

CHEMICAL INTELLIGENCE

No. 10, November 2013

The Newsletter of the Society for the History of Alchemy and Chemistry

At Year's End

As 2013 is drawing to a close, it is worth reviewing what would undoubtedly be remembered as an important year for the history of alchemy and chemistry.

2013 has marked a series of 'firsts' for both the Society and its journal, *Ambix*. For the first time in its 76-year history, *Ambix* was published quarterly. This allowed us to present two special issues (including the first in our 'Sites of Chemistry' series), guest edited by John Perkins and Tara Nummedal, respectively. 2013 also marks the launch of the new series, *Sources of Alchemy and Chemistry* under the general editorship of Lawrence Principe and Jennifer Rampling. The first volume, included as a supplement to issue 4 of *Ambix*, presents the *Four Books of Pseudo-Democritus* in a new edition and translation by Matteo Martelli.

A lot has been happening on the meeting scene as well, and we have brought you some reports from this exciting (al)chemical summer. SHAC provided sponsorship for the ICHSTM event in Manchester, the Sites of Chemistry conference in Uppsala, Sweden, and the Edinburgh Tercentenary 'Cradle of Chemistry'. Several of our members have been reporting from other alchemy and chemistry-related meetings. Our 4th annual SHAC Postgraduate Workshop on 'Alchemy and Chemistry in Context', held at Birkbeck College, London, was a success, as was the joint SHAC-Bolton Society meeting 'Chemists and their Books' at the Royal Institution, London.

SHAC has also elected new officers to represent it: Dr Simon Werrett has become the new Secre-



tary, Dr Michael Jewess the Treasurer, and Dr Anna Simmons has taken up the newly-created position of Membership Secretary. Mike Zuber was appointed as International Student Representative and Judith Mawer as UK Student Representative. I hope you will join me in wishing Simon, Michael, Anna, Mike and Judith a warm welcome! SHAC also wishes to express its gratitude to John Perkins and Dr Anna Marie Roos, outgoing Treasurer and Secretary, respectively, for their distinguished service.

Jo (Georgiana) Hedesan

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SOCIETY FOR THE HISTORY
OF
ALCHEMY AND CHEMISTRY



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UPCOMING SHAC EVENTS

Sites of Chemistry in the 17th Century—Call for Papers

Maison Francaise, Oxford



Deadline for Submission of Abstracts: 15 January 2014.

This is the fourth conference of the **Sites of Chemistry, 1600-2000** project, which investigates the multitude of sites, spaces and places where chemistry has been practiced since the beginning of the 17th century. It is part of a series of four annual conferences each devoted to a particular century. A final conference will be held in 2015 to explore themes and developments over the whole period and on a broader comparative scale. Selected papers from each conference will be published in special issues of *Ambix*, and two volumes of essays will be published at the end of the project. The project is supported financially by the Wellcome Trust for the History of Medicine and is sponsored by the Society for the History of Alchemy and Chemistry. Full details on the general project as well as on the past conferences are available at www.sitesofchemistry.org.

The focus of this fourth conference is on the variety of physical sites where chemistry was practiced in the 17th century. Its main purpose is to analyse, first, who was practising chemistry in a particular site, where, how, to what ends, and the physical, social, cultural and economic organisation of these sites; and second, the wider social, economic, political and cultural contexts for the practice of chemistry through detailed examination of chemists' interactions, in and around these sites, with other actors. Further details about the range of 'Topics and Themes' under study can be found at www.sitesofchemistry.org.

In the first conference in the series, on the 18th century, the majority of papers were on the second part of the century. To redress this, we welcome proposals that go beyond the end of the 17th century and cover the early decades of the 18th.

Conference format

There will be five non-parallel sessions over the two days of the conference with 3 or 4 papers in each session. Each session will consist of a 15-minute presentation of each paper, followed by a 15-minute report on all the papers by a commentator and then a general discussion. Commentators will be asked to summarise key points of the papers and offer a few critical/constructive thoughts on them as the focus for discussion.

Full versions of papers are due to be submitted for pre-circulation by 15 June 2014. Papers should be no more than 6,000 words in length. They will be made available only to registered participants in the conference via a restricted section of the project's website three weeks before the conference.

The conference will open with registration and a reception at the Oxford Museum of the History of Science on the evening of Thursday, 17 July and there will be a conference dinner on Friday, 18 July.

Proposals for Papers

Proposals in the form of a 300-word summary should be sent to the organisers Antonio Garcia Belmar, agbelmar@gmail.com, and John Perkins, jperkins@brookes.ac.uk, by **15 January 2014**.

Decisions will be announced by 31 January 2014. We particularly welcome proposals from doctoral students and post-doctoral researchers.

SHAC-SPONSORED MEETINGS

AD HOC History of Chemistry Reading Group *Cambridge and London*

AD HOC is a history of chemistry reading group with parallel series of meetings held in UCL and Cambridge, organised by Hasok Chang, Jenny Rampling, Chiara Ambrosio, Emma Tobin, Simon Werrett and Sophie Osiecki. While our main focus is on history, we also pay attention to philosophical, sociological, public and educational dimensions of chemistry. Over the past years our meetings have been attended by a variety of scholars, ranging from advanced undergraduates to teaching staff in both science studies and chemistry, and often attracting visitors from other parts of the UK and abroad. Travel bursaries are also available for student participants. For more information, including the programme and details of readings, please visit our website, www.hps.cam.ac.uk/adhoc. To join the mailing list, please contact Sophie Osiecki at adhochistory@gmail.com.

AD HOC (Cambridge)

5pm–6.30pm (Mondays, fortnightly during term), Department of History and Philosophy of Science, Free School Lane, Cambridge CB2 3RH

Meetings are held on **Mondays, 5.00–6.30pm in Seminar Room 1**. It is open to everyone, but part III, MPhil and PhD students in the Department are especially welcome to attend this seminar. Readings will be announced and made available in time for each meeting.

The final session for this year will be on Monday 2 December on ‘Early Modern Pyrotechnics’, presented by Dr Simon Werrett (University College London). The reading is:

Simon Werrett, *Fireworks: Pyrotechnic Arts and Sciences in European History* (Chicago, 2010), Introduction and Ch. 1 (‘Perfecting the Pyrotechnique story: The Ingenious Invention of Artificial Fireworks’), pp. 1–46.

AD HOC (London)

6pm–7.30pm (Mondays, monthly), University College London

The next session of Ad Hoc London will be on Monday 9 December in Foster Court 123. We shall be reading:

Benjamin Martin, *The philosophical grammar; being a view of the present state of experimented physiology, or natural philosophy*. Second Edition (London, 1738), pp. 31–46 and 108–122.

George Macintosh Maclean, *Elements of Somatology: A Treatise on the General Properties of Matter* (New York, 1859), 1–17.

The readings discuss ‘Somatology’ or the science of the properties of matter.

AMBIX

November Issue

The 4th issue of *Ambix* is a special issue guest edited by **Tara Nummedal** (Brown University), which features four articles on 'Alchemy and Religion in Christian Europe'. This special issue highlights the work of established scholars alongside two recent PhDs and members of the SHAC Graduate Network: Georgiana (Jo) Hedesan and Donna Bilak. The volume spans the thirteenth to the eighteenth centuries, considers Catholic, Protestant, and Jewish perspectives, and incorporates alchemists' scholarly, medical, and transmutation aspirations to explore some of the distinctive ways that alchemy resonated with medieval and early modern religious culture.

- **Zachary Matus (Boston College)**, 'Resurrected Bodies and Roger Bacon's Elixir'
 - **Georgiana Hedesan (University of Oxford)**, 'Reproducing the Tree of Life: Radical Prolongation of Life and Biblical Interpretation in Seventeenth-Century Medical Alchemy'
 - **Peter Forshaw (University of Amsterdam)**, 'Cabala Chymica or Chemia Cabalistica — Early Modern Alchemists and Cabala'
 - **Donna Bilak (Chemical Heritage Foundation)**, 'Alchemy and the End Times: Revelations from the Laboratory and Library of John Allin, Puritan Alchemist (1623-1683)'
-

Sources of Alchemy and Chemistry

SHAC is proud to announce the launch of a new series of monograph-length volumes: *Sources of Alchemy and Chemistry: Sir Robert Mond Studies in Early Chemistry*. This series provides critical editions and English translations of some of the foundational texts in the history of alchemy and early chemistry. The series is named in honour of the Society's first and only President, Sir Robert Mond (1867–1938). The publication of this series has been made possible by the extremely generous support of Robert Temple, and will be made available free of charge to all SHAC members.

The series is under the general editorship of Professor Lawrence M. Principe (Johns Hopkins University) and Dr Jennifer M. Rampling (University of Cambridge). The international editorial board is comprised of Professor Charles Burnett (Warburg Institute), Dr Michèle Mertens (Université de Liège) and Professor Cristina Viano (CNRS, Paris).

In their general introduction, editors Principe and Rampling expressed their hope that 'the new series will in fact bring more serious attention to bear upon textual scholarship, while also providing opportunity, support, and encouragement for the talented scholars who devote themselves to such crucially important labours'.

The first monograph in the series is one of the earliest known chemical texts: the *Four Books of Pseudo-Democritus*, edited by Dr Matteo Martelli (Berlin). Martelli presents not only a fresh edition and translation of the surviving Greek fragments, but also, for the first time, additional materials preserved in Syriac. The volume also presents important examples of the medieval and early modern reception of these writings, including the dialogue of Synesius and Dioscorus – the most influential Byzantine commentary on the *Four Books* – and previously unpublished Latin translations of both the *Four Books* and Synesius' commentary made by Matthaeus Zuber in 1606. Accompanied by a full introduction and commentary, these sources offer new and significant insights into the world of ancient chemistry: practical recipes and lists of ingredients, clues to the doctrinal content of ancient alchemy, and early hints of a tradition that linked the alchemist 'Democritus' to the wisdom of Egypt and Persia.

The first issue is distributed alongside the fourth issue of *Ambix*.

BOOKS RECEIVED FOR AMBIX REVIEW

NOTE: Appearance in this list does not guarantee review in a subsequent issue. Please note that some of these books have already been given for review. Anyone wishing to act as a reviewer of any of the books should contact *Ambix* reviews editor: José-Ramón Bertomeu-Sánchez (bertomeu@uv.es).

Cabinets of Experimental Philosophy in Eighteenth-Century Europe. Edited by JIM BENNETT and SAFIA TALAS. Pp. 253, illus., index. Brill: Leiden. 2013. (€107). ISBN: 978-90-04-25296-7.

Solvay. History of a Multinational Family Firm. By KENNETH BERTRAMS, NICOLAS COUPAIN, ERNST HOMBURG. Pp. 630, illus., index. Cambridge University Press: Cambridge., 2013 (\$99). ISBN: 978-1-107-02480-9.

The Color Revolution. By REGINA LEE BLASZCZYK. Pp. 380, illus., index. MIT: Cambridge, MA. 2012. ISBN: 978-0-262-01777-0.

Matter and Method in the Long Chemical Revolution. Laws of Another Order. By VICTOR D. BOANTZA. Pp. 266, illus., index. Ashgate: Farnham, Surrey. 2013. (£65). ISBN: 978-1-4094-1868-9.

Manuscripta chemica in Quarto. Universitätsbibliothek Kassel. By HARTMUT BROSZINSKI. Pp. 671, illus., index. Harrassowitz Verlag: Wiesbaden. 2011. (€198). ISBN: 978-3-447-06494-1.

Life Atomic: A History of Radioisotopes in Science and Medicine. By ANGELA N.H. CREGGER. Pp. xvi + 490, illus., index. Chicago University Press: Chicago. 2013. (\$45). ISBN: 978-0-22601-7-945.

Hans Christian Orsted. Reading Nature's Mind. By DAN CH. CHRISTENSEN. Pp. 743, illus., index. Oxford University Press: Oxford. 2013. (£ 39,99). ISBN: 978-0-19-966926.

Early Modern Things. Objects and their Histories, 1500-1800. Edited by PAULA FINDLEN. Pp. 389, illus., index. Routledge: London. 2013. (£29.99). ISBN: 978-0-415-52051-5.

Häresie und Wissenschaft. Eine Genealogie der paracelsischen Alchemie. By UTE FRIETSCH. Pp. 474, illus., index. Wilhelm Fink: München. 2013. ISBN: 978-3-7705-5433-1.

Ways of Regulating Drugs in the 19th and 20th Centuries. Edited by JEAN-PAUL GAUDILLIÈRE and VOLKER HESS. Pp. 327, illus., index. Palgrave Macmillan: Hampshire. 2013. ISBN: 978-0-230-30196-2.

Johann Daniel Mylius Arzt, Musiker und Alchemist aus Wetter in Hessen. By OLIVER HUMBERG. Pp. 379, illus., index. Buchverlag Oliver Humberg: Elberfeld. 2012. ISBN: 978-3-938657-04-1.

An Environmental History of Russia. By PAUL JOSEPHSON, NICOLAI DRONIN, RUBEN MNATSKANIAN et al.. Pp. 340, illus., index. Cambridge University Press: Cambridge. 2013. ISBN: 978-0-521-68972-4.

Early Russian Organic Chemists and Their Legacy. By DAVID E. LEWIS. Pp. 136, illus., index. Springer: Fargo. 2012. ISBN: 978-3-642-28218-8.

O Laboratório Chimico da Escola Politécnica de Lisboa: História, Coleções, Conservação e Musealização. By MARTA LOURENÇO (COORD.). Pp. 159, illus., index. Museus da

BOOKS RECEIVED FOR AMBIX REVIEW

Universidade de Lisboa: Lisboa. 2013. ISBN: 978-989-98300-0-4.

The Philosophy of Chemistry: Practices, Methodologies, and Concepts. Edited by JEAN-PIERRE LLORED. Pp. xvi + 780, illus., index. Cambridge Scholars Publishing: Newcastle upon Tyne. 2013. (\$118.99). ISBN: 978-1-4438-4605-9.

Napalm. An American Biography. By ROBERT M. NEER. Pp. 310, illus., index. Harvard University Press: Cambridge, MA. 2013. (£22.95). ISBN: 978-0-674-07301-02.

Vitalism and the Scientific Image on Post-Enlightenment Life Science, 1800-2010. Edited by SEBASTIAN NORMANDIN and CHARLES T. WOLFE. Pp. 377, illus., index. Springer: New York. 2013. (€135.19). ISBN: 978-94-007-2444-0.

The Chemical History of Color. By MARY VIRGINIA ORNA. Pp. 153, illus., index. Springer: Fargo. 2013. ISBN: 978-3-642-32641-7.

Magnificent Principia. Exploring Isaac Newton's Masterpiece. By COLIN PASK. Pp. 528, illus., index. Prometheus Books: New York. 2013. (\$26). ISBN: 978-1-61614-745-7.

Flickering Light. A History of Neon. By CHRISTOPH RIBBAT. Pp. 224, illus., index. Reaktion Books: Great Sutton. 2013. (£19.95). ISBN: 978-1-78023-091-7.

A Tale of 7 Elements. By ERIC SCERRI. Pp. 270, illus., index. Oxford University Press: Oxford. 2013. (£12.99). ISBN: 978-0-19-539131-2.

Comment la chimie a transformé le monde. Une histoire en 7 tableaux. By SACHA TOMIC. Pp. 259, illus., index. Le Square éditeur: Paris. 2013. (€18). ISBN: 979-10-92217-01-8.

Risky Rays for an Improved Food Supply? National and Transnational Food Irradiation Research as a Cold War Recipe. By KARIN ZACHMANN. Pp. 55, illus., index. Deutsches Museum: München. 2013. ISBN: 2190-8966.

SHAC PRIZES & AWARDS

Partington Prize

December

31

Tuesday

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 2013, has not reached 35 years of age, or if older has been awarded 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*.

Entries should be submitted electronically as e-mail attachments. We prefer files to be Microsoft Word (93–2013), although these may be accompanied by a PDF version if desired. 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 the former Hon. Secretary, Dr Anna Marie Roos, at aroos@lincoln.ac.uk, with the words 'Partington Prize' in the subject heading. Two documents should be submitted: the first, a separate title page giving the author's name, institution, postal address, e-mail address and date of birth (and, if relevant, the date of the award of the Ph.D.). The second should be the essay. 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 midnight GMT on **31 December 2013**. 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 2014**.

Rumford Scholarship

March

1

2014

The Chemical Heritage Foundation (CHF) and the Society for the History of Alchemy and Chemistry (SHAC) are pleased to invite applications for the 2014-2015 Rumford Scholarship. This annual award established in 2011 will enable a Northern American scholar to travel to Europe in order to undertake original research in the history of chemistry or alchemy in libraries/archives/museum collections using their particular resources. The award may be held in any European country. The value of the award is £2300. Applications are due **1 March 2014**. For more information or an application, please go to www.chemheritage.org.

Eligibility: Applicants must be either doctoral students or have been awarded a doctorate within three years of January 1 of the year in which the application is submitted. In addition, independent scholars and part-time or adjunct faculty at any point in their academic career are eligible to apply. Individuals currently holding other research grants supporting travel to Europe are not eligible. Applicants must be normally resident in North America.

Outcomes: The scholar will give a talk at CHF about their work shortly after their return. Support to

SHAC PRIZES & AWARDS

allow the scholar to travel to Philadelphia to do this will be available outside the funding of the scholarship. The scholar must submit a report of not less than 750 or more than 1500 words to CHF and SHAC within three months of carrying out the research, and a statement of account together with receipts. The report will be published in an appropriate form by the two organisations. The support of CHF and SHAC must be acknowledged in any publication arising from the research. The Scholar must take up the award within nine months of the date of its announcement.

SHAC will use its best endeavours to facilitate access to collections, to assist in finding accommodation and to put the scholar in touch with other historians.

SHAC Award Scheme

SHAC offers two types of award: 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 deadline for either award is usually **at the end of May. Please refer to our website and social media for more specific details at the beginning of 2014.**

The **New Scholars Award** is open to post-graduate 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 £1000 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, post-graduate 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.

An activity report needs to be submitted at the end of the Award. This will be published in the *Chemical Intelligence* newsletter.

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.

Please note that awards do not have to be held in the UK.

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, Dr Simon Werrett, s.werrett@ucl.ac.uk. Membership enquiries should be made to the Hon. Membership Secretary, Dr Anna Simmons, a.simmons@ucl.ac.uk.

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). The Society also organises an annual workshop for students and junior scholars, focusing on methods, sources and approaches in the history of alchemy and chemistry. The 4th annual workshop took place on the 26 October 2013.

If you are a postgraduate student or junior researcher interested in the history of alchemy or chemistry, you are also invited to join our online Graduate Network group, which publicises announcements and hosts discussions related to the fields. Should you wish to join, please send an e-mail, mentioning your name, affiliation and brief interest, to: shac_graduate_network-subscribe@yahoogroups.co.uk. Please note that you do not need to be a member of SHAC to become part of the Graduate Network.

If you have any other questions about the Graduate Network, and the opportunities available for students and early career researchers interested in the history of alchemy and chemistry, please contact the International Student Representative, Mike Zuber, at M.A.Zuber@uva.nl and/or Judith Mawer, the UK Student Representative, Judith Mawer, at judith.mawer@btopenworld.com (for more information on their positions, see the section 'New Officers' below).

In each issue we are introducing a current member of the Graduate Network, allowing them to present themselves, their work and their views on the challenges facing students and early career researchers. In this issue, we introduce Dr Corinna Guerra, from the Italian Institute of Historical Studies at Naples and University of Bari, who presented at this year's Postgraduate Workshop.

Graduate Network Showcase

Corinna Guerra

Istituto Italiano per gli Studi Storici, Naples and University of Bari



Self-Introduction: I am currently finishing my second year of a postdoctoral scholarship at IISS-the Italian Institute for the Historical Studies. I have been an honorary fellow in History of Science at the University of Bari since 2011.

Following Lavoisier, the chemistry of the late 18th century went through a significant theoretical change: in my PhD thesis (defended in 2011), I have shown how this transition from one knowledge system to another was introduced and developed in the Kingdom of Naples (i.e. the South of Italy). While the focus of my postdoctoral studies is on how chemists made use of Mount Vesuvius as a source of corroboration for the theories expounded by the Chemical Revolution, I am also drawing up a 'cartography' of scholars, locations and methods of interpretation.

I have published some papers on the history of chemistry, book reviews and book chapters for the Nova Science Publishers and Springer NY.

What is the greatest challenge you are facing as an early career researcher?

As I am finishing my first postdoc experience the greatest challenge for me is choosing the best way to continue my studies. It is not easy to quickly understand which is the 'right' place to apply to, by which I mean a place with a collection of primary sources fitted for my research, a mentor supportive of my topic, a stimulating community of colleagues and job opportunities.

OTHER MEETINGS

International Conference on Knowledge and Colonial Science

Faculdade de Ciências da Universidade de Lisboa, Pavilhão C6, Lisbon, Portugal

November

27-29

2013

The International Conference Knowledge and Colonial Science resulted from the collaboration between the Centro de Filosofia das Ciências da Universidade de Lisboa and the Centro de História of the Instituto de Investigação Científica Tropical (IICT) and aimed to reflect and discuss the nature of science's role in the colonial context as well as its relevance in a post-colonial perspective. The meeting brought together researchers, teachers and specialists from the fields of natural, social and human sciences in order to stimulate the debate on an issue that has gained considerable visibility over the last few decades. For more information, please see <http://coloquiocienciacolonial2013.wordpress.com/>.

Official languages: Portuguese, English, French and Spanish.

'Chemistry Applied' Workshop

Hebrew University of Jerusalem, Givat Ram, Jerusalem, Israel

November

28

2013

This workshop was organised by the Sidney M. Edelstein Center for the History and Philosophy of Science, Technology and Medicine, The Hebrew University of Jerusalem, Givat Ram, Jerusalem, Israel on Thursday 28 November 2013, Seminar Room, Sidney M. Edelstein Center, Levy Building.

9:30 Reception

10:00 Session 1: '1913'

This session was devoted to centenaries of three events in the history of chemical sciences: publication of Rabbi Dr. Isaac Herzog's doctoral thesis; derivation of the Michaelis-Menten constant; and inauguration of the Haber-Bosch ammonia process.

Zvi C. Koren, Edelstein Center for the Analysis of Ancient Artifacts, Shenkar College, 'New Chemical Insights into Ancient Tyrian Purple Dyeings'

Ute Deichmann, Jacques Loeb Centre for the History and Philosophy of the Life Sciences, Ben Gurion University, 'Discovery and Progress in Biochemistry: The Enzyme Kinetics of Michaelis and Menten, 1913-2013'

Tony Travis, Edelstein Center, Hebrew University, 'Capturing Nitrogen: In Peace and War'

12:00 Coffee break

12:30 Session 2: 'Power: Chemical and Political'

Shaul Katzir, Cohn Institute, Tel Aviv University, 'Struggling with Electrochemistry: Hermann Aron's Work on the Storage Battery Around 1880'

Tony Travis, 'The Context of Theodor Herzl's Inn of Aniline (1896)'

OTHER MEETINGS

Conference: 'Quand l'alchimie était une science' by Bernard Joly

Club Histoire de la chimie, Paris

January

09

2014

The Club histoire de la chimie of the Societe Chimique du France organises the conference 'Quand l'alchimie était une science' ('When alchemy was a science') presented by Professor Bernard Joly.

For more information see

<http://www.societechimiquedefrance.fr/manifestation/conference-du-club-histoire-de-la-chimie-10741.html>

Science as Cultural Hegemony: International Workshop on Gramscian Concepts for the History of Science

Centre d'Historia de la Ciencia (CEHIC) Universitat Autonoma de Barcelona (UAB) - Institut d'Estudis Catalans (IEC), Barcelona

January

23-24

2014

In spite of the longstanding perception of modern science as value-free knowledge of the external world, the boundaries between a supposed ideology-free history of ideas and an ideology-loaded social history of science have been progressively blurred in the last decades. As a result, criticisms of the autonomy and neutrality of modern science have permeated more or less explicitly recent historiography of science. Within such a framework, the profiles, responsibilities and commitments of academics, and especially of those involved in the natural sciences, have been dramatically realigned.

As some recent scholarship has shown, of particular significance in discussing these issues are the reflections of the political thinker Antonio Gramsci (1891-1937). In his *Prison Notebooks* of the 1920s and the 1930s, he provided scholars with an effective vocabulary to critically grasp new interactions between science and society. Key notions such as 'cultural hegemony', and the role of the 'intellectuals' (scientists, experts, popularizers, educators), when raised within the context of historiography of science, may help to articulate new approaches for understanding the relationship between science and social control.

The workshop aims at examining and assessing the ways in which hegemonic values and science have been continuously intertwined. It may provide the opportunity to bring to surface the manner in which science—through its practices, conceptions, justifications, transmission, circulation and employment—mirrored power relations in the past.

For more information visit <http://www.internationalgramscisociety.org/communications/news.html>

OTHER MEETINGS

Chemical Reactions: Chemistry and Global History

Chemical Heritage Foundation, Philadelphia, USA

April

10-12

2014

The Cain conference, 'Chemical Reactions: Chemistry and Global History,' organized by Cain Conference Fellow Lissa Roberts, will take place 10-12 April 2014 at CHF. The conference will bring together over thirty scholars from the US, Europe, Asia, and South America, including several former fellows, whose work focuses on global history and the history of science. Panel topics include fertilizer and agriculture, science and the senses, governance, industrialization and waste, food, and medicine and drugs. Ian Inkster will provide an opening lecture. All are welcome

to attend.

'The Life Sciences after World War II: Institutional Change and International Connections' Conference

University of Pittsburgh, USA

May

16-17

2014

The World History Center at the University of Pittsburgh is accepting proposals for their upcoming conference, 'The Life Sciences after World War II.' This conference, the second in a series on world-historical views of the history of science, addresses the theoretical and empirical work of researchers in the life sciences, from 1945 to 2000, in the context of changing scientific institutions, shifting socio-political regimes, and advancing knowledge. For both historians of the life sciences and world historians, the post-WWII period remains relatively under-examined. The conference seeks interventions in interpretation of these fields from scholars based in history, history of science and medicine, social sciences and natural sciences. In particular, they are seeking papers that address any aspect of the life sciences from a global/world history perspective. Deadline for proposals is **1 December 2013**. This conference is being organised by Mat Savelli, 2012-13 CHF Haas Fellow and current Postdoctoral Fellow in the World History of Science at the University of Pittsburgh. For more information see <http://www.worldhistory.pitt.edu/LifeSciences/LifeSciences.CFP.pdf> or email matsavelli@gmail.com.

Advance Notice: 10ICHC (International Conference on the History of Chemistry), June/July 2015

Aveiro, Portugal

The next International Conference on the History of Chemistry (10ICHC) organised by the European Working Party for the History of Chemistry will take place in Aveiro, Portugal in June or July 2015 (exact date to be confirmed at a later stage). The conference will be hosted by Isabel Malaquias as Chair of the Local Organising Committee, while Peter Morris has agreed to act as the Chair of the Programme Committee.

Further information will be provided in the next issue of *Chemical Intelligence*.

CALLS FOR PAPERS

International Society for the Philosophy of Chemistry Annual Conference 2014

London School of Economics (LSE), London

July

07-09

2014

Deadline for Submission of Abstracts: 23 May 2014.

The Annual Conference of the International Society for the Philosophy of Chemistry will take place at the London School of Economics (Lakatos Building, LAK 2.06). The meeting will be jointly sponsored by ISPC and the Centre for Natural and Social Science (CPNSS) at LSE.

The conference will open with Registration at 9 am on Monday 7 July and end at 12 noon on Wednesday 9 July, 2014. A light lunch will be available on the Monday and Tuesday at the Centre. A Conference Dinner will be held on the evening of Tuesday 8 July at a nearby restaurant. The Conference Fee will be £30 to be paid at Registration.

Submissions – title and 100 word (max) abstract – should be sent to: ispc.ac2014@gmail.com with subject title 'ISPC Abstract Submission.' Submissions can be received from 7 October 2013.

The deadline for abstract submission is 23 May 2014. This date will make possible the formal acceptance of a submission for anyone who needs it in order to notify their home university for travel etc.

For more information, please write to Rom Harré (harre@juno.com), President, ISPC or Roman Frigg (r.p.frigg@lse.ac.uk), Director, CPNSS.

ICOHTEC (International Committee for the History of Technology) Symposium 2014

Brasov, Romania

July–August

29-02

2014

Deadline for Submission of Abstracts: 3 February 2014.

The 41st ICOHTEC Symposium will be held in Romania at the turn of July and August next year. The main theme of the meeting will be 'Technology in Times of Transition'. The aim is to examine major breaks and turning points in technological development with the following conversion periods in a multidisciplinary framework.

The general theme is tailored for the site, while the intention is to examine flexibility of technology to adjust to major societal transitions in the past and present. Times of transition refer to rapid and even revolutionary phases of history when major societal structures changed and nations had to bend to new conditions. Industrial revolutions of the 18th and 19th century, restructuring the economies during and after World War I, depression of the 1930s, post-war period of reshuffle and economic growth and collapse of the Soviet regime in the 1990s are examples of times of transition. In addition, the idea of the symposium is to promote dialogues between East and West as well as North and South and – if possible – also to compare experiences of various countries in the similar circumstances.

If you have any questions related to the scientific programme, paper, poster or session proposals, please, do not hesitate to contact Slawomir Lotysz, the chair of the programme committee, via email s.lotysz@gmail.com.

For more information please refer to <http://www.icohtec.org/brasov2014/>

CALLS FOR PAPERS

The International Workshop on the History of Chemistry 2015: ‘Transformations of Chemistry from the 1920s to the 1960s’

Tokyo Institute of Technology, Japan

March

02-04

2015

Deadline for Submission of Abstracts: 30 May 2014.

The years between the 1920s and the 1960s saw a transformation of chemistry in several aspects. These included the development of biochemistry, polymer chemistry, quantum chemistry, and computational chemistry, as well as the instrumental revolution. New methods, theories, and technologies opened up new fields of chemical sciences, and the chemical industry grew to be one of the most important branches of industry that supported national economies. Chemistry was greatly influenced by World War II and the Cold War, when it was directed especially to military and security needs, while the public image of chemistry also changed, due largely to the environmental problems caused by synthetic chemical materials.

These years also saw developments in Japanese chemistry. The first generation of Japanese chemists started their research in the early 20th century. Born and educated after the Meiji Restoration, the starting point of Japan's full-fledged modernization, some of them founded a research strategy that aimed to study the structure of components of Japan's local natural products using methods newly developed in Europe, in order to compete with chemists in the West. However, after several decades, the accomplishments of seven Japanese Nobel laureates in chemistry became not fundamentally different from those of their Western counterparts. Their researches, performed mostly from the 1950s to the 1970s, developed new methods and theories and opened new fields. Clearly, there must have been a transformation of chemistry research in Japan between the 1920s and the 1960s as well.

The aim of the workshop ‘Transformation of Chemistry from the 1920s to the 1960s’ is to stimulate a discussion of the transformation of chemistry in Japan and/or in the world during the period with comparative perspectives. The workshop may take an interdisciplinary approach and pay special attention to the social dimension of chemistry.

This subject has only recently started to be discussed and even then it has only been considered intermittently. This workshop attempts to bring those interested in the history of chemistry in the 20th century together for dialogue and debate from various perspectives. It will comprise thematic four keynote lectures, sessions with papers and commentaries, and a concluding general discussion.

Keynote speakers:

Professor Jeffrey Johnson, Villanova University, USA

Professor Mary Jo Nye, Oregon State University, USA

Professor Ernst Homburg, University of Maastricht, The Netherlands

With an introductory lecture on the theme and on the Japanese Society for the History of Chemistry by its president, Professor Yasu Furukawa, Nihon University, Japan

The workshop organising committee invites proposals for papers on the following themes, though other topics within the broad framework of the conference are also encouraged:

Emergence of polymer chemistry, quantum chemistry, and computational chemistry

Biochemistry and the origins of molecular biology

Instrumental revolution in chemistry

Development of chemical engineering

Changes in the chemical industry

Chemistry and the environment

Chemistry and World War II

Chemistry and the Cold War

CALLS FOR PAPERS

International communication in chemistry
Chemical heritages

Abstracts of less than 400 words should be submitted no later than **30 May 2014** by posting through the submission form on the workshop website <http://kagakushi.org/iwhc2015>. General inquiries should be sent through the contact form on the same website. The format of the conference will not allow for more than about 20 papers. Applicants will be notified if their papers have been accepted or not by 1 July 2014.

Full versions of papers are due to be submitted for commentators by 16 December 2014. Papers should be no more than 7,000 words in length. They will be made available only to registered participants in the workshop via a restricted section of the website before the workshop.

The registration fee will be 10,000 JPY, conference dinner 8,000 JPY, and excursion optional. It will be possible to obtain limited economic support for travel expenses of paper presenters from abroad. Please indicate in the application if such support is required for attendance and what level of support will be needed. More information will be announced later.

Workshop venue: Tokyo Institute of Technology (2-12-1 Ookayama, Meguro-ku, Tokyo 152-8552). The workshop will be two full days, from morning to late afternoon 3-4 March 2015. The late afternoon/evening of 2 March is reserved for registration, reception, and possibly one keynote lecture. The workshop language will be English (with simultaneous Japanese translation).

It is possible to apply for participation (to attend) without giving a paper. The deadline for such applications is 1 December 2014. Selected papers from the conference will be considered for publication.

The workshop is organised by the Japanese Society for the History of Chemistry (JSHC) with support from the History of Science Society of Japan and the Chemical Society of Japan. The workshop will be held to commemorate the 40th anniversary of the foundation of JSHC. The Commission on the History of Modern Chemistry (CHMC) will be co-sponsor of the workshop. The workshop is supported by the Japan Society for the Promotion of Science (JSPS) KAKENHI Grant Number 24300295.

Organizing Committee:

Masanori Kaji (chair), Tokyo Institute of Technology, Japan
Keiko Kawashima, Nagoya Institute of Technology, Japan
Yoshiyuki Kikuchi, The Graduate University for Advanced Studies (SOKENDAI), Japan
Toshiya Kohno, University of the Sacred Heart, Japan
Yasu Furukawa, Nihon University, Japan
Makoto Ohno, Aichi Prefectural University, Japan
Hiroaki Tanaka, Tokyo Denki University, Japan
Togo Tsukahara, Kobe University, Japan
Masao Uchida, Wako University, Japan
Toshifumi Yatsumimi, Aoyama Gakuin Women's Junior College
Hideyuki Yoshimoto, Tokyo University of Foreign Studies
Jeffrey Johnson (ex officio), Villanova University, USA

Program Committee:

Yasu Furukawa (chair), Nihon University, Japan
Jeremiah James, Max Planck Institute for the History of Science, Germany
Jeffrey Johnson, Villanova University, USA
Masanori Kaji, Tokyo Institute of Technology, Japan
Yoshiyuki Kikuchi, The Graduate University for Advanced Studies (SOKENDAI), Japan
Peter Morris, Science Museum, UK
Carsten Reinhardt, Chemical Heritage Foundation, USA
Brigitte Van Tiggelen, Mémosciences, Belgium

CALLS FOR PAPERS

9th STEP Meeting (Science and Technology in the European Periphery) *Interuniversity Center for the History of Science and Technology (CIUHCT), Lisbon*

September

01-03

2014

Deadline for Submission of Abstracts: 15 December 2013.

STEP meetings have always sought to strike a balance between historiographical reflections, which help develop a broader comparative analysis, and case-studies examining different national and regional contexts. They will continue to favour both approaches at the 9th meeting. The Scientific Committee encourages contributions on a range of themes related to STEP's interests and in particular to its established re-

search groups:

Cross-National, Comparative and Transnational History of STM

1. Experts in the Periphery
2. Material Culture of Science: Museums and Collections in the Periphery
3. Popularization of Science and Technology: Centres and Peripheries
4. Science and the Press
5. Universities in the Periphery
6. Women in Science, Women in the 'Periphery'
7. Science x Medicine

A Special fee will be considered for those attending both STEP and ESHS (4-6 Sept) , also in Lisbon at the same premises. Abstracts and presentations should be in English.

For more information please refer to <http://bdrupal.hicido.uv.es/?q=node/922>.

For any other information please contact the local secretariat, Fátima de Haan (occoe@occoe.pt)

6th International Conference of the European Society for History of Science

*Interuniversity Center for the History of Science and Technology (CIUHCT),
Lisbon*

September

04-06

2014

**Deadline for Submission of Abstracts and Panel Sessions (max 4 papers):
15 December 2013.**

The theme of the conference is 'Communicating Science, Technology and Medicine'. Communicating science, technology and medicine has always been central to the scientific and technological enterprise, but across ages and spaces agents, audiences, means, aims and agendas behind this complex process have varied considerably. The interpretations put forward by historians of science, technology and medicine have also changed considerably. Historians have been compelled recently to move away from former historiographical categories opposing creative producers to passive recipients and consumers, and contrasting the production of knowledge with its transmission. The vertical model of diffusion has been superseded by a horizontal conception of circulation and appropriation of science, technology and medicine, which gives voice to various actors and to their different, often contradictory, agendas. Within this framework, science, technology and medicine are envisaged as active forms of communication, to such an extent as ultimately blurring the distinction between the making and the communicating of science, technology and medicine.

The 6th ESHS aims at stimulating historical and historiographical studies and debates on the communication of science, technology and medicine along the following sub-thematic clusters.

CALLS FOR PAPERS

- 1) Human and non-human agents: experts, amateurs, and institutions;
- 2) Networks of circulation and communication of knowledge;
- 3) Means of communication: correspondence, papers, books, textbooks, popularization outlets, newspapers, radio, theatre, films, cartoons and internet;
- 4) Spaces and modes of communication: conferences, classrooms, public demonstrations, exhibitions, instruments, collections and museums;
- 5) Audiences: lay and specialized audiences, consumers;
- 6) Rhetorical devices;
- 7) Communication in the European Periphery;
- 8) Communication in a globalized world: challenges and constraints; ideology of communication, hegemonic values and commercialized science, technology and medicine

Abstracts, presentations and proceedings should be preferably in English.

For any other information please contact the local secretariat Fátima de Haan (occoe@occoe.pt), http://www.eshs.org/index.php?option=com_content&view=article&id=128:6th-eshs-congress-lisbon-2014&catid=5:congress&Itemid=81

Please note that the European Working Party for the History of Chemistry is planning a session at the Conference. The topic is Linus Pauling's *Nature of the Chemical Bond* in post World War I Europe, focussing in particular on the chemical curriculum and teaching. Call for Papers will be circulated shortly.

XII Congreso de la Sociedad Española de Historia de las Ciencias y de las Técnicas, III Encuentro Internacional Europeo-Americano (12th Meeting of the Spanish Society of History of sciences and technology and 3rd International European-American Meeting)

Escuela de Ingeniería Minera e Industrial de Almadén, Ciudad Real, Spain

September

09-12

2014

Deadline for Proposal Session Submission (min 5 papers): 28 February 2014.

Subject Areas:

1. Science and Heritage: documents, instruments and buildings.
- 2 Exchange and Circulation of Science and Technology between Spain and Latin America.
3. Industrial Heritage and Regional Development.
4. History of Sciences.
5. Industrialization, commemorations and anniversaries.
6. Free themes.

Questions and proposals to the Scientific Committee should be addressed to: presidente@sehcyt.es

For more information, please refer to: <https://sites.google.com/site/sehcyt2012/noticias/entradasintitulo>

SHAC NEWS

New Officers



Michael Jewess has been elected as the new **Treasurer** of SHAC. He is an Oxford chemist (New College, matriculated 1966), who did his Part II on mixed metal oxides and his DPhil (with the late L A K Staveley) on heat capacities at low temperatures. He later qualified as a patent attorney. Working in this field (from 1988 to 2009 as head of intellectual property for a sequence of major multinationals), he was privileged to observe and participate in the risky process of converting laboratory results into commercial practice. He recently completed his book *Inside Intellectual Property – best practice in intellectual property law, management, and strategy* (Chartered Institute of Patent Attorneys, London, 2013). He has long been interested in the history of science and technology and has published on sundials, on the shape

of the earth according to Newton, on the commercial production of washing soda in the nineteenth century, and on Faraday's apprenticeship. He is a member of the historical groups both of the Royal Society of Chemistry and of the Institute of Physics. He is married to Professor Kathleen Burk, a historian of international relations, with a grown-up daughter who works in publishing.



As SHAC's membership continues to grow, the Society has created a new position of **Membership Secretary** to undertake some of the tasks formerly handled by the Treasurer. At our AGM in November, **Dr Anna Simmons** was elected to this position. She is an Honorary Research Associate in the Department of Science and Technology Studies at University College, London. Her research has centred on the social history of British chemistry during the nineteenth and twentieth centuries with a particular focus on the laboratories and pharmaceutical trade at the Society of Apothecaries and the development of chemical careers and professional organisations. She is currently working on a longitudinal study of the development of sites for the wholesale production of pharmaceuticals from the seventeenth to the nineteenth century. She has

been a SHAC Council member since 2003 and served as Hon. Secretary from 2003 to 2008. She is also editor of the Royal Society of Chemistry Historical Group Newsletter.

Simon Werrett has been elected as the **Honorary Secretary** of SHAC. He is a lecturer in the Department of Science and Technology Studies at University College London. Previously he taught History of Science in the Department of History at the University of Washington, Seattle from 2002 to 2012. He has held postdoctoral fellowships at the Max Planck Institute for the History of Science in Berlin and the Getty Research Center in Los Angeles. Werrett's work explores exchanges between the arts and sciences, principally in the sixteenth to nineteenth centuries. His first monograph *Fireworks: Pyrotechnic Arts and Sciences in European History* (University of Chicago Press, 2010) examined exchanges of skills and techniques between early modern pyrotechnists and natural philosophers in Britain, France and Russia. Werrett's current research explores the history of recycling in science and medicine, and economies of skills in households, workshops, factories, laboratories and hospitals in Europe and North America since the seventeenth century. He was a fellow of the Rachel Carson Center for Environment and Society in Munich in 2011.



SHAC NEWS

New Officers



Joel A. Klein is the SHAC Webmaster. He is a Ph.D candidate in the Indiana University Department of History and Philosophy of Science, as well as a Research Fellow at the Chemical Heritage Foundation in Philadelphia. He spent two years carrying out research in Germany via Fulbright and DAAD grants, and his research focuses on the Wittenberg medical professor, Daniel Sennert (1572-1637), whose unique combination of chymistry, medicine, and atomism came to be influential throughout the seventeenth century. Joel has also worked on *The Chymistry of Isaac Newton Project* as an editorial assistant, and has even recreated several of Newton's alchemical experiments.



Mike A. Zuber is the newly-appointed International Student Representative and the Content Editor of the SHAC website. He is a PhD candidate at the University of Amsterdam. His project focuses on various forms of theosophical chymistry in the German context of the early-eighteenth century. He has previously concluded a MA at ETH, which he finished with Distinction.



Judith Mawer is the newly-appointed UK Student Representative. She has started a PhD at University of Exeter in the History department. She is examining the life and work of the alchemist Thomas Vaughan (1621/2 - 1666), seeking to place this syncretistic and philosophical enigma in the context of the intellectual, religious and political milieu he inhabited. She has recently finished a MA in Western Esotericism (Distinction) at University of Exeter.

OTHER NEWS, EVENTS & GRANTS

Chemical Heritage Foundation Announces Beckman Center for the History of Chemistry Fellowships for 2014–2015

Deadline: 15 February 2014

The Beckman Center for the History of Chemistry at the Chemical Heritage Foundation (CHF), an independent research library in Philadelphia, invites applications for short-term and long-term fellowships.

Short-term fellows are particularly meant to use the collections, while long-term fellows' work must help to support the mission of the institution and fit with collections more generally. The research collections at CHF range chronologically from the fifteenth century to the present and include 6,000 rare books, significant archival holdings, thousands of images, and a large artifact and fine arts collection, supported by over 100,000 reference volumes and journals. Within the collections there are many areas of special strength, including: alchemy, mining & metallurgy, dyeing and bleaching, balneology, gunpowder and pyrotechnics, gas-lighting, books of secrets, inorganic and organic chemistry, biochemistry, food chemistry, and pharmaceuticals.

CHF supports roughly 20 fellows each year, creating a vibrant international community of scholars whose work is in some way tied to the history of materials and materiality, chemistry, and all related sciences. Applications come from scholars in a wide range of disciplines across the humanities and social sciences. To see this year's list, go to: <http://www.chemheritage.org/research/beckman-center/fellows-and-staff.aspx>.

Postdoctoral Fellowships (CHF encourages scholars with PhDs at all career levels to consider applying, including those looking for a place of residence during a sabbatical leave)
9 Months in Residence; open to PhD scholars • \$45,000

Dissertation Fellowships
9 Months in Residence; open to graduate students at the dissertation stage • \$26,000

Short-Term Fellowships
1–4 Months in Residence; open to all scholars and researchers • \$3,000 per month

For further information visit: www.chemheritage.org/BeckmanCenter

CHF Travel Fellowships

The Beckman Center for the History of Chemistry at CHF offers grants to cover travel and accommodation expenses for researchers who wish to use its collections for short-term research (periods of up to one month) on the history of the chemical and molecular sciences. Travel grant recipients have access to the collections of the Othmer Library and are encouraged to use CHF's oral history materials and its collection of art, artefacts, archives, and images. Travel grants are \$750 per week and are intended to help defray the costs of travel and accommodation.

Travel grant applicants must reside more than 75 miles from Philadelphia to be eligible. No more than one travel grant per person per fiscal year (1 July to 30 June) can be awarded. Grants must be taken within one year of the award or the grantee must request an extension or reapply.

There is no deadline for travel grant applications. 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 (one page)

OTHER NEWS, EVENTS & GRANTS

- A curriculum vitae (up to three 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: travel-grants@chemheritage.org.

Royal Society of Chemistry Historical Group News

From 1 January 2014, Dr John Hudson will be the new Chairman of the Royal Society of Chemistry Historical Group. He will replace Professor Alan Dronsfield who is stepping down after serving two four year terms as Chairman. Dr Peter Morris will replace Dr Hudson as the Treasurer of the RSCHG.

The next meeting of the RSCHG will be held at Burlington House, Piccadilly, London on Wednesday 19 March 2014. It is entitled 'Revolution in Analytical Methods.' Further details will be available on the RSCHG website nearer the time and also in the winter 2014 RSCHG newsletter.

The next issue of the Royal Society of Chemistry Historical Group Newsletter will be published in February 2014. Past issues can be downloaded from the RSCHG website: <http://www.chem.qmul.ac.uk/rschg/>

Obituary: Mark Finlay

The American historian of agricultural chemistry, Mark Finlay, died in October 2013 following a car accident on his way home to Savannah from a committee meeting at the Chemical Heritage Foundation in Philadelphia. His death at the early age of 53 will be a blow to historians of chemistry. Mark was educated in Liberal Arts at Grinnell College in Iowa before taking his PhD (1992) at Iowa State University. His entire academic career was spent in the History Department of the Armstrong Atlantic State University in Savannah, Georgia where he became a full professor in 2005, and where he taught courses in German History and the History of Technology. His initial research on German agricultural research stations and their influence on American agricultural practice inevitably led him to study Liebig. For this work he was awarded the Liebig-Wöhler-Freundschafts-Preis of the Göttingen University Chemical Society in 1995. Members of SHAC will recall his revealing essay on Liebig's motives in publishing the 7th edition of the *Agricultural Chemistry* (Ambix 38, 1991, 155-67), and his fascinating cultural history of Liebig's extract of meat in Hamke Kamminga and Andrew Cunningham, eds., *The Science and Culture of Nutrition, 1840-1940* (Rodopi: Amsterdam, 1995), pp. 48-74. His interest in chemurgy led to research on America's attempts to grow natural rubber that culminated in the book *Growing American Rubber: Strategic Plants and the Politics of National Security* (Rutgers University Press, 2009) which was awarded the Theodore Saloutos Memorial Prize of the [American] Agricultural History Society in 2009. Latterly, his teaching and research interests had turned to environmental history and he was engaged in a cultural and environmental history of Ossabaw Island, one of the Georgia's barrier islands to the south of Savannah. A man of great cultivation and charm, he will be sorely missed by his many friends in Europe and America.

William Brock (University of Leicester)

OTHER NEWS, EVENTS & GRANTS

Member News

Congratulations to **Dr Matteo Martelli** for winning the biennial Prize for Young Historians awarded by the Académie internationale d'histoire des sciences for his critical edition of the Greek alchemical texts of Pseudo-Democritus. For more information, see <http://www.aihs-iahs.org/fr/prix>. The prize was presented to Dr Martelli at the ICHSTM in July 2013 as part of a session organised by the Académie internationale.

Congratulations to **Dr Jennifer Rampling** for receiving the inaugural Neu-Whitrow Bibliography Prize for *The Catalogue of the Ripley Corpus*, published in *Ambix* in 2010. The prize is sponsored by the Commission on Bibliography and Documentation of the International Union for the History and Philosophy of Science/Division of History of Science, and is awarded every four years for the best bibliography or manuscript finding aid in the history of science. The prize is named after two bibliographers who followed George Sarton: Magda Whitrow who worked at Imperial College on the Cumulative Bibliography of History of Science and John Neu who worked at the University of Wisconsin-Madison as the editor of the annual bibliography for thirty-five years. The award was presented to Dr Rampling at the ICHSTM in July 2013, as part of a symposium organised by the Commission.



Congratulations to **Dr Anke Timmermann**, currently working on alchemical images as Munby Fellow at Cambridge University, who has been awarded a two-year Henkel Foundation fellowship to return to the Max Planck Institute for the History of Science in Berlin in October 2014. We are also happy to announce the recent publication of her monograph on alchemical poetry, *Verse and Transmutation* [<http://www.brill.com/verse-and-transmutation>].

Congratulations to **Dr Anna Marie Roos**, who was elected as a Fellow of the Society of Antiquaries in October 2013 [<http://www.sal.org.uk/newsandevents/newsarchive/>].

Congratulations to **Dr Georgiana Hedesan**, who was awarded a three-year Wellcome Trust Fellowship in Medical Humanities at the University of Oxford to study universal medicine in seventeenth-century alchemy. She is currently concluding a short-term Frances A. Yates Fellowship at the Warburg Institute, University of London.

Congratulations to **Dr Brigitte Van Tiggelen**, who was appointed Chair of the Working Party for the History of Chemistry at the 9th International Conference on the History of Chemistry.

REPORTS

Rumford Scholarship 2013

Evan Helper-Smith*University of Princeton*

Evan Hepler-Smith is a PhD candidate in Princeton's Program in History of Science and 2013-14 Herdegen Fellow of the Chemical Heritage Foundation. In addition to his dissertation, *Nominally Rational: Systematic Nomenclature and the Structures of Organic Chemistry, 1889-1935*, he is pursuing research projects in the x-ray examination of paintings in the early twentieth century and in the role of computers in the interplay of logical and aesthetic conceptions of chemical synthesis.

In order to teach about, learn about, or record new information about a scientific object, to obtain a sample of it or classify it or promote or disparage it, you need to be able to name it. This is particularly true for organic chemists, who use nomenclature not only to identify tens of millions of carbon-containing small molecules but to express their inner constitution and the intricate network of relationships among them through systems of prefixes, suffixes, and roots corresponding to chemical subunits. Whether quoted as shibboleth, complied with grudgingly, or honored in the breach, systematic names structure how chemists talk, write, and think about their world. Yet it was not always so.

In my dissertation, *Nominally Rational: Systematic Nomenclature and the Structures of Organic Chemistry*, I delve into the five-decade period of lexical experimentation at the turn of the twentieth century that produced the systematic nomenclature of organic chemistry. Driven by the fear that a disordered vocabulary would slow the rapid progress of late-nineteenth century chemistry, a commission of leading European chemists codified the 1892 Geneva Nomenclature, a set of rules for translating diagrams of chemical structures into names of chemical substances. However, chemists working in different settings – pedagogues and researchers, editors and authors – had different ideas of what made a good chemical name, and they adapted, adopted, or ignored systematic names in the service of very different goals. This period of grappling with systematic nomenclature both gave rise to a new set of institutions and experts dedicated to managing the chemical lexicon and entrenched a set of assumptions about the nature of chemical substances and chemical reasoning.

This spring and summer, I traveled to Europe to research this project, aided by the Rumford Scholarship, an annual award supporting a North American scholar's original research in the history of chemistry or alchemy at libraries, archives, or museum collections in Europe. With the support of SHAC and the Chemical Heritage Foundation, which jointly administer this award, I was able to consult archival collections in Paris, Geneva, Berlin, and Cologne. In Paris, I explored the network of reformist chemists, led by Charles Friedel (Sorbonne chair of organic chemistry and pioneer of an important class of synthetic reactions), who first championed the project of creating a standard, international nomenclature. I discovered that many of these chemists had close ties to French industrialists and Third Republic education reformers, ties made yet closer by the Alsatian heritage that many of these figures shared. For this 'Alsatian school' of progressive chemists, nomenclature reform was not a petty, pedantic matter. Rather, alongside a new set of educational institutions focused on practical chemistry, an association for disseminating scientific knowledge to technical experts in the provinces, and the promotion of atomism in French chemical pedagogy and research, systematic nomenclature was part of a program to boost the fortunes of French science and industry.

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My research in Geneva focused on one chemist, Amé Pictet, scion of one of the city's leading families and longtime (1894-1932) professor of organic chemistry at the University of Geneva. Though little-remembered, Pictet was a chemist of significance in his day, whose work on alkaloids, sugars, and coal distillates earned him membership in the prestigious French Academy of Science and honors from the Chemical Societies of London and France, as well as a Nobel Prize nomination. Pictet was much occupied with matters of nomenclature throughout his career, from his service as secretary to the Geneva Congress in 1892 to a course on chemical nomenclature to active participation in the nomenclature reform work of the fledgling International Union of Pure and Applied Chemistry in the 1920s. An active and conscientious researcher, teacher, editor, and committee member, Pictet captured in his meticulously-kept records the broad range of settings in which early twentieth-century chemists struggled to put chemical names - systematic and not - to use.

In Berlin, I discovered a collection of corrected article drafts submitted to the *Berichte* of the German Chemical Society. The pen of Paul Jacobson, an editor of the *Berichte* much concerned with preserving links within the literature sustained by established names, reveals an alternative to the reformist French group's account of the demands that a standard nomenclature must answer.

Important as journals like the *Berichte* were, much of the life of chemical substances and names occurred outside of their pages, and outside of the halls of universities. In search of the practices of chemical naming in the burgeoning turn-of-the-century chemical industry, I visited the archives of the Bayer corporation outside of Cologne. There I found records of a different sort of systematic nomenclature, one founded not on chemical units but on names of chemists and numbers of laboratory notebook pages. Such a system of bookkeeping structured and enabled the collaborative research enterprise by which a team of physiologists, organic chemists, and clinical investigators were able to sift through thousands of synthetic substances to discover Prontosil, the original sulfa antibiotic and a substance that one historian has justly labeled 'the first miracle drug'.

Chemical names are an elusive subject matter. They saturate the papers of chemists, but are rarely the object of explicit reflection. I am grateful to the SHAC for helping to make it possible for me to begin to understand how these omnipresent systems of reference have structured the work of chemists and the world that they have helped to build.

REPORTS

SHAC New Scholar Awards 2012

Ignacio Miguel Pascual Valderrama

ICP—CSIC

Over the past few years, I have undertaken the study of the life and work of Martine de Bertereau and her husband, Jean de Chastelet, Baron and Baroness of Beausoleil. Their works are generally rare and difficult to find, and so, while preparing a critical edition of one of them, the *Diorismus verae philosophiae* (1627; reprinted as *Archetypus verae philosophiae* in 1630), I was surprised to find a handwritten copy amongst the papers of David Lindsay, first Lord of Balcarres (1587–1642), the remains of whose collection are at present housed at the National Library of Scotland.

Thanks to the 2012 SHAC Award Scheme, I was able to travel to Edinburgh, in order to examine the surviving Lindsay documents: not just the copy of the *Archetypus*, but also nine more handwritten volumes on alchemy and occultism that have hitherto been preserved, as well as Lord Balcarres's notebooks on alchemy and other related matters, the inventories of the books he bought during his lifetime, his private correspondence, and others.

When analyzing the handwritten copy of the *Archetypus*, I noticed that the style of writing coincides with that used by Lindsay in his private correspondence, showing that he had personally copied the texts himself. Every year, Lord Balcarres would enlarge his library, not only by buying new books, but also by copying by hand other works he was interested in, most of them on alchemy and occultism.

On the other hand, I have noticed that Lindsay's transcriptions were very faithful to the originals. At least, such is the case with the *Archetypus*, which is practically identical to the 1630 printed edition. However, Lord Balcarres allowed for some changes in the punctuation marks which make the text much clearer, showing that he was not just aiming to transcribe, but that he also understood what he was copying. Thus, thanks to those small changes, I have been able to clarify some particularly obscure passages, which could not have been correctly interpreted if we had only dealt with the printed editions. This fact has meant a significant improvement of our critical edition of *Archetypus*, by allowing us to read the text not only through the present day eyes, but with the mentality of the public to which it was addressed, an educated élite of the first half of the seventeenth century interested in alchemy and the occult.

Furthermore, David Lindsay's papers allow us not only to interpret the *Archetypus*, but also many other books of chemical content, with the vision of the readers of his own time. In fact, amongst the material that the cataloging sources had classified as 'Miscellaneous notes', I found numerous notes to be studied in the future as sources of abundant information on how Lindsay read and understood some key texts, such as Cardano's *De subtilitate rerum*, Muller's *Miracula chymica* or Maier's *Symbola aureae mensae*.

Finally, the inventories made by Lindsay of the works that he acquired have also been examined, as they also provide abundant information on the type of books he included in his library, which, as it is known, became one of the most important not only in Scotland, but in all of Great Britain.

REPORTS

SHAC New Scholar Awards

Haileigh Robertson

University of Leeds

A SHAC Award allowed me to travel to the Danish Medieval Centre (Middelaldercentret) in Nykøbing Falster, Denmark to undertake research for my Ph.D thesis. My thesis aims to recover and define the role of gunpowder in the development of 17th century experimental natural philosophy. To enhance my understanding of the subject, I find it beneficial to replicate historic gunpowder experiments and practices. At the DMC I was able to work with ‘The HO Group’: an international group of scholars who meet annually at the centre to conduct experimental research on historic ordnance.

The primary goal of this year’s meeting was saltpetre extraction. Saltpetre was the oxidising component in gunpowder, and its major, yet rare, ingredient. To make nitre was a long and unpleasant process, but it was in very high demand and had a wide reaching distribution network owing to its many potential uses. David Cressy describes nitre as ‘the crucial link in the chain between chemistry and power’ (*Saltpeter: Mother of Gunpowder*, 2013, 2). To make saltpetre was an old alchemical process, yet increasingly in the early modern era, natural philosophers, chemists in particular, sought to understand its causes, to get more out of the substance—both in material and intellectual terms. To understand the process of saltpetre making more fully, we endeavoured to extract the substance in the manner prescribed by Lazarus Ercker (*Treatise on Ores and Assaying*, 1580). We aimed to simulate, as far as possible, the actual early modern procedures involved in making saltpetre. The DMC has an excellent range of expertise and facilities suited to this research, and has been operating a nitre bed since 2011—namely a pile of earth, treated regularly with pigs urine and pigs dung to create a nitrate concentration. We intend to submit a sample of the saltpetre crystals obtained for chemical analysis, to find out what we actually have, and explore the types of impurities that may have been present in early saltpetre and gunpowder.

We further conducted research into early gunpowder testing, using a replica eprovette (or powder tester), based on Joseph Furtenbach’s vertical-ratchet model of 1627. The pyro-technician at the DMC tested the device, enabling an investigation into early gunpowder testing technology, and helping me address the larger questions of what early moderns considered ‘better’ gunpowder. Replication has demonstrated that eprovettes would not necessarily facilitate an accurate comparison of powders, but it has allowed me to experience and understand a sophisticated technology arising from the intention to make gunpowder of a higher quality.

This award has facilitated research which will greatly enrich my thesis, and also act as the basis for a research paper on historical replication. In making saltpetre like an early modern, and working with a replica eprovette, I learned a great deal on the nature of early approaches to saltpetre and gunpowder. I also developed a tacit knowledge of procedures which could not be obtained from texts alone. I now can assess more closely how the 17th century experimental philosophers’ ideal Baconian union of theory and practice would actually transpire in the domain of gunpowder. I will return to the centre next year to conduct similar experiments on a larger scale, now that the potential of the replication has been demonstrated.

REPORTS

JUNE 2013

Report on the ESSWE Conference ‘Esotericism and Health’*Held on 26-29 June 2013 at the University of Gothenburg, Sweden*

Over a few long, Scandinavian midsummer days late in June, the fourth biennial conference of the European Society for the Study of Western Esotericism (ESSWE) took place in Gothenburg. The topic of ‘Western Esotericism and Health’ attracted a number of papers pertaining to Paracelsus and early modern alchemy, or iatrochemistry more specifically, while others touched upon aspects of their later reception.

The conference began with a first highly relevant panel and contributions by Lorenza Gianfrancesco, Ariel Hessayon and Lionel Laborie that explored, respectively, Giambattista della Porta’s *Magia naturalis* and its use of iatrochemistry, Jacob Boehme’s impact on medical and alchemical practice, and the panaceas of Jacques Massard, a virtually unknown French Huguenot physician and mystic. Hard on their heels, the first keynote by Peter J. Forshaw on Paracelsian and Hermetic medicine followed, treating among other things Paracelsus’ psychiatry, the more drastic cures and emetics he had promoted and later repercussions throughout the early modern period. Several presentations returned to topics touched upon in this inspiring as well as highly entertaining lecture.

On the second day, Mike A. Zuber connected Johann Philipp Maul’s practice as a physician overseeing the use of healing mineral waters to his concept of ‘kabbalistic chymistry’, intended to solve pressing political and religious problems of all Europe in the early eighteenth century.

The next morning, M. E. Warlick explored alchemical imagery based on the human body, sex, pregnancy and birth in late medieval manuscripts, as well as their transition into print in the early seventeenth century. Her talk was succeeded by that of Thomas Willard who investigated Paracelsus’ ideas on *imaginatio* and how they shaped his medical practice.

The fourth and final day of the conference was concluded by Rafał T. Prinke’s case-study based on archival research on Ludvík Korálek, a merchant and amateur alchemist based in Prague who was unsuccessfully treated for alcoholism by both Oswald Croll and Michael Sendivogius. On the whole, there was a definite thread of studies on early modern alchemy and its medical application throughout a conference that covered very diverse currents and phenomena from antiquity to the present day. All the abstracts of the papers presented are available on the website of the conference, conference.esswe.org. It is definitely to be hoped that some of the papers mentioned here will be published as part of the conference proceedings or elsewhere in the future.

Mike A. Zuber (University of Amsterdam)

REPORTS

JULY 2013

Report on the Symposium: 'Reworking the History of Chemistry: Practice, Visualization and Exchange' at the 24th International Congress on the History of Science, Technology and Medicine (ICHSTM), Manchester

Held on 22 July 2013 at the University of Manchester

SHAC-Sponsored Meeting

This summer, the ICHSTM – the largest ever gathering of historians of science and medicine – took over Manchester's university district. As calculated on the Congress website, the event 'featured nearly 1400 papers across 23 parallel tracks, 411 sessions, around 100 social and public events, receptions, walks, tours and excursions, and 1758 registered delegates.' The history of alchemy and chemistry was strongly represented, with an entire parallel track to itself that included ten academic panels, a public lecture and a business meeting.

Naturally, SHAC was also involved. The Society joined forces with the Chemical Heritage Foundation and the Forum for the History of the Chemical Sciences (FoHCS) to co-sponsor a day-long symposium, 'Reworking the History of Chemistry'. This symposium included three panels, each of which addressed an exciting and developing area in the historiography of chemistry, with presentations by postgraduate students and postdocs as well as established scholars.

The first panel, 'Practice: Recovering early alchemy and chemistry', examined the boundaries between different areas of chemical activity in the pre-modern world. Matteo Martelli (Berlin) spoke on theory and practice in Graeco-Roman alchemy, while Donna Bilak (New York) introduced Michael Maier's emblematic *Atalanta fugiens*. Jennifer Rampling provided the commentary, and read a paper on behalf of Cesare Pastorino (Sussex) on knowledge production in early modern mining enterprises. The second panel, 'Visualising: The matter of form in modern chemistry', considered how tools such as diagrams, mental models and tables were used to visualize matter in late modernity: with Alan Rocke (Cleveland, OH) on mental imagery in nineteenth-century models of chemical compounds and reactions, Ann E. Robinson (Amherst, MA) on pedagogical uses of the periodic table, and Michel Morange (Paris) on the importation of graphic structures from chemistry into molecular and cellular biology. David Knight (Durham) gave the commentary. Finally, 'Exchange: Global histories of chemistry' explored international exchanges of chemical knowledge, materials and practices. an important and often contested role, in fields ranging from pedagogy to drug development. Matthew D. Eddy (Durham) provided commentary on papers by Gabriele Ferrario (Cambridge) on the trade of lapis lazuli between medieval Egypt and China, Yoshiyuki Kikuchi (Leiden) on the international circulation of nineteenth-century chemical



textbooks, and Anna Geltzer (Middletown, CT) on collaborative drug development between the US and USSR.

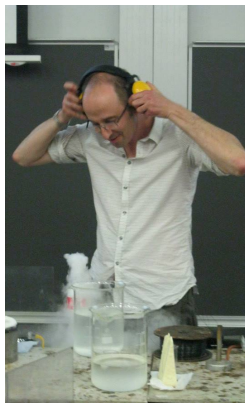
The individual panel organisers were Jennifer Rampling, Matthew Eddy, and Carin Berkowitz, while a representative of each of the organising bodies chaired a panel: Jenny (Programs Chair of FoHCS), Robert Anderson (Chair of SHAC), and Carin (Chemical Heritage Foundation) respectively. The symposium attracted a large audience, with every seat taken. At lunchtime, participants continued their discussion while picnicking on the lawn outside. The conversation continued in the evening, with the UK Learned Societies' Reception, co-sponsored by SHAC. Finally, the day closed with a Chinese banquet at a nearby restaurant.

Jennifer Rampling (University of Cambridge)

REPORTS

Report of Andrea Sella's 'Strange Ice' Demonstration at the 24th ICHSTM

Held on 23 July 2013, Chemistry Building, University of Manchester



Though you will find it in every refrigerator in the world, water ice is a material so strange that it breaks almost every rule in our textbooks. Using a variety of live demonstrations, Andrea Sella, Professor of Inorganic Chemistry at University College London, delved into the intriguing world of ice, inspecting its crystallographic, chemical and phase-change properties. This public event was sponsored by SHAC and an anonymous donor.

**SHAC-Sponsored
Event**

<http://www.ichstm2013.com/programme/guide/s/L345.html>

Anna Marie Roos (Universities of Lincoln and Oxford)

Report of the 2013 Boyle Summer School

Held on 4-7 July 2013, Lismore, Waterford, Ireland

The Robert Boyle Summer School was held from the 4th -7th July 2013 at the chemist's birthplace, Lismore Heritage Town, Co Waterford. The School, which had a mixed audience of academics, students, and the interested public, was held to commemorate the 350th anniversary of Boyle's publication *On the Usefulness of Natural Experimental Philosophy*. Eoin Gill of Calmast at the Waterford Institute of Technology and Lismore Heritage Centre organised the event. The following speakers were on the programme:

Dr Allen Chapman, University of Oxford, 'For the Glory of God, and for the Relief of Man's Estate.'

Dr Bill Eaton, Georgia Southern University, 'Boyle in Ireland 1652-1654: medicine and the mechanical philosophy.'

Dr Peter Elmer, University of Exeter, 'Valentine Greatrakes, Ireland and the Boyles: the making of an early modern miracle healer.'

Professor Jim Malone, Trinity College Dublin and the Robert Boyle Foundation, 'Robert Boyle: Getting to Know the Man from Lismore: Genius, Polymath and Eccentric.'

Dr Anna Marie Roos, Universities of Lincoln and Oxford, 'On the Boyle: Robert Boyle and early modern English science.'

To explore the usefulness of modern science, Dr Liam Dolan, Sherardian Professor of the University of Oxford, gave a plenary entitled 'Plants for the 21st Century.' In *The Usefulness of Natural Philosophy* Boyle wrote: 'I shall not consider myself a true naturalist, til my skill can make my garden bear better herbs and flowers, my orchard better fruit, or my field better corn, or my dairy better cheese, than theirs that are strangers to physiology.' The 20th Century saw amazing progress in food production made possible by science. However global population has risen faster and many in the world still do not have enough to eat. Professor Dolan outlined the challenges of increasing food production against a background of climate, environmental and societal change and introduced present scientific work that shows promise of meeting global food demand.

The school also featured a tour and barbeque in Lismore Castle Gardens, a formal dinner complete with limerick competition, and a guided tour of scientific sites of interest in West Waterford by Donald Brady. Robert Boyle also made a surprise appearance, reproducing his iconic experiments with the vacuum pump.

For more information on this annual summer school, see <http://www.robertboyle.ie>.

Anna Marie Roos (Universities of Lincoln and Oxford)

REPORTS

AUGUST 2013

Report on the Summer Symposium of the International Society for the Philosophy of Chemistry, Montevideo, Uruguay*Held on 31 July–3 August 2013 at Universidad de la República, Uruguay*

The 2013 Summer Symposium of the International Society for the Philosophy of Chemistry took place in Uruguay, sponsored by the Universidad de la República Oriental del Uruguay, and the Ministry of Industry and Chemistry. The head of the organizing committee was Prof. Dr. Lucía Lewowicz. The keynote speakers were the president of the institution Rom Harré, Hasok Chang, Rodolfo Gambini, Eric Scerri and Joachim Schummer.

Professor Harré took as his starting point the recently-introduced concept of affordance to discuss a mereological fallacy regarding models of molecular and atomic compositions. Professor Chang argued in favor of the independence of chemistry as discipline, challenging the view that chemistry can be reduced to physics. Professor Gambini discussed the Montevideo interpretation of quantum mechanics, arguing that it allows for the construction of a purely quantum ontology where strong emergence with ontological novelty and downward causation is a natural and widespread phenomenon. Through a study of some of John Nicholson's 'wrong' scientific theories, Professor Scerri probed some assumptions about the role of erroneous theories in widespread conceptions of scientific progress, and raised the question to what extent is it meaningful to talk about right and wrong in science. Professor Schummer explored the origins of the comparatively minor importance of natural laws in chemistry and its emphasis on models instead, which is explained by the methodological pluralism characteristic of the discipline.

During the main part of the conference, 20 scholars in the field of History and Philosophy of Chemistry dealt with topics belonging both to mainstream Philosophy and History of Chemistry as well as with emerging concerns regarding the object of chemistry, such as chemistry in the 19th century, chemistry and society, chemistry and education, modelling and structure in chemistry, and the relationship between chemistry and other disciplines.

The first part of the Summer Symposium of the ISPC took place in Montevideo, the capital of Uruguay, and the second part in Fray Bentos, in the province of Rio Negro also in Uruguay. The choice of Fray Bentos as a venue for this event allowed Professor Dr Lewowicz, together with national and regional government authorities, to present to the international community of researchers in History and Philosophy of Chemistry a project considered of national interest, namely the reconstruction of the 19th century laboratory where Justus von Liebig's famous extract of meat was produced. According to Dr Lewowicz, who is the author and coordinator of the initiative, this laboratory may have been designed by von Liebig himself, or at least it was done according to his detailed specifications, in order to begin the mass production of one of his most famous and profitable inventions.

In fact, several presentations reflected philosophical and historical issues that are closely related to this project. First, J. Chamizo explored the role of instruments to offer an alternative to Thomas Kuhn's exemplar-based identification of paradigms. Based on Lacey's discussion of the role of values in science, L. Gomes explored the historical context of the Chemical Revolution, while C. Headley studied the importance of chemical metaphors and practices in shaping pragmatism. R. Mocelin explored the chemical culture of the Enlightenment and the role played by G. de Morveau in shaping a 'republic of chemists', while J. Stern argued that the cognitive constructivism framework can be productively applied to the study of some episodes in the history of chemistry.

The Summer Symposium also hosted the annual meeting of the ISPC where it was decided that London would be the venue of the 2014 Symposium.

Cecilia Rennie (Universidad de la República, Uruguay)

REPORTS

**Report on the Annual Conference of ‘Sites of Chemistry, 1600-2000’
‘Sites of 20th-Century Chemistry’***Held on 20-21 August 2013 at Uppsala University, Sweden***SHAC-Sponsored
Meeting**

The third of the annual conferences of the project entitled ‘The Sites of Chemistry, 1600-2000’ was held in Uppsala on 20-21 August 2013. The project is sponsored by the SHAC, and previous conferences have been organised in Oxford (on the 18th century, 2011) and Valencia (on the 19th century, 2012). This year the conference has been devoted to the 20th century. It included 12 papers and the participation of more than thirty attendees. The venue of the meeting was the Auditorium Minus located in the Museum Gustavianum, a wonderful 17th century building that holds the Uppsala University’s museum, and an ancient anatomical theatre.

The meeting was organised in four sessions, which included a short presentation of pre-circulated papers, and discussion time. The conference began with a session devoted to industrial sites. It was opened with a paper by Muriel Le Roux (Ecole Normale Supérieure, Paris) ‘From science to industry: the sites of aluminium in France from the 19th century to the 20th century’, which discussed how French chemists and engineers applied their 19th century expertise to industrial processes of aluminium in the 20th century. The second paper by Erik Langlinay (EHESS, Paris) - ‘Cultures of work in French chemical factories, 1900-1930’ analysed three different Solvay factories, studying issues such as exposure to danger, environmental problems and technology risks. Peter Reed (Leominster) presented ‘The Central Chemical Laboratory at Widnes goes to war, 1914-18’, which showed how a chemical laboratory was managed during the WW2 by the British Ministry of Munitions, combining the production of chemical substances, such as fertilizers, bleach or dyeing, with war products such as explosives, sulphuric acid or ammonium perchlorate. The last paper by Ute Engelen (University of Mainz), ‘Chemical companies and chemical spaces in the Mainz region after World War II’ explained how the Rhine valley concentrated many chemical industries, enabling a good regional cooperation between them, but creating problems with the local population.

The second session studied the relationship between sites and networks. The first paper by Yoshiyuki Kikuchi (International Institute for Asian Studies, Leiden), ‘Evolving networks of the sites of chemistry in Meiji and Taisho Japan, 1868-1926’, studied the structures and social networks of chemistry teaching in Japanese Imperial Universities, describing their laboratories as ‘outreach contact zones’ with social interactions within the site and between insiders and outsiders. The other paper by Robin Mackie and Gerrylynn Roberts (Open University), ‘Where British chemists worked, c. 1900-1970’ presented new studies on the *Biographical Database of British Chemists, 1882-1971* that outlined different career pathways and their relationship with the places where chemists worked. The speakers outlined the importance of geographical and sectoral mobility as relevant issues for the development of a professional community of chemists in the United Kingdom.

The third session analysed sites and circulation. The first paper was offered by Ana Carneiro and Isabel Amaral (New University of Lisbon), ‘The Institute Rocha Cabral, a Site of Biochemistry (1925-1950)’, and discussed how some Portuguese scientific projects were developed with the contribution of both international institutions, such as the Carnegie Foundation and the Rockefeller Institute, and local private initiatives. The second paper by Daniele Cozzoli (Pompeu Fabra University, Barcelona), ‘From the Forest to the Laboratory: Daniel Bovet’s Research on Curare, 1940s-60s’ studied the spatial and disciplinary scientific collaboration that involved the medical research of Daniel Bovet in Italy and South America. Thibaut Serviant-Fine (University of Lyon), in his ‘Sites and circulations: the chemistry of antimetabolites in the laboratory and in the clinic, 1940-1960’, considered the pharmaceutical laboratory as a new site of chemistry in the 20th century for researching on antimetabolites.

Report on the Annual Conference of 'Sites of Chemistry, 1600-2000' 'Sites of 20th-Century Chemistry' (continued)

The last session included three papers focused on sites and disciplines. Daniel Normark (Karolinska Institute, Stockholm) 'Heterogeneity and inexactitude: 'Lab 60' at the Karolinska in the transformation from medical disciplines to the modern biomedical complex' studied how the Karolinska Institute profited of its 150 anniversary to create the new Wallenberg laboratory as a 'flexible' space of research with a wide conceptual programme. The second paper by Peter Morris (Science Museum, London) 'Symbol of Change: the Central Chemical Laboratories at Oxford, 2004' presented the evolution of chemistry laboratories in Oxford, from college and departmental laboratories to the new centralised laboratory, highlighting its relationship with the pharmaceutical industry. The last paper in the conference was given by Jean Pierre Llored (Ecole Polytechnique, Paris) 'Epistemological shifts and chemical sites: the example of nanochemistry', which considered the cities of Limoges, Paris and Sèvres as technical sites, focusing on the role of some porcelain factories and industrial schools in the nanochemistry research and their epistemological chemical practices.

The Sites of Chemistry meeting immediately preceded the 9th International Conference for the History of Chemistry, which was also held in Uppsala on 21-24 August 2013. The project Sites of Chemistry will return next July 2014 to Oxford to be focused on the 17th century. Further details on the project, which is sponsored by SHAC and funded by the Wellcome Trust, can be found at www.sitesofchemistry.org.

Ignacio Suay Matallana (University of Valencia)

Reports on the 9th International Conference on the History of Chemistry *Held on 22-25 August 2013 at the Museum Gustavianum, Uppsala*

The Ninth International Conference for the History of Chemistry (9ICHC) of the Working Party on the History of Chemistry (EuChemS) was held in Uppsala. The conference theme was 'Chemistry in Material Culture', and the meeting investigated all aspects of chemistry in its engagement with material culture, from the earliest times to the present. The conference was a highly successful event, and gathered about 80 researchers and students. Most participants came from European countries, but there were also participants from USA, Nigeria, Japan, China, Turkey and Saudi Arabia. The sessions lasted for three and a half days, including such themes as 'Objects and the philosophy of chemistry', 'Technologies of visualization', 'Discipline building and discipline busting', 'Sites of innovation and production' and 'Material culture' during different centuries. Plenary lectures were given by Lawrence Principe (Johns Hopkins University, USA) and Marta Lourenco (Museum of Science, University of Lisbon, Portugal). A third plenary lecture was given as the Morris Award Lecture by Mary Jo Nye (Oregon State University, USA), the 2012 receiver of the John and Martha Morris Award for Outstanding Achievement in the History of Modern Chemistry and the Chemical Industry. For the full programme, see the conference website www.9ichc.se.

Conference organisers had made special preparations to enable participants to interact with, and visit local museums and collections of scientific objects. The main venue of the conference was Museum Gustavianum, the oldest building of Uppsala University, and now a museum with large history of science collections. A special exhibition on crystallography had also been prepared in the University Library, Carolina Rediviva in cooperation with the conference organizers. As part of the programme there was also a visit to the ultracentrifuge of Nobel Prize winner The Swedberg, professor of physical chemistry at the university 1912-49. The ultracentrifuge is now a standard laboratory technology, and Swedberg's centrifuge – the first ever built and used for several seminal experiments- is an unique object of great interest to the history of chemistry. There was also a conference excursion to Stockholm, with a visit to the Observatory Museum, and its special exhibition on Jöns Jacob Berzelius (1779-1848) one of the most well-known chemists of all time. The Berzelius-exhibition had been kept on for a month longer than originally planned by the museum to make a

Report of the Annual Conference of ‘Sites of Chemistry, 1600-2000’ ‘Sites of 20th-Century Chemistry’ (continued)

visit from the conference possible. The excursion continued with a visit to the Vasa Museum, where the conference participants were given a tour and a lecture by Marika Hedin, director of the museum, on the chemistry involved in the preservation of archaeological objects.

Hjalmar Fors (University of Uppsala)



Picture courtesy of Masanori Kaji

Second Report

About 80 delegates attended the 9th International Conference on the History of Chemistry held at the Uppsala University's museum, Museum Gustavianum. The centrepieces of the conference were two keynote lectures and the Morris Award lecture. The first keynote lecture was by Lawrence Principe (Johns Hopkins University) on 'Uncovering and trading secret materials in the 17th century, or, How to make the Bologna stone', and related Principe's attempts to reproduce the well-known experiment of the 17th century, including the difficulties when using reconstructed equipment and searching for sources of raw materials used in the original experiment. The second was given by Marta Lournço (University of Lisbon) on 'The invisible heritage: increasing relevance and use of material sources in the history of science', and reviewed how material sources can be used effectively to study the history of science though it is often neglected. The Morris Award lecture was given by Mary Jo Nye (Oregon State University) on 'Mine, thine, and ours: Collaboration and the material culture of the 20th century chemical laboratory. This was a fascinating lecture about the work of the three chemists, Dorothy Hodgkin, Michael Polanyi and Linus Pauling, and how the hierarchical use of their name amongst the other authors associated with a particular book or article varied, whether alphabetical, or with Hodgkin, Polanyi and Pauling's name first or with the order reflecting the relative contributions. The lecture is to be published in full in *Ambix* in due course.

The remaining part of the three days was split into two parallel sessions that concentrated on a wide range of themes, including Objects and Philosophy of Chemistry, 20th Century Physical Chemistry, Environmental Chemistry, Sites of Innovation and Production, Discipline Building and Discipline Busting, and Materials in the 20th and 21st Century. With such a rich and varied menu there was something of interest for every historian of chemistry. Besides the formal talks, coffee and lunch breaks provided plenty of time for discussion and exchange of ideas in the pleasant surroundings of Uppsala.

Peter Reed (Independent Scholar)
(Courtesy of RSCHG Newsletter)

REPORTS

OCTOBER 2013

Report on the Edinburgh James Crawford Tercentenary: Cradle of Chemistry
*Held on 24 October at 22-26 George Street, Royal Society of Edinburgh***SHAC-Sponsored Meeting**

In 1713, James Crawford was appointed to a chair of medicine and chemistry at the University of Edinburgh (or 'Tounis College' as it was usually called at the time). Thus 2013 has been a year of celebration for the Department of Chemistry, which has included an exhibition, a specially-composed opera, and a one-day conference which enjoyed financial support from SHAC.

The exhibition, curated by Dr Andrew Alexander of the Chemistry Department, was held in Edinburgh University Library. It covered three themes: *Discovery*, *Enlightenment* and *Economy*. On display was a wide range of material, with memorabilia, personalia, publications, instruments and apparatus, and chemical substances. It is difficult to pick out particular items, but outstanding was the portrait of Joseph Black as a young man by David Martin, his and Thomas Charles Hope's chairs (was it common for chairs of university departments to be provided with actual chairs?), the student Chemical Society's book of proceedings dating from 1785 (it is claimed that this is the world's oldest chemical society with a continuous history) and a model of the atomic structure of sodium chloride made from balls of wool and knitting needles by Alexander Crum Brown in the mid-1880s, decades before William Bragg verified the pattern by X-ray diffraction. The exhibition particularly considered the education and contributions made by women chemists.

The opera, 'Breathe Freely' was given its first performance in the Assembly Rooms on 24 October. Written by composer-in-residence Julian Wagstaff, it considers an actual visit to the Chemistry Department made by Stansilaw Hempel, a Polish independence fighter, towards the end of the Second World War, and his relations with the professor, James Kendall, and Chrissie Miller, a chemist who was the first woman to be elected a fellow of the Royal Society of Edinburgh. This was a highly polished production in front of a large and appreciative audience. It may well be the first opera to be written on a theme of chemistry (perhaps this assertion will stimulate SHAC members to suggest others) and it deserves further performances.

The conference itself 'The First Hundred Years of Chemistry' was held in the fine rooms of the Royal Society of Edinburgh, a body established only 70 years after Crawford's appointment, and whose founder fellows included three of the Edinburgh chemistry professors. It was opened by the current president, Sir John Arbuthnott, himself a biochemist, and the current head of the chemistry school, Eleanor Campbell. John Henry, director of Science Studies and professor of the history of science at Edinburgh, gave a masterly overview of Newtonianism and the leading role played by Scots in its adoption. John Powers from Virginia Commonwealth University talked about the strong influence of Leiden, and Boerhaave in particular: Crawford and Andrew Plummer both went to the Dutch city and came under his commanding authority. Georgette Taylor and John Christie gave papers on early teaching and attitudes adopted by students and teachers (both bemoaning the recent loss of publications and manuscripts which until recently were known to exist), and Matthew Eddy spoke about the specific contribution of diagrams used by Black. Tom Addyman, an archaeologist, provided details of his remarkable recent finds of chemical apparatus during excavations in the Old College. Robert Anderson assessed the teaching of Thomas Charles Hope (who held the chair for 44 long years) in relation to that of Black. There were also three shorter contributions: Peter Morris explained how Black's house was destroyed by fire in 1981, Alison Morrison-Low talked about Black's apparatus which has been safely preserved in the National Museum since 1858, and Andrew Alexander brought the story into the 20th century with an overview of the contributions of Gregory, Playfair and Crum Brown. This was a meeting which worked well, and Berliin Press plans to publish a volume of the papers as long as sufficient support can be indicated by subscribers. This would be the first monograph on the significant contribution made by Scottish academic chemists since Andrew Kent's *An Eighteenth Century Lectureship in Chemistry* of 1950, which dealt with the Glasgow scene. **Robert G W Anderson (Clare Hall, Cambridge)**

REPORTS

Report on the 4th SHAC Postgraduate Workshop ‘Alchemy and Chemistry in Context’

Held on 26 October 2013 at the Keynes Library, Birkbeck College, London

Every year, the SHAC Graduate Network organises an international workshop to provide training on research skills and methodology for graduate students and early career researchers. The 4th SHAC Postgraduate Workshop on the topic ‘Alchemy and Chemistry in Context’ took place on Saturday 26 October 2014 at the Keynes Library of the Birkbeck College (University of London). The Keynes Library is a historical nineteenth-century library dedicated to the memory of economist John Maynard Keynes, one of its most famous residents. Keynes is famous in the history of alchemy and chemistry for having purchased and rescued from oblivion Isaac Newton’s alchemical manuscripts, eventually donating them to King’s College Cambridge in 1946.



The historical setting of the Keynes Library was enlivened by the presence of twenty participants, of whom sixteen were postgraduate students and early career researchers from the UK, Italy, Norway, Denmark, Belgium, the Netherlands, Germany, Ireland, Romania and the U.S. The workshop took place in a relaxed and friendly atmosphere, which encouraged interaction and free discussion.

The meeting was opened by the organiser, outgoing Student Representative Jo Hedesan (London/Oxford), and was followed by individual introductions. The first panel, ‘Alchemy in Context’, chaired by Jennifer Rampling (Cambridge) included presentations from Hilde Norrgrén (Oslo) and Agnieszka Rec (New Haven, CT). Hilde argued that Renaissance scholar John Dee’s *Propadaeumata aphoristica* (1558/68) outlined a method of quantifying and analysing astrological influence and its effect on alchemical change in the sublunary world. Dee’s method of quantification, which used principles from Galenic medicine, provides an interesting case-study of the interaction of alchemical theory with both astrology and medicine.

Agnieszka illuminated the audience on the little-known topic of medieval Polish alchemy, by focusing on alchemist Adam of Łowicz (d. 1514), student, professor of medicine, and sometime rector of the Cracow Academy. While still a student, Adam wrote *Fundamentum scientiae nobilissimae secretorum naturae*, preserved in a single copy in BJ 5465, a lengthy alchemical miscellany itself supposedly compiled by Adam.

The morning session concluded with the keynote presentation by Dr Stephen Clucas (Birkbeck), who highlighted the many different genres in which alchemical writing was composed in the early modern period, including aphorisms, theorems, poems, emblems, viva-voce-style dissertations, Scholastic *quaestiones* and even Christian prayers. This wealth of textualities can in turn be linked with the interaction of alchemy with different institutions and professions during the period.

The afternoon session discussed the subject of post-seventeenth-century chemistry in context. The first panel, ‘Chemistry in Context’ was chaired by Professor John Christie (Oxford, Leeds, Warwick) and included presentations by Rachel Dunn (Durham) and Corinna Guerra (Naples, Bari).

REPORTS

‘Alchemy and Chemistry in Context’ (continued)

Rachel focussed on chemist John Dalton’s system of atomic symbols and its importance for his pedagogical purposes. She examined the ways in which he manipulated the symbols, looking at his spatial arrangements to suggest that he was one of the earliest stereochemists.

Corinna showed how, in the eighteenth century, Mount Vesuvius acted as a locus for chemical activity, being the centrepiece of chemical explanations, experimentation and debate. Corinna particularly reflected on the lively debate over the nature of Vesuvius’ ash, which implied both a scientific purpose (knowledge of substances) and a practical one of allaying common people’s fears over its impact.



The second keynote speaker, Professor John Christie (Oxford, Leeds, Warwick), focussed on the importance of context in history of chemistry. He illustrated the change in the historiography of science from a non-contextual framework to one that emphasised historical accounts and relationships. As a case study, he examined Samuel Johnson’s probable attack on chemist Joseph Priestley, which was based on the former’s dislike of Priestley’s religious and revolutionary sentiments rather than purely scientific reasons. Thus, Professor Christie concluded, we must retain sensitivity to the historical situation in order to completely understand intellectual positions.



The meeting concluded with a lengthy roundtable discussion on the subject of context and contextualisation. We debated such emerging themes as the importance of communication in alchemical/chemical practices, the social and political background of alchemical/chemical writings, the relationship of alchemy and chemistry with philosophy, religion, education, and other sciences. The discussion was so intense and fruitful that it continued later outside the Keynes Library and even at a local pub!



We would like to thank all participants for their interventions and comments, which were instrumental in making the Workshop a successful, thought-provoking event.

Jo Hedesan (University of Oxford)

REPORTS

NOVEMBER 2013

Report on the SHAC-Bolton Autumn Meeting ‘Chemists and their Books’*Held on 9 November 2013 at the Royal Institution, London*

The Bolton Society is an organisation of bibliophiles based at the Chemical Heritage Foundation, Philadelphia (CHF). Named after the chemist and bibliographer Henry Carrington Bolton (1843-1903), the Society normally meets twice a year and its members largely come from the United States, though a few are based in Europe. Several years ago it was decided to hold a meeting which would be of interest to both societies, hence ‘Chemists and their Books’, which was organised in the Royal Institution (RI) on 9 November 2013 with the enthusiastic co-operation of Frank James, the RI’s professor of the history of science. A call for papers resulted in a good response from members of both societies and twelve papers were squeezed into the day’s schedule.

It is also a statutory requirement to hold the SHAC Annual General Meeting in the autumn, and that had to be programmed into the proceedings. The Chairman, Dr Robert Anderson, introduced the meeting, and then the Annual Report and accounts of 2012 were reviewed and approved. Three new officers were elected at the meeting: Dr Simon Werrett, who replaces Dr Anna Marie Roos as Honorary Secretary of SHAC, Dr Michael Jewess, who replaces John Perkins as Treasurer, and Dr Anna Simmons, who was sworn into the newly-established position of Membership Secretary. In order for the new officers to become Council members, Dr David Knight and Dr Anna Marie Roos have stepped down from their Council positions. Dr Anderson further announced that Dr Georgiana Hedesan, who has been serving as SHAC Student Representative and Newsletter Editor, will be stepping down from the Student Rep position. In her place, two PhD students have been proposed: Mike Zuber, from University of Amsterdam, and Judith Mawer, from University of Exeter. Finally, John Perkins was presented with a gift on behalf of SHAC for his outstanding services as Treasurer of the Society.



The day started with a welcome from Robert Anderson (chairman, SHAC) and Gary Patterson (chief bibliographer, Bolton Society). Frank James then introduced the Royal Institution by talking about its origins and the early financial problems it faced. Ron Brashear, Director of the Othmer Library at the CHF talked about those who collected chemistry books on a grand scale. He was followed by David Knight’s presentation of natural theology books written by chemists. Anke Timmermann, Munby Fellow at Cambridge University Library, discussed the tricky issue of cataloguing alchemical images. Jim Voelkel, also from CHF, talked about the confusing editions, reprints and reissues of Lemery’s *Cours de Chymie*. He was followed by Ned Heindel, who gave a fascinating account of the equally confusing, but much greater output, of ‘Dutch’ books of veterinary medicine around Philadelphia. Then we got round to Chief Bibliographer Gary Patterson’s paper, who talked about Bolton and his alchemical bibliographical work. Pierre Laszlo was concerned with marginalia he has discovered in chemistry books, which stimulated much discussion (everyone is a graffiti-ist manqué). Then Ronald Smelzer, a collector and scholar of the printed word, gave a rigorous paper on 19th century colour printing. After the tea break, Bill Brock gave a personal account of collectors and bibliographers of Justus von Liebig (several of whom Bill had known). This was followed by Elizabeth Clarence’s assured account (based on her recent undergraduate thesis) of the chemistry in Arthur Conan Doyle’s Sherlock Holmes books: Doyle had studied chemistry as a medical student at Edinburgh. Finally, Peter Reed told us of Robert Angus Smith and his library, and informed us that it was Smith who coined the expression ‘acid rain’. A reception with drinks followed, and some even had the stamina to go on to dinner.

REPORTS

'Chemists and their Books' (continued)

The Aftermath

Following the Saturday meeting, the Bolton Society (together with some SHAC members) reconvened in Cambridge on Monday 11 November and Oxford on 12 November. In Cambridge, the day started at the Whipple Museum for the History of Science where the party was welcomed by the director, Liba Taub. The librarian of the Whipple Library then showed the group some of the holdings: first, a rare copy of Vigani's *Medulla Chymiae* (Giovanni Francesco Vigani was the first professor of chemistry in Cambridge, appointed in 1703). Richard Watson was the fifth professor, and although he was not ashamed to declare, 'I know nothing at all of chymistry... [have] never seen a single experiment in it...', he eventually got down to work and wrote his five-volume *Chemical Essays* (1781-87). A catalogue issued by the Scientific Manufacturers' Association of Great Britain in 1943, marked 'Private and Confidential' because it was printed during the Second World War was shown, and the unlikely friendship between Joseph Needham and James Riddick Partington was discussed in relation to their interests in the development of gunpowder in the East and West. The next stop was King's College, where the librarian, Peter Jones, showed the party a range of Newton's alchemical manuscripts and described how these had been acquired for the college by John Maynard Keynes in the 1930s. The final trip of the morning was to the Fitzwilliam Museum, where the magnificent 16th century Ripley Scroll had been laid out in the Study Room and its alchemical content was explained by Jennifer Rampling.



In the afternoon, a visit was made to the Cavendish Laboratory, where Malcolm Longair described the remarkable research conducted in Cambridge in the 20th century (one departmental group photograph on the wall included nine Nobel Prizewinners). The large collection of instruments and models devised by J J Thomson, F W Aston, C T R Wilson, Ernest Rutherford, John Cockcroft and Ernest Walton, William and Lawrence Bragg, and Francis Crick and James Watson were inspected with awe.

The group convened next day in the Museum of the History of Science, where the acting director, Stephen Johnston, described how the very space in which the party had convened had, from 1683, been a chemistry laboratory in the basement of the Ashmolean Museum. The archivist, Tony Simcock talked about the origins of the Society for the History of Alchemy and Chemistry (whose archives are deposited here) and about the production of *Ambix* from 1937. This was followed by a paper by John Perkins about the enthusiastic publication of chemical articles in a wide variety of French periodicals from the middle to end of the 18th century. Robert Anderson then spoke about the founder of the Museum of the History of Science, Robert T Gunther, and especially his publications pertaining to Charles Daubeny and the history of chemistry. It was Gunther who, following a gift to Oxford University of a fine collection of early scientific instruments by Lewis Evans, had been utterly single-minded about developing a museum in the Old Ashmolean, something not finally achieved until 1949 after Gunther was dead. In the afternoon the party went to the Oxford University Press Museum, where they were guided by the OUP archivist, Martin Maw. From the first Oxford book of 1478, to the present day, publishing has had a major impact, intellectually and financially, on the wellbeing of the University. This was the final event of the three-day programme and Boltonians dispersed in a seemingly happy frame of mind.

Robert G W Anderson (Clare Hall, Cambridge)

REPORTS

Ronald K. Smeltzer, Robert J. Ruben and Paulette Rose, *Extraordinary Women in Science & Medicine: Four Centuries of Achievement* (The Grolier Club: New York, 2013). 184pp. ISBN 978-1-60583-047.

Readers of this 'Book of the Show' will certainly wish they could have been in New York between 18 September and 23 November 2013 to see the exhibition at the Grolier Club for themselves. This volume, a substitute for getting to 47 E 60th Street in New York between these two dates, is beautifully produced to a high standard of design, typography and scholarship. It comprises two general essays on women in science and medicine, together with a catalogue of the displayed material, each of the 23 women being provided with a brief biographical entry. Five science subject areas: physics, chemistry, astronomy, mathematics and computing, were selected, and one section was on the medical sciences. Natural history was deemed to be outside the scope of the exhibition, perhaps surprising as this is an area in which many women excelled; doubtless space-limitation was a factor. Practically no objects were displayed, exceptions being the piezo-electric quartz apparatus devised by Pierre Curie and his brother for Marie Curie's experiments characterising the properties of new radioactive elements, and Beever-Lipson strips for helping to determine molecular structures from X-ray diffraction data, of the kind used by Dorothy Hodgkin.

How were the women chosen? We are told in the Preface that there had to exist pertinent material suitable for exhibition (the lack of such eliminated some likely candidates), that the work followed by the women should not be purely secondary, that they should be original contributors to their subjects (not merely adjuncts), and finally that their output should not be purely didactic. Obviously making major contributions to their discipline was another. Undoubtedly there could be much discussion as to whether the best possible choices have been made but it seems that each can be readily justified, though to some, Florence Nightingale, placed in the mathematics section, may seem odd. The period of scientific and medical activity covers the range from the early 17th century to the present day, though no women still living are included.

The five women 'chemists' (most would not have called themselves that) who were selected were Marie Meurdrac, Marie-Geneviève-Charlotte Thiroux d'Arconville, Elizabeth Fulhame, Dorothy Crowfoot Hodgkin and Rosalind E. Franklin. Meurdrac was represented by three copies of editions of *La Chimie Charitable et Facile, en Faveur des Dames* of (probably) 1666, (definitely) 1666, and 1687 (after all, the Grolier Club is a haunt of bibliographers!). Thiroux d'Arconville was concerned with food preservation and putrefaction and published her 600-page text on the subject in 1766. So little is known about Fulhame, other than her 1794 London-published treatise *An Essay on Combustion, with a View to a New Art of Dying and Painting* (the 1810 Philadelphia edition was also displayed). Hodgkin's work was represented by published papers elucidating structures of penicillin, Vitamin B12 and insulin. Finally, in this section, is Franklin, whose contribution to the work of Francis Crick and James Watson has been much debated. The entry states of her, 'Conflict and unpleasantness are found... In many cases the difficulties were clashes of personality and of style of doing scientific work, not gender issues,' which may upset some.

The absence of Jane Marcet and Kathleen Lonsdale in the chemistry section (and of Caroline Herschel and Mary Somerville elsewhere) may at first seem surprising, yet the curators have been rigorous in applying their selection criteria. The best exhibitions, in any case, stimulate questions about what to include and what to leave out, and plenty of questions like this arise. Few enough science exhibitions in the UK are challenging in a way in which this one does (though some recent ones at London's Wellcome Collection provide honourable exceptions). *The New York Times* published a short, but thoughtful review of *Extraordinary Women* on 11 November 2013 which should stimulate sales of the catalogue. Try to get hold of it before it goes out-of-print.

Robert G W Anderson (Clare Hall, Cambridge)

NEW MEMBERS

SHAC welcomes the following new members:

Banchetti, Maria	Florida Atlantic University
Bigotti, Fabrizio	Warburg Institute, London
Conway, Ben	University of Kent
Cook, Ed	Coventry, Connecticut, USA
Driggers, Edward Allen	University of South Carolina
Fonteneau, Virginie	University of Paris-Sud
Garai, Luca	Bologna
Hanley, John	Huntington Beach, California
Katz, David	Tucson, Arizona
Loonan, Conleth	National University of Ireland, Maynooth
Moreau, Elisabeth	Free University of Brussels
Nummedal, Tara	Brown University
Pichaj, Mark	Burbank, California
Robertson, Haileigh	University of York
Salzer, Stephen	Greenwich, Connecticut, USA
Temple, Olivia	London
Taape, Tillmann	University of Cambridge
Van Berkel, Janne	Utrecht
Watson, Neale	Sagamore Beach, USA
Wujastyk, Dagmar	University of Vienna
Wujastyk, Dominic	University of Vienna

MEMBERSHIP

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Type of Membership	For 2014	2014 & 2015
Full Membership	£35	£70
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Retired member with 10 years standing	£27	£54
in US Dollars	\$54 US	\$108 US
Student member	£22	£44
in US Dollars	\$44 US	\$88 US

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1. Online via PayPal.
2. By a cheque in pounds sterling, payable to SHAC sent to Dr Mike Jewess, The Long Barn, Townsend, Harwell, Oxfordshire, OX11 0DX.
3. By a US dollar cheque payable to SHAC. **Please add \$15 to the value of your cheque to cover the costs of currency conversion** and send the cheque to Dr Mike Jewess, The Long Barn, Townsend, Harwell, Oxfordshire, OX11 0DX.
4. By International Bank Transfer to Santander Bank, Bootle, Merseyside GIR 0AA, UK;

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We welcome any contributions that newsletter readers might wish to make to the *Chemical Intelligence*. This includes, but is not limited to:

- Upcoming Conferences or Meetings
- Publications
- Conference or Meeting Reports (these should not normally exceed 1,000 words)
- News Items or Announcements
- Grants, Fellowships or Awards
- Reviews of Websites, projects or blogs of interest (up to 500 words)

The Editor retains the right to select those contributions that are most relevant to the interests of the Society's members.

We also wish *Chemical Intelligence* to provide a platform for interaction between members. We therefore encourage you to submit:

- Questions you may wish to put to other members
- Materials that you are working on and wish to share
- Suggestions for improvement

For any queries regarding the content of *Chemical Intelligence*, or to propose material for inclusion in future issues, please contact the Editor:

Jo Hedesan, E-mail: georgianahedesan@yahoo.com

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Society for the History of Alchemy and Chemistry

The Society for the History of Alchemy and Chemistry has a longstanding tradition in the field, organising colloquia, publications and promoting the interdisciplinary study of the history of alchemy and chemistry from its early beginnings to the present. The Society offers support to its members, including an award scheme, regular meetings and events, graduate network, and the triennial Partington prize for original academic writing on any aspect of the history of alchemy and chem-

istry. It offers a forum for advertising forthcoming events, both within the United Kingdom and internationally, and its website provides a portal to resources relating to the history of alchemy and chemistry.

Members receive the Society's journal *Ambix*, the leading scholarly journal in the field of history of alchemy and chemistry. *Ambix* is published by Maney Publishing and appears quarterly from 2013. Members also receive the Society's newsletter,

Chemical Intelligence, twice yearly, and the annual *Sources of Alchemy and Chemistry* volume.

Application forms and membership information may be found on the Society's website, <http://www.ambix.org/>, under 'Membership'.

For all membership questions, please contact the Membership Secretary, Dr Anna Simmons.

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