' drug, with its connotations of both folk culture and huge potential, was used to win acceptance for modern medicines at the turn of the twentieth century. Paul Ehrlich identified his revolutionary Salvarsan in terms of the traditional German category of 'Magic Bullet', and the name heroin resonated in a Germany adulatory of 'heroes'. By the early interwar period the stratagem was already suspect: the 1919 play *Das Wundermittel* (wonder drug) was a parody. When the sulphonamides were discovered in the early 1930s, considerable effort was expended in proving that they really did have wonderful potential. Certainly British breakthrough sulphonamide M&B693 was described by the press at the time as a 'miracle drug'.

So, the cultural framework was quite ready when penicillin emerged during the Second World War. Soon it too was described as a miracle drug. The faith in this medicine came to resonate with the very modern belief in a technical fix for an enduring problem. One can see in the 1950s sincere belief in a number of technologies, not just as good technical solutions to specified technical problems, but further to major political and social challenges. Atomic power stations could make up for oil shortage and nuclear bombs were more than a match for Russian tanks. Protein from oil would feed a hungry world.

Within such a framework, the use of antibiotics as speedy cures, rather than prevention by changing behaviour, was seen as the effective response to infection. No longer was illness seen as the result of culpable behaviour. No longer was the patient to 'blame'. When resistance emerged as a widespread problem in the 1950s, the Beecham Company developed methicillin, a semi-synthetic penicillin which could not be destroyed by the bacteria. We can see penicillin and antibiotics generally becoming a powerful 'brand'. Such brands, not all of course trademarked items, combine particular technical qualities with cultural associations. These brands became remarkably strong and much loved across the world. Other drugs were also emerging. The use of chlorpromazine to treat victims of schizophrenia emptied the mental hospitals, and vaccines such as the polio vaccine promised to wipe out childhood diseases which had hitherto blighted lives.

As early as 1962 the use of the technical fix came into question. Atomic tests were blamed for spreading the radioactive isotope Strontium-90 into babies' milk, fluoridation of water was suspected, the use of DDT was castigated by Rachel Carson, and thalidomide was exposed as the cause of infant malformation. Doctors were blamed for unauthorised use of patients as 'medical guinea pigs'. So when in 1967 an outbreak of antibiotic resistant *E. coli* in Middlesbrough hospitals was blamed for the deaths of eleven infants, the abuse of antibiotics was now blamed. There was a

chance that the resistance in the bacteria had spread from animals fed low doses of antibiotics to promote growth and larger doses to combat infection caused by miserable conditions. The Swann Committee was established to investigate use of antibiotics on animals. It recommended banning the use of certain important human medications as growth promoters. Still the brand's value and use in humans was not addressed.

By the 1990s much of the *Staphylococcus aureus* encountered in hospitals was resistant to even to methicillin. Now no longer could we trust to the brand to rescue us from infection. Only changing behaviour would work. More careful use of antibiotics by patients and doctors and greater cleanliness in hospitals were called for. These were not just individual techniques; they challenged the way we thought about antibiotics. No longer could the sophisticated citizen of the twenty-first century resort to the innocent brand of 'miracle drugs' and their magical connotations. Rebranding has been required, to make patients collaborators with doctors in understanding the strengths and limitations of the valuable but complex tools that antibiotics really are.

Georgette Taylor
Hon. Secretary

5.2 Reports on SHAC Award Scheme 2009

Research in the archives of the Ritman Library in Amsterdam

Efthymia Priki (MLitt Medieval and Renaissance Studies, University of Glasgow)

Through the support of SHAC and its New Scholars Award (2009), I have been able to complete my MLitt thesis entitled *Hypnerotomachia Poliphili and the Chemical Wedding of Christian Rosenkreutz: Influences, Parallels, Reception*. As the title suggests, my aim was an in-depth examination of the possible links between the two texts through a close parallel reading and in relation to the cultural context of the time (sixteenth and seventeenth centuries), emphasizing on *Hypnerotomachia's* alchemical rendering by Béroalde de Verville (1600), the instances of *Hypnerotomachia's* reception as an alchemical allegory from the sixteenth century until today as well as on the *Chemical Wedding's* reception as a Rosicrucian text from the moment of its publication and onwards. The New Scholars Award gave me the opportunity to enhance my research by visiting the Bibliotheca Hermetica Philosophica or Ritman Library.

The Ritman Library, located in the heart of Amsterdam, has perhaps the greatest collection of manuscripts and printed works of hermetic, esoteric, cabalistic and alchemical texts. Of particular interest to my research were the Hypnerotomachian editions, especially those by Jean Martin (1546) and Legrand (1804, 1811), which were not available in the other collections I have consulted (Stirling Maxwell and Ferguson collections of the Special Collections at the University of Glasgow and Young collection of the Andersonian library at Strathclyde University). Legrand's edition elucidated several aspects of the history of the book's reception and confirmed the assumption that Hypnerotomachia, after lying in obscurity for more than a century, has been deprived of its emblematic character when the interest in it reemerges in the nineteenth century.

In addition, the library contained various editions of the *Chemical Wedding*, which broadened my perspective on the history of this book. Particularly, I focused my attention on whether it was bound with other texts and which as well as the publisher's choices of devices (especially when comparing the 1616 Zetzner and the

1781 Nicolai editions) and their possible significance as indicators of the development of the work's reception and the distortion of the author's intentions in subsequent centuries.

The greatest advantage of studying the different editions of the *Hypnerotomachia* and the *Chemical Wedding* in this library was the suitability for a comparative approach towards them not only as texts but also as physical objects.

Also of interest were the 1516 Aldine edition of Greek hermetic texts translated by Marsilio Ficino, Michael Maier's *Atalanta Fugiens* editions and, additionally, several modern studies and editions of the *Hypnerotomachia* and the *Chemical Wedding*, which would be otherwise hard to obtain or even inaccessible, such as Wildermann's 1923 publication of the *Chemical Wedding*.

Overall, the visit in the archives of the Ritman Library was both helpful and productive contributing to the completion of my thesis at a great extent. I am deeply grateful to the Society for the History of Alchemy and Chemistry for supporting this research trip financially.

New sites for a new concept of pure food

Ximo Guillem-Llobat (University of Valencia)

The 2009 SHAC Award Scheme funded my project proposal on the 'New sites for a new concept of pure food'. The award allowed me to travel to Paris in order to work in different libraries and archives during early September 2009. In my short 8-day stay I visited the Bibliothèque Interuniversitaire de Pharmacie (BIUP), Bibliothèque Historique de la Ville de Paris, Centre d'accueil et de recherche des Archives nationales (CARAN), and the Archives Communales et départementales de Paris. In these libraries and archives I was able to carry out my research.

As a result of that research and building on previous work, I have been able to develop my project on the new sites for food regulation through three different frameworks, including: object biographies, lab histories and transnational expert assessment. All three frameworks will allow me to obtain a more complete perspective on the transition in the concept of 'pure food' that took place at the turn of the twentieth century. Moreover, they will give me the possibility to contribute to major debates on current historiography.

The framework on object biographies has inspired my work on saccharin. This particular artificial sweetener motivated some of the most important debates and actions for food safety and quality regulation in the late-nineteenth and early-twentieth centuries. Thus, as stated in the bibliography and documents to which I had access in Paris, saccharin stands as one privileged case study for the analysis of the transition of the concept of pure food. My study of the regulation of saccharin has led me to the preparation of a paper which was presented at a colloquium of department III of the Max Planck Institute for the History of Science (MPIWG) and which is now in revision for publication. Moreover, a second paper on saccharin will be presented in a workshop to be held at MPIWG in June and will probably entail a second publication.

The materials collected in Paris have also been very useful for my work on the transnational expert assessment in food safety regulation. This work will lead me to the presentation of an oral communication in a special session on 'The search for Food and Nutrition Standards in the International Context' included in the programme of the European Social Science History Conference which will be held in Ghent in

2010. Moreover, this communication will inspire a collective journal article already in preparation for publication. Finally, the rich materials collected during my stay in Paris will provide the basis of a book-project on municipal laboratories which now stands as my main research project for a postdoctoral position.

The support I have received from the SHAC Award Scheme has been of great importance in developing my research project, and therefore I would like to thank the Society for accepting my proposal. I also want to thank Josep Lluís Barona and José Ramón Bertomeu for their support and acute comments as well as Bensaude-Vincent, Zylberman and Garcia Belmar for their help in guiding my research in Paris.

Alchemical Manuscripts in Viennese Archives

Jennifer Rampling (PhD History and Philosophy of Science, University of Cambridge)

George Ripley, Canon of Bridlington (d. c.1490), ranks as one of England's most famous alchemists. In 1591 his long poem, the *Compound of Alchemy* or 'Twelve Gates', became the first work of an English alchemist to be published in England. A second edition was included in Elias Ashmole's important compendium of English alchemical verse, the *Theatrum Chemicum Britannicum*, in 1652. However, less well known is the extent of Ripley's influence in continental Europe during the same period. Ripley's attributed works circulated throughout Europe in manuscript and print, translated into Latin, French, German, Italian, and Czech. His *Opera omnia chemica* was published not in England, but in Kassel – edited in 1649 by Ludwig Combach, court physician to the landgraves of Hesse-Kassel.

My PhD traces the contours of Ripley's European reception, tracking the works of this Yorkshire alchemist from England to the courts of Central and Eastern Europe throughout the sixteenth and seventeenth centuries. This transmission was largely mediated by manuscripts: collections of authoritative texts carefully copied and annotated by alchemical practitioners. In August 2008, a SHAC New Scholars award enabled me to study a particularly important example, held at the Austrian National Library in Vienna.

Österreichischen Nationalbibliothek Codex 11133 was compiled in Bohemia between 1605–1607 by the alchemist Symon Thaddeus Budeck. This huge compendium includes nine of the Ripleian works later published by Combach. Budeck's fascination with the English alchemist is apparent from his dense annotations and cross-referencing, in Latin and Czech, and by his addition of a 31-folio catalogue listing terms and materials employed in Ripley's works ("Index rerum et verborum in omnia opera venerabilis Canonici Domini Georgii Ripleyi Angli"). Budeck's annotations reveal just how carefully he read Ripley's works; attempting to interpret the Englishman's processes in light of other medieval and contemporary alchemica from across Europe.

Besides offering insights into Budeck's reading strategies, Codex 11133 also provides evidence of a link with two well known English visitors to Bohemia: John Dee and Edward Kelley. As I argue in my thesis, when Dee and Kelley reached Prague in the 1580s they brought with them several of Ripley's works, which were subsequently copied by local practitioners. Budeck's own manuscript is one outcome of this process of transmission. The month after my visit, I presented these findings in a talk at the John Dee Quatercentenary Conference in Cambridge, shortly to be published as an article, 'Dee and the alchemists'.

During my visit I also had the opportunity to examine other manuscripts in the Viennese archive, including several fifteenth-century collections of pseudo-Lullian works – the primary source for many of Ripley's own writings. These include texts

unavailable in English archives, and never printed, such as the *Dialogus de realitate artis alchymicae* and *Tractatus scrutationis*. Finally, the award enabled me to attend the 7th International Conference for the History of Chemistry in nearby Sopron, Hungary. There I presented a paper based on my research findings to date: 'Ripley Revis'd: reading medieval alchemy in early modern Europe'. I am extremely grateful to SHAC for supporting both my research and attendance at the conference.

5.3 Libraries and museums

Chemical Museum, University of Leeds (United Kingdom)

At the top of a flight of unused stairs in the School of Chemistry, rows of nineteenth-century black lacquered display cases house the remains of the Chemical Museum at the University of Leeds. Very few people know of the existence of the Museum and fewer still get the opportunity to see the material. For those who do, the immediate aesthetic presence of the collections, in the still and silent air of the unused stairwell, commands your attention. The rows upon rows of variously shaped glass flasks — a miscellany of brilliantly coloured pigments, indescribable compounds, glittering minerals, and handsome crystals — seize your curiosity and draw you in for closer inspection.



MHSTM student volunteers Louise Summerton and Caroline Lloyd examine some of over 2000 specimens which constitute the Chemical Museum.

I first became involved in the Chemical Museum while assisting with a project to develop a museum for the history of science, technology and medicine at the University of Leeds (MHSTM). We learned that because of the huge pressure that the School of Chemistry is presently under to use the space taken up by the Museum, it was being considered for disposal. Desperate to prevent this loss, the MHSTM group aims to show that this collection is important and useful. To do this we need to raise the profile of the Chemical Museum among the history of science community and to increase accessibility to it. We have already established a good dialogue with the School of Chemistry, and more recently have begun researching the history of the Museum.

So far this research has revealed collections rich in historically significant material. Also apparent at this early stage is a close link to the industrial and academic development of the town. Highlights include an 1876 specimen of manganese from the Challenger Expedition, making the Chemical Museum the only institution outside of the British Museum to acquire one from this expedition. In addition, the Museum holds an 1888 Bunsen and Roscoe specimen from their experiments on the chemical

action of light, as well as material from Bohuslav Brauner's 1880s experiments on the atomic weight of Tellurium. While most of the specimens are contemporaneous with the establishment in 1874 of the Yorkshire College of Science, several specimens predate the College, such as those from A. H. Church's experiments on the copper content of animal pigments — posing the question of whether the Chemical Museum predates the College. Certainly, the original architectural plans for the College suggest that it does, describing as they do the need to accommodate a Chemical Museum during the building of the College.

One possibility is that the Museum's early foundations are linked to the Leeds General Infirmary, which from 1771 was the first to teach chemistry in Leeds. This was then taken over by the Medical School in 1831, and by the Yorkshire College of Science in 1874. The Medical School and the College merged in 1887 to form the basis of the University, which was eventually established in 1904. Such provenance, closely aligned to medicine, suggests an interesting early history for the Chemical Museum and certainly offers an exciting field of research for future historians.

Mark Steadman
University of Leeds

Further information:

With six years experience as a curator in the UK and Denmark, Mark Steadman is a final year PhD candidate at the Centre for the History and Philosophy of Science, University of Leeds. During 2008-09 he was head of the MHSTM student taskforce at Leeds. If you would like more information on the Chemical Museum or the work of the University of Leeds Museum for the History of Science, Technology, and Medicine in safeguarding its future and in improving access to the collection please contact Mark on phms@leeds.ac.uk.

6. News and resources

Graham Rees (1944-2009)

Members of SHAC and early-modern historians worldwide will be saddened to hear of the death of Graham Rees on 23 July 2009. In 1972, after teaching English for some years following graduation from the University of Birmingham in 1969, he spent sixteen years at Wolverhampton Technical College (now Wolverhampton University). Here, besides teaching English, he inherited Noel Coley's popular course on the history and philosophy of science. A talented Latinist, his challenging essays on Francis Bacon's natural philosophy and semi-Paracelsian cosmology, published in *Ambix* during the mid-1970s, established his reputation as an expert on Bacon and on the relations between alchemy and literature. He served on SHAC's Council for many years and was a helpful referee to successive editors of *Ambix*. In 1988 he moved to London as professor of English at Queen Mary College, where he became Director of the 15-volume edition of Bacon's works, six volumes of which appeared during his lifetime. Together with his wife, Maria Wakely, Graham completed a major study of Jacobean political and cultural life before his untimely death. *Publishing, Politics, and Culture: The King's Printers in the Reign of James I and VI* will appear posthumously later this year. He was elected to the British Academy in 2005.

Graham was a warm and friendly scholar with an outstanding wit, epitomised by a deathbed anecdote. When awarded the OBE earlier this year while lying in his hospital bed, a nurse asked him why he had been given the honour. "For services to

pedantry", he replied. For a brilliant portrayal of Graham, see the obituary penned by his friend, the novelist Howard Jacobson in *The Independent*, 20 August 2009.

W. H. Brock

Associate Director of the Beckman Center for the History of Chemistry

The Chemical Heritage Foundation (CHF) invites applications and nominations for the position of Associate Director of the Beckman Center for the History of Chemistry.

The Chemical Heritage Foundation fosters an understanding of chemistry's impact on society. An independent nonprofit organization, we strive to inspire a passion for chemistry; highlight chemistry's role in meeting current social challenges; and preserve the story of chemistry across centuries. CHF maintains major collections of instruments, fine art, photographs, papers, and books. We host conferences and lectures, support research, offer fellowships, and produce educational materials. Our museum and public programs explore subjects ranging from alchemy to nanotechnology. CHF is located in Philadelphia, Pennsylvania, USA, in the heart of the city's historic district.

CHF's Arnold and Mabel Beckman Center for the History of Chemistry hosts a community of visiting fellows. These fellows conduct their own independent historical research, interact with staff, publish academic and popular works, and establish CHF as a leading research center in the history of chemistry and related sciences, technologies, and industries. The Beckman Center also hosts conferences, symposia, and workshops on a variety of topics relating to the history of chemistry. In 2009 the Beckman Center awarded 15 fellowships including seven full-academic year postdoctoral & dissertation fellowships and hosted the annual Gordon Cain Conference (this year the topic was "Technology Transfer and Diffusion in Comparative Perspective"), a conference on "Composition to Commerce: Chemistry, History, and the Wider World," and the 2009 Summer Symposium of the International Society for the Philosophy of Chemistry.

Further information about the Chemical Heritage Foundation and the Beckman Center for the History of Chemistry may be found at www.chemheritage.org.

The Associate Director of the Beckman Center for the History of Chemistry reports to the Director of the Othmer Library. Key responsibilities include:

- Managing the Visiting Scholar Program including promoting it to the academic community, assisting with the fellows' peer-review selection process, and overseeing the diverse community of fellows in residence at CHF.
- Being an active and well-regarded member in the history of science and technology communities, including researching, writing, and publishing scholarly works and presenting papers at academic meetings.
- Assisting in the development, organization, promotion, and execution of academic meetings at CHF and other programming of the Beckman Center.

Requirements for the position include:

- A PhD with experience in an area of history of chemistry and related sciences, technologies, or industries (construed broadly).
- An ability to connect and work with multiple communities of historians, scientists, engineers, and other academics.
- A broad knowledge of wider scholarship relevant to CHF's intellectual interests.

- Being fluent in both written and spoken English.
- Having excellent interpersonal skills.

Review of applications begins on 15 February 2010 and will continue until the position is filled.

To be considered for this position, email a cover letter, curriculum vitae, writing sample, and contact information for up to three references to ADBCHOC@chemheritage.org. If necessary, mail or fax these materials to Ronald Brashear, Director of the Othmer Library, Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia PA 19106-2702, 1-215-629-5284 (fax). CHF is an Equal Opportunity Employer.

BSHS monographs online

BSHS Monographs enjoys its 30th birthday in 2009. To celebrate, we've created a digital collection of past monographs. These monographs are available for viewing and download free-of-charge at www.bsbs.org.uk/monographs

Paper copies remain available for purchase, e.g., for heavy users and for libraries. An order form is available on the site. All volumes are now back in stock. As part of our birthday celebrations, our SALE continues, too, with prices reduced up to 50%. International and bulk purchases are welcome. Proceeds support further volumes in the *BSHS Monographs* series.

This digital collection of our monographs is made possible by the BSHS 'Wheeler Fund,' from a donation given to the society to assist development of a library related to the field. We are grateful.

BSHS Monographs publishes work of lasting scholarly value that might not otherwise be made available, and aids the dissemination of innovative projects advancing scholarship or education in the field. Additional titles forthcoming.

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Joe Cain
Editor, BSHS Monographs
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A History of the International Dyestuff Industry

In order to commemorate the 150th anniversary of William H. Perkin's discovery of mauve, *A History of the International Dyestuff Industry*, authored by Peter J.T. Morris and Anthony S. Travis, and originally published by the American Dyestuff Reporter in 1992, is now available on the Internet. The link to this comprehensive review of Perkin's work and the subsequent development of the global dyestuff industry is at: <http://colorantshistory.org/HistoryInternationalDyeIndustry.html>

This article is also available in Adobe PDF format for ease of downloading, filing and printing. A version suitable for users of the Mozilla Firefox browser is included since this browser is becoming increasingly popular with Internet users.

Studies on Volta and his Times

Five volumes of *Nuova Voltiana: Studies on Volta and his Times*, edited by Fabio Bevilacqua and Lucio Fregonese, are now available online at Pavia Project Physics:

<http://ppp.unipv.it/PagesIT/NuovaVoltFrame.htm>

Irish contributions to the development of the chemical and physical sciences

R. Charles Mollan's recent book *It's Part of What We Are: some Irish contributions to the development of the chemical and physical sciences* (published by the Royal Dublin Society in October 2007), is now available free in electronic form, if requested from the publisher at science@rds.ie (please put 'Mollan book' in the subject line).

It is in the form of four pdf files (Volume 1, Volume 1 Figures, Volume 2, Volume 2 Figures), and the total size is 8MB. Details of the book, with contents, and extracts from reviews, can be seen on line at www.rds.ie/science/publications (click 'It's Part of What We Are').

The book, which extends to two large volumes with over 1,800 pages, gives biographies of more than 100 dead scientists with Irish connections (interpreted generously!) who made contributions over three centuries to the historical development of astronomy, chemistry, mathematics and physics (plus some engineering and geology).

7. Membership

New members

The Society for the History of Alchemy and Chemistry warmly welcomes the following new members:

Alexander Bieri (La Roche Historical Collection & Archive, Basel)
Dr Robert Bud (Science Museum, London)
John Christie (Oxford University)
Dr Donald Cotter (Mount Holyoke College)
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Further Intelligence

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