



HEMICAL INTELLIGENCE

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

No. 17, January 2017

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Editorial

Welcome to the Winter issue of Chemical Intelligence. In the last issue, I was able to report that Dr Robert Anderson, Chair of SHAC, had been appointed interim President and CEO of the Chemical Heritage Foundation, based in Philadelphia, US. I am pleased to report that Robert has now been appointed to the substantive position, as successor to Carsten Reinhardt, who has returned to the University of Bielefeld. Congratulations Robert (see p. 30). Also to be congratulated is Professor Lawrence Principe, a member of the SHAC Council, who was recently awarded the prestigious 2016 Prix Franklin-Lavoisier at a formal ceremony on 9 November 2016 (see p. 29).

Furthermore, SHAC will be honouring Bill Brock, a long-standing member of the Society and its Council, in a special Spring Meeting to acknowledge Bill's contribution to the history of chemistry, and to mark the eightieth anniversary of our journal, *Ambix*. Details of the meeting and its intriguing programme, which includes a paper from Bill himself, can be found on p. 4.

On a sadder note, we reported in the last issue the death of Professor Masanori Kaji, who passed away in Yokohama, Japan, on 18 July 2016. Three of his friends and colleagues, Yasu Furukawa, Ernst Homburg and Elena Zaitseva, have contributed an obituary (p. 23) which pays tribute to Masanori's life and work and reflects the sense of loss felt by those whose lives he touched.

It is apparent from the number of reports

included in this issue that there has been a great deal of activity in our field over the summer and autumn terms. I am delighted to have received such detailed accounts, which, if you were unable to attend the event, are both

informative and stimulating and, for those fortunate enough to participate, will be an excellent record. So, a thank-you to all reporters and a word of encouragement to would-be reporters: your accounts and any photographic images from events will be greatly appreciated by the editor!

As always, there is much to look forward to in the months ahead, with a host of conferences and activities scheduled. After reading SHAC student representative, Mike Zuber's fascinating insight into the organisational process behind this year's Postgraduate Workshop (see p. 8), however, we are reminded of the effort and planning that goes into making these events such an enjoyable experience for participants.

Finally, the SHAC Awards for 2017 open to applicants on 1 March (see p. 3) and, with an increase in the grant payments available, we look forward to receiving an encouraging response.

Judith Mawer



SOCIETY FOR THE HISTORY
OF
ALCHEMY AND CHEMISTRY



Visit our website at <http://www.ambix.org>

SHAC MEMBERSHIP SUBSCRIPTIONS 2017 AND 2017/2018

Important Reminder regarding Membership Renewal

Membership subscriptions were **due on 1 January 2017**, and the Membership Secretary, Anna Simmons, sent out email renewal due notices in 31 December 2016. A reminder e-mail was sent out on 31 January 2017 to those members (only) whose subscriptions were then overdue. The great majority of members are now paid up for 2017 (thank you!).

Members who have still not paid for 2017 and who wish to renew are requested to pay for 2017 or 2017/18 now. Details of how to pay – both for renewers and new joiners – are on the website www.ambix.org – but **please do not log in**, as this is only necessary to access the *Ambix* on-line archive. Please note that the website does not register whether you have already paid for 2017, so it does allow you inadvertently to double-pay for 2017. If you have doubts as to whether you have already paid for 2017, contact Anna Simmons at membership@ambix.org.

If your email or postal address changes, please let the Membership Secretary know as soon as possible. Almost all of our communication with members is *via* email and **it is important that we hold a current email address that you check regularly**. The Membership Secretary also prepares address lists for distribution of the journal, so please inform her, not the publisher, if your postal address changes.

We recommend that non-UK Members especially should pay by clicking the appropriate ‘Add to cart’ button (1 out of 6) at <http://www.ambix.org/renew-your-membership/> and then ‘Checkout’ at the bottom, enabling them to pay securely by credit or debit card.

The subscriptions for 2017 and 2017/18 for all classes of Member (Student*, Retired with at least 10 years’ standing, and Full) are given in full detail on the website and also in the August 2016 issue of *Ambix*. The subscription (ranging from £ 25 to £ 40 per year) represents remarkable value: as well as the other benefits of Society membership, Members receive:

**4 hard-copy issues of *Ambix* per year (it was 3 up to and including 2012), and
Access to the online *Ambix* archive.**

** The student membership rate for 2017 and 2017/18 can be paid by all those who held a valid student card at any time during 2016, as well as to those who still hold one!*

SHAC ANNUAL GENERAL MEETING COVERING 2015

The Annual General Meeting of the Society was held at 12:40 pm on Saturday 12 November 2016 at the Royal Institution, 21 Albemarle Street, London, W1S 4BS. There were 30 members present.

Members can view minutes of the AGM on the Society’s website by following the link found on <http://www.ambix.org/about/>

Copies of the most recent Trustees Annual Report and Annual accounts can also be viewed by following the links on this page.

SHAC AWARD SCHEME 2017

Important Announcement for Members

The Society for the History of Alchemy and Chemistry invites applications for its Award Scheme for 2017. 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.

Opening date for Awards applications: 1 March 2017

Closing date for Awards applications: 31 May 2017

It is expected that applicants will be advised of the outcome of their application by 31 July 2017. The Awards are most suitable for activities to be undertaken in the academic year October 2017–September 2018.

New Scholars Awards are open to post-graduate students (both masters and doctoral students) and those who have obtained a PhD since 1 January 2012. Awards of up to **£750** 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 does 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 does not pay conference registration fees.

Subject Development Awards of up to **£750** may be made to support activities such as 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 activities covered by the Awards do not have to occur in the UK, and that the Awards are open to members of the Society resident both in the UK and elsewhere. Members who have applied to the Scheme in previous years, whether successfully or not, are entitled to make an application in 2017.

Applicants must be members of the Society in good standing at the time of making an application, and, if successful, throughout the period of an award. For more information and application forms, please contact grants@ambix.org. Membership enquiries should be made to membership@ambix.org

An activity report must be submitted at the end of the Award. This will usually be published in *Chemical Intelligence*.

UPCOMING SHAC EVENTS

New and Old Themes in the History of Chemistry: A meeting to honour Bill Brock and mark 80 years of *Ambix*

Royal Institution, 21 Albemarle Street, London, W1S 4BS



In 2017 SHAC's journal *Ambix* will be eighty years old. To mark this anniversary and the contributions made by one of our longest standing members, Bill Brock, SHAC will be holding a special meeting to explore old and new themes in the history of chemistry. Since *Ambix* was launched in May 1937, sixty-three volumes have been published, and Bill was editor of the journal from 1968 to 1983.

Programme

- 10.00 Registration and Coffee
- 10.30 **Carolyn Cobbold** (University of Cambridge)
'Yeast, a Problem. The Rise of Chemical Bread Technologies in the 19th century'
- 11.00 **Rupert Cole** (UCL / RI)
'"Chemist has the answer" (The Guardian): George Porter, a cheerleader for chemistry in post-war Britain'
- 11.30 Coffee
- 12.00 **Aileen Fyfe** (University of St Andrews)
'The development of non-commercial science journals, in Victorian Britain and beyond'
- 12.30 **Sally Horrocks** (University of Leicester / BL)
'"I wish I could say I had a little chemistry set at home": What does oral history really tell us about scientists' childhoods?'
- 1.00 Lunch
- 2.00 **David Knight** (University of Durham)
'Losers and Winners'
- 2.30 **Hattie Lloyd** (UCL / RI)
'Fashion and Chemistry - the Incongruous Union'
- 3.00 **John Brooke** (University of Oxford)
'Chemistry and Secularity: From the Most to the Least Spiritual of the Sciences'
- 3.30 Tea
- 4.00 **Bill Brock** (University of Leicester)
'Distilling History through the *Ambix*'
- 4.30 Round table including Bill Brock, John Brooke and David Knight
- 5.30 Close

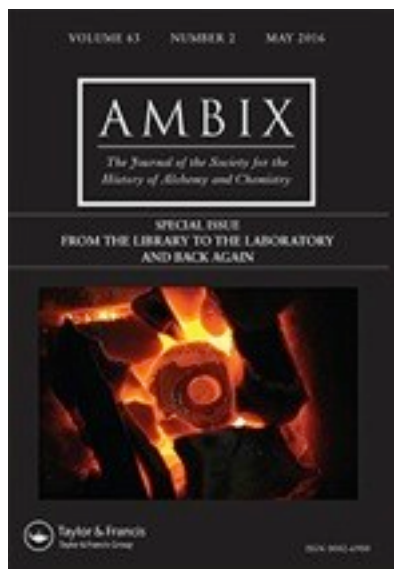
The registration fee for the meeting (to include refreshments and a sandwich lunch) is £15 for SHAC and RSCHG members, otherwise £20.

Further details about booking arrangements will be circulated to members and will be available on the SHAC website: www.ambix.org

AMBIX: Journal of the Society for the History of Alchemy & Chemistry

All members should have received the second and third issues of volume 63 of *Ambix*: publication and distribution of the fourth and final issue of this volume has been delayed and, on behalf of SHAC and our publishers Taylor and Francis, I should like to apologise to our members and assure everyone that both T&F and the Society are working hard to get publication back on schedule in 2017. The November 2016 issue is in press, and the contents - including research articles and book reviews - are now available to read online (See page 6 below). We anticipate despatch of hard copies of the journal in late February 2017. The research papers appearing in this issue are:

- i) Dorothea Heitsch, 'Descartes, Cardiac Heat, and Alchemy'
- ii) José Carlos Vieira Leitão, 'Alchemy, Prophecy, and Politics in Eighteenth-Century Iberia: Anselmo Castelo Branco's Critique of Benito Feijoo'
- iii) Marcin Krasnodebski, 'From Distillation to Standardization: A French Perspective on the Shaping of Turpentine Spirit (1909–1976)'



Issue Number 2 of Volume 63 was a special edition of *Ambix*, published online in August/September 2016. The theme, 'From the Library to the Laboratory and Back Again: Experiment as a Tool for the History of Science', was introduced in an essay by guest editors; Hjalmer Fors, Lawrence M. Principe and Otto Sibum and explored through examples presented in the following articles:

- i) Sébastien Moureau & Nicholas Thomas, 'Understanding Texts with the Help of Experimentation: The Example of Cupellation in Arabic Scientific Literature'
- ii) Lawrence M. Principe, 'Chymical Exotica in the Seventeenth Century, or, How to Make the Bologna Stone'
- iii) Haileigh Robertson, 'Reworking Seventeenth-Century Saltpetre'
- iv) Nils-Otto Ahnfelt & Hjalmer Fors, 'Making Early Modern Medicine: Reproducing Swedish Bitters'

Issue Number 3 of Volume 63 (online, November 2016) presented a broad chronological spread of articles, although readers with a particular interest in medieval alchemy were treated to an essay review, in addition to a fascinating article on a thirteenth-century alchemical encyclopedia attributed to Friar Bonaventura of Iseo. The contents of Issue 3 include:

- i) Maria Chiara Succurro, 'The Liber Compostelle Attributed to Friar Bonaventura of Iseo: The Textual Tradition of a Thirteenth-Century Alchemical Encyclopedia'
- ii) Rafał T. Prinke, 'New Light on the Alchemical Writings of Michael Sendivogius (1566–1636)'
- iii) Isabella Whitworth & Zvi C. Koren, 'Orchil and Tyrian Purple: Two Centuries of Bedfords from Leeds'
- iv) Jennifer M. Rampling, 'The Englishing of Medieval Alchemy' (Essay Review)

ACCESSING AMBIX ONLINE

Important Reminder to Members

SHAC members have access to all back issues of *Ambix* dating back to 1937 via our website www.ambix.org

How to Access *Ambix* via the SHAC Website

To access these issues you need to log in as a member on the SHAC website www.ambix.org using your username and password. These were sent to existing members when the back issues were first digitised in March 2013. If you have joined SHAC more recently, the username and password was issued when you joined the Society.

If you don't know your username and password please contact the Membership Secretary, Anna Simmons, via membership@ambix.org

Priority Access: Register for Alerts

Issues are published online prior to the physical copy being sent out to members. If you would like to receive notification of when a new issue is available online, please register for Table of Contents Alerts via the Taylor and Francis Website. Click on [Register for Table of Contents Alerts](#) or visit <http://www.tandfonline.com/action/doUpdateAlertSettings>

SOCIETY FOR THE HISTORY OF ALCHEMY AND CHEMISTRY

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Welcome

Posted on 06/03/2014 by mauber

Welcome to the Website of the Society for the History of Alchemy and Chemistry (SHAC).
 Founded in 1935, SHAC has consistently maintained the highest standards of scholarship in all aspects of the history of alchemy and chemistry from early times to the present. The Society has a wide international membership of over 250 members from 28 countries.

We hold meetings, offer scholarly prizes and grants, and publish the journal *Ambix*. The Society's newsletter, *Chemical Intelligence*, is published twice a year. We have also established the Graduate Network to bring together postgraduate students in the field.

Keep up to date with the news and events of SHAC by following us on Facebook and Twitter.

Join SHAC Renew your Membership Log in for Members

SHACorg Tweets

- @SHACorg SHAC promotes academic scholarship in the field of the history of alchemy and chemistry broadly defined.
- Alchemy Workshop - Call for Registration Registration is now open to the 'Alchemy, Universal Medicine, and...' <https://t.co/fYBafUXsO5> Thu 9th Jun 16 20:49
- Some of you may be interested in the upcoming Oxford seminar in Early Modern German Cultures, taking place... <https://t.co/jaQ0xgyA/> Thu 18th Feb 16 23:26
- This job posting might be of interest to some... <https://t.co/UnVNEdIO1J> Wed 10th Feb 16 20:13

News

- SHAC Autumn Meeting, Saturday 12 November 2016: Call for Papers 31/05/2016
- New Website Content Editor 10/05/2016
- Pertington Prize 2016/17 10/05/2016
- Oxford Seminar in the History of

Sources of Alchemy and Chemistry

The Editors of *Sources*, Lawrence Principe and Jennifer Rampling, confirmed in the last issue of *Chemical Intelligence* that next to be published in this important series will be a critical edition of two important Greek treatises: the alchemical dialogues attributed to Cleopatra. Prepared by Vincenzo Carlotta, the edition will include an English translation, introduction, and commentary on the text. We hope soon to be able to confirm the publication date of this volume, which will be distributed to members of SHAC.

Editions of Coptic alchemical writings, Zosimus Arabus, and the *Book of Alums and Salts* of pseudo-Razī are also in the pipeline.

Books Received for *Ambix* Review

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

Autonomous Nature. Problems of Prediction and Control from Ancient Times to the Scientific Revolution. By CAROLYN MERCHANT. Routledge: London. 2016.

Empires of Coal. Fueling China's Entry into the Modern World Order, 1860-1920. By SHELLEN XIAO WU. Pp. 266, illus., index. Stanford University Press: Stanford. 2015

Coal and Empire. The Birth of Energy Security in Industrial America. By PETER A. SHULMAN. Pp. 318, illus., index. Johns Hopkins University Press: Baltimore. 2015.

The Andean Wonder Drug: Cinchona Bark and Imperial Science in the Spanish Atlantic, 1630-1800. By MATTHEW J. CRAWFORD. Pp. xi + 284, illus., index. University of Pittsburgh Press: Pittsburgh. 2016.

GRADUATE NETWORK

From Idea to Event: On the 7th SHAC Postgraduate Workshop ‘Colouring and Making in Alchemy and Chemistry’ (Utrecht University, 26 October 2016)

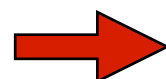


Mike Zuber, SHAC Student Representative, was lead organiser for last October’s Postgraduate Workshop, a key annual event in the society’s calendar. In the article below, Mike offers a fascinating insight into the planning and delivery of this popular and invaluable event for postgraduate and early career researchers.

Traditionally, SHAC Postgraduate Workshops take place in the UK; the first exception to this rule arose in 2014, when the event was held at the University of Amsterdam. This year the workshop returned to the Netherlands to take place in Utrecht, where it was hosted by the ERC-funded research group ‘ARTECHNE – Technique in the Arts, 1500–1950’. As the SHAC Student

Representative responsible for convening the workshop, I reached out to other SHAC student members in the Netherlands at the very beginning of the organisational process. Thijs Hagendijk (Utrecht), a PhD candidate affiliated with ARTECHNE, responded enthusiastically and subsequently helped organise the workshop by facilitating the collaboration with his research group. What was initially a vague request for ideas on potential keynote speakers ultimately turned into a powerful synergy that led to the great success of the workshop. More importantly, this approach could serve as a blueprint for future workshops as well, and I am sharing the history of this particular one with the explicit aim of encouraging student members to be in touch with their representative and collaborate on the most important event of our Graduate Network – our annual workshop.

One of the greatest challenges for SHAC Student Representatives past and present is to identify a suitable topic and keynote lecturers willing to address it. Finding a topic sounds a lot easier than it is, until we pause to consider the requirements. Any topic needs to be sufficiently relevant to both aspiring historians of alchemy and of chemistry: despite their proximity, the approaches brought to bear by these groups can be vastly different, and it is the stated goal of SHAC as a whole and the Postgraduate Workshops in particular to bring them together. But perhaps more importantly, there need to be keynote lecturers who are willing to address the topic from the vantage points of alchemy and chemistry, respectively. At this stage, there are important practical constraints due to budget limits; geographical proximity greatly helps in making a keynote lecturer’s attendance feasible. As far as the history of chemistry was concerned, former member of the SHAC Council, Prof. Ernst Homburg (Maastricht) was an obvious choice. Regarding history of alchemy, however, the situation was a bit more difficult: Dr Peter J. Forshaw (Amsterdam), a current member of the SHAC Council, had already contributed to the 2014 workshop. Luckily, he mentioned that Prof. Tara Nummedal (Brown) would be in Berlin for the academic year. Berlin is not exactly around the



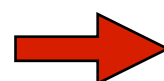
corner but is connected to Amsterdam by train, rather than via an intercontinental flight from her base near Providence.

Fortunately, both Prof. Homburg and Prof. Nummedal responded positively to our initial approaches. As we discussed possible topics, an unexpected convergence appeared: both expressed an interest in colours and their production, or the manufacture of products with specific colours, in which the twin aspects of colouring and making appear. This in turn seemed an ideal topic for increased collaboration with ARTECHNE, and Thijs quickly secured the commitment of his research group to host the workshop. With two keynote lecturers, a topic and a venue, it did not take long to find a suitable date and compose a call for papers. The response to the call for papers further endorsed the wide appeal of the workshop topic: eleven submissions arrived before the deadline! However, past Postgraduate Workshops most commonly accommodated four papers and never more than six. This encouraging response required, therefore, a selection process to establish the best submissions and I asked Dr Forshaw, Prof. Hasok Chang (Cambridge) and the two keynote lecturers to rate all of the submissions in an anonymous process.

In addition to SHAC's baseline funding, the Amsterdam School of History, the Centre for History of Hermetic Philosophy and Related Currents and ARTECHNE all contributed funds to support the realisation of the workshop. The greatest part of the budget goes towards the travel expenses incurred by presenters and keynote speakers. This means that the SHAC Postgraduate Workshop plays an important role in making it possible for PhD candidates or early-career researchers, whose home institutions do not finance conference participation, to nonetheless attend, present, and gain experience, all of which is useful and enhances individual CVs. As the day of the workshop drew closer, many practicalities needed to be dealt with, ranging from organising refreshments to providing name tags. With the deadline for registration passed, I was delighted to find that the maximum number of thirty participants had applied for a place. I was also privileged to have two immensely qualified volunteers to chair the history of chemistry and of alchemy panels, respectively: Dr. Brigitte van Tiggelen (Chemical Heritage Foundation) and Dr. Marlise Rijks (Leiden).

I hope that I have offered some insight into the process and tasks involved in planning an event like the SHAC postgraduate workshop and shared a number of the ingredients that contribute to the successful planning of the event. A key factor is to engage support from appropriate people and, although this might at times arise through serendipity, I hope I have illustrated the benefits of actively seeking help for specific aspects of the organisational process. I am certainly indebted to all the people who contributed to making this year's workshop in Utrecht a great success.

A full account of the proceedings at the 7th SHAC Postgraduate Workshop is given under 'Reports', on pages 42-45 below.



Aims & Objectives of the 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.

SHAC Student Representative

The current SHAC Student representative is **Mike Zuber**, a PhD candidate at the University of Amsterdam, who may be contacted via email (studentrep@ambix.org).

Contributions to *Chemical Intelligence*

Graduate members are encouraged to contribute items of interest to this newsletter, including a personal student profile (see format below); reports of conferences, workshops, events etc. attended; articles on places or resources of interest e.g. libraries, archives, museums, laboratories etc., news items about the history of alchemy and chemistry etc. Photographic images are also very welcome. Contributions should be sent to: Judith Mawer, *Chemical Intelligence* Editor, chemintel@ambix.org

Graduate members will find more information about SHAC, its events, prizes and awards, along with details relating to past, present and forthcoming news and activities in the history of alchemy and chemistry, by visiting the Society's webpage: <http://www.ambix.org>

GRADUATE PROFILE

The graduate profile is always a popular and important feature of *Chemical Intelligence* introducing, as it does, new (or at least relatively new) colleagues and their research interests. If you would like, or at least be willing, to share your own profile with readers, please submit your details to the SHAC student representative, Mike Zuber, studentrep@ambix.org, who I am sure would be delighted to hear from you. Please follow the format used below, restricting your profile to one A4 page and including a photograph of yourself.



Amélie Bonney
University of Oxford



Self-introduction

After my undergraduate studies in France, I decided to research William Morris's use of arsenic green in his wallpapers during my MSc at the University of Oxford, where I am now pursuing a DPhil in the History of Science, Medicine and Technology under the supervision of Professor Pietro Corsi. My doctoral project is a comparative study of the use of harmful chemical elements in the colour industry in France and Britain between 1850 and 1914. Focusing on cases of accidents involving colours made with arsenic, lead, aniline, and picric acid among others, my research investigates the practices surrounding the production and use of colours, and assesses their wider environmental and sanitary impact. One of the most stimulating aspects of my research consists in analysing material culture in order to understand how and on what scale specific colours were used. So far, I

found that the risks involved in the use of specific dyes and pigments were often well-known by colour-makers, craftsmen, and occupational health physicians long before regulation was implemented. These risks were, however, often minimized during official governmental enquiries as a means to favour national industries. Comparing the French and British colour industry makes it possible to determine to what extent international debates, economic competition, conflicting understandings of toxicity, and different attitudes to risk management were potential catalysts for using or banning certain colours in both countries.

What is the greatest challenge you are facing as a postgraduate student?

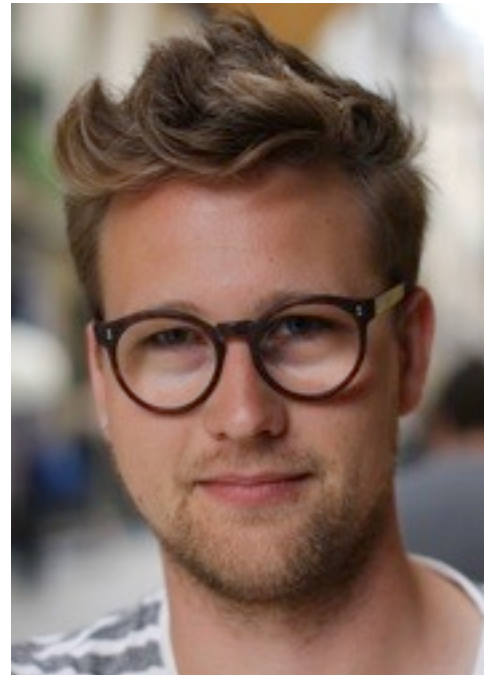
When I enrolled for the doctorate, I was particularly optimistic and eager to start researching. I had no doubts that rigorous organization, enthusiasm and perseverance would make it a pleasurable and fulfilling activity. Of course, doing a doctorate turned out to be much harder than I first expected. There are always new or undiscovered specialized books and journals waiting to be read, paragraphs to be written and rewritten, archives that turn out to be disappointing, leaving you with the impression of being a modern Sisyphus, never reaching your goal. But as Albert Camus wrote, 'one must imagine Sisyphus happy' – the struggle itself is rewarding, and even if the process of researching will never be fully finished, I find that it certainly teaches me a lot. I have also had many good surprises, such as finding interesting material when I least expect it, or being encouraged to work with objects from a museum collection. In order to overcome the solitary character of doctoral research, I think it is essential to talk to fellow scholars to discuss problems and obtain constructive criticism. If you share some of my interests in the history of colour and in colour chemistry, you can therefore feel free to contact me at the following address: amelie.bonney@gtc.ox.ac.uk.



Thijs Hagendijk
Utrecht University

Self-introduction

For almost a year now, I have been working at Utrecht University as a member of the ERC-funded ARTECHNE project ‘Technique in the Arts: Concepts, Practices, Expertise, 1500–1950’. Over the last two decades, scholars have been discovering a rich body of early-modern artisanal texts, which range from books of secrets and recipe collections, to published treatises on arts and crafts. I am specifically interested in how these texts functioned in the early-modern period and whether people ever used these texts to learn how to do things. In answering these questions, I use the relatively new and exciting method of historical reconstructions to gain access to my sources. Since last summer, I have been investigating what appears to be a Dutch manual on gold and silversmithing (1721). By reading and using the book as if I am the one who needs to learn how to do things, I try to find out how the book might have functioned in the period following its publication. And what about alchemy and chemistry, I hear you ask? Luckily, the delicate art of material transformation is never far away in the early modern period, especially if you deal with artisanal practices.



What is the greatest challenge you are facing as a postgraduate student?

The biggest challenge I encountered thus far arises from the interdisciplinary character of the project. The ARTECHNE project operates on the borders between history of science, technical art history and the field of conservation/restoration studies. All fields come with their specific language, specific customs and a specific body of scholarly literature. Navigating between these fields can often feel like you are missing out a lot. Yet this challenge is simultaneously one of the greatest perks of the job. I get to work closely with conservators, see a lot of art and get to cast silver objects as well. More generally, however, there is much we can learn from each other. This was beautifully illustrated with the latest edition of the SHAC postgraduate workshop. Several students from the field of (technical) art history joined that day and enthusiastically participated in the debate on colouring and making in alchemy and chemistry. I hope that similar collaborations will return in the years to come.

OTHER MEETINGS

Onto the Table: Food Production, Processing and Distribution in the 19th, 20th and 21st Centuries

Instituto de História Contemporânea. Faculdade de Ciências Sociais e Humanas. Universidade Nova de Lisboa



The food supply chain has been a serious concern of the contemporary society. With the Industrial Revolution, the food supply paradigm suffered a profound change, both nutritionally and in the selection and classification of essential goods. Therefore, technological innovation allowed for an efficient response to successive political, economic, social and cultural rights over the 19th, 20th and 21st centuries. Food processing methods and distribution permitted the emergence of global food distribution networks. From the second half of the 20th century on, the demands of the consumer society boosted such processes of transformation and distribution aiming to diversify and improve the quality of diets that should be available at any time of the year and at more affordable prices.

Only after a late and slow process did Portugal join this global change of the eating habits. At a time when the origin and the type of food we eat is constantly in the spotlight, it is important to understand how the eating habits have evolved from the second half of the 19th century until now.

In this conference we intend to reflect on a) the implementation and development of manufacturing processes, including milling, canning, drying, pasteurization, fermentation, roasting, refining, freeze-drying, cooling and freezing; and on b) the means and distribution platforms, including cold chains, grocery stores and local markets.

For more information, see: <https://food2016ihc.wordpress.com/portfolio/english-version/>

Congrès de la Société Française
d'Histoire des Sciences et des Techniques

Strasbourg 19-20-21 avril 2017



University of Strasbourg/Faculty of Medicine



This conference of the Société Française d'Histoire des Sciences et des Techniques includes a symposium of particular interest to historians of chemistry: 'Les scientifiques français dans les organisations scientifiques internationales (1945-1970)', which has been organised by Danielle Fauque, Delphine Berdah and Michel Cotte, with the support of the Club d'histoire de la Chimie. The symposium is part of the sixth international congress of chemistry, physics, mathematics, biology and the history of science, further details of which may be found at <https://sfhststras2017.sciencesconf.org/>



VI *Scientiae* Conference: Disciplines of Knowing in the Early Modern World

University of Padua: Department of Historical and Geographic Sciences and the Ancient World



The major premise of this conference series is that knowledge during this period was inherently interdisciplinary, involving complex mixtures of theories, practices and objects, which had yet to be separated into their modern 'scientific' configurations. Although centered on attempts to understand and control the natural world, *Scientiae* addresses natural philosophy, natural history, and the *scientiae mixtae* within a wide range of related fields, including but not restricted to Biblical exegesis, medicine, artisan practice and theory, logic, humanism, alchemy, magic, witchcraft, demonology, divinatory practices, astronomy, astrology, music, antiquarianism, experimentation and commerce.

Keynote Speakers: *Paula Findlen (Stanford)*
Claire Preston (Queen Mary, London)
Antonio Clericuzio (Roma Tre)

This year attention is especially given to the history of early modern knowledge and erudition, the history of universities, particularly though not exclusively the history of the university of Padua, as well as the history of the book and the history of political thought.

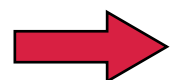
For more information and details of registration: <http://scientiae.co.uk/conferences/padua-2017/>

See page 49 for Stop Press Additional Other Meeting



The Centro de História of the Faculdade de Letras da Universidade de Lisboa (CH-ULisboa)/Center of History of the Faculty of Arts and Humanities of the University of Lisbon and the Instituto de História Contemporânea of the Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa (IHC-FCSH, UNL)/Institute of Contemporary History of the Faculty of Social Sciences and Humanities of the New University of Lisbon, are pleased to be hosting the II meeting of REPORT(H)A in Spring 2017.

Keynote Speakers: *Marcus Hall (University of Zurich)*
Patricia Vieira (University of Georgetown)
Simon Pooley (Birkbeck, University of London)



The II meeting REPORT(H)A (Portuguese Network of Environmental History) intends to bring together researchers, teachers, students and experts on environmental history from the fields of human, social and natural sciences creating synergies among all scholars engaged in environmental history and stimulating debate on an issue that has gained considerable visibility over the last decades. The cross-cutting conference theme, ‘Environmental Changes in Historical Perspective’, embraces transnational and trans-disciplinary approaches. It aims to be a bridge between different forms of knowledge and between different geographical and social spaces, while putting them into a meaningful context. Thus, the conference welcomes innovative approaches contributing to a lively exchange of ideas and experiences, welcoming new perspectives, concepts, methodologies and processes in the field of Environmental History. The conference goals are to foster communication and collaboration, to share information and disseminate research and to discuss issues, concerns and challenges relevant to further the development of environmental history.

For more information: <http://reportheameeting.wixsite.com/2017/the-conference>

Royal Society of Chemistry Historical Group Meeting

The Centenary of Robert Burns Woodward (1917-1979)

Burlington House, Piccadilly, London



The programme for this afternoon meeting, printed below, promises to reflect many aspects of the life and works of the chemist, Robert Burns Woodward, and indeed present an insight into the man himself. Please note that item scheduled for 17.00 hours will be a short dramatic playlet put on by Jeffrey Seeman and Anthony Barrett.

Programme

- 13.00 Registration and tea or coffee
- 13.30 Welcome (Dr John Hudson, Chairman, Historical Group)
- First Session** – Chair: Henry Rzepa (Imperial College)
- 13.40 Peter Morris (Science Museum)
- “Was Robert Burns Woodward a Great Chemist?”*
- 14.10 Pierre Laszlo (Cornell University)
- “The Simmons-Woodward Interaction”*
- 14.40 Mark Whiting (University of Bristol)
- “Working with Woodward, 1951-2”*
- 15.00 Stanley Roberts (Manchester University)
- “The Aroma of Yardley Aftershave”*



15.20 Tea interval**Second Session** – Chair: Peter Morris (Science Museum)

15.40 Jeffrey Seeman (University of Richmond, Virginia)

Wheeler Lecture: "Woodward's Unpublished Letters"

16.40 Jeffrey Seeman (University of Richmond, Virginia)

"Woodward, Corey and the Rashomon Effect"

17.00 Jeffrey Seeman and Anthony Barrett FRS FMedSci (Imperial College)

17.20 Concluding remarks by Peter Morris: *Remembering Woodward*

17.30 Close of meeting

The meeting is free to attend but prior registration is essential. Please contact the Royal Society of Chemistry Historical Group's Secretary, Professor John Nicholson: jwnicholson01@gmail.com if you would like to attend.

Royal Society of Chemistry Historical Group & the History Group of the Institute of Physics

Rutherford's Chemists

Glasgow (venue to be confirmed)



Plans are being developed for a historical symposium entitled *Rutherford's Chemists* organised by the Royal Society of Chemistry Historical Group and the History Group of the Institute of Physics. Details are not yet finalised, but it will probably be a two-day meeting in Glasgow, with the likely dates 15-16 July 2017. The meeting will be open to all and details will be published nearer the time on the Historical Group's page on the RSC website: www.rsc.org/historical.



**Science, Technology and Medicine
between the Global and the Local**

Rio de Janeiro, Brazil



Questions of place are gaining increasing importance in the work of historians of science, technology and medicine, to such an extent that some scholars suggest this corresponds to a veritable "spatial turn". It is unavoidable that researchers take sides on issues such as the situatedness of knowledge and practices, the problems pertaining to their movements across spaces and cultures (and not only along time) and, above all, the proper choice of scales

of analysis – all the way between the global and the local, which is the core of the 25th ICHST's theme. At the same time, this theme relates to the very nature of the Congress as the largest international gathering of historians of science, technology and medicine, inviting all of us to think about what we may say to and learn from each other, considering our own multifarious places and standpoints. The 25th ICHST will be held in the Praia Vermelha campus of the Federal University of Rio de Janeiro (UFRJ).

For more information: <http://www.ichst2017.sbhc.org.br/site/capa>



11th International Conference on the History of Chemistry (11ICHC) *Trondheim, Norway*



In summer 2017, the fortieth anniversary of the creation of the Working Party (WP) on the History of Chemistry (EuCheMS) will be celebrated. The 11th International Conference on the History of Chemistry (11th ICHC) will take place from 29th August to 2nd September, 2017 in Trondheim, a city founded in 997 which served as Norway's capital during the Viking Age. The Norwegian University of Science and Technology (NTNU), which has been the country's centre for technology education since 1910, will host the conference.

The conference is sponsored by NTNU, the Research Council of Norway, the Norwegian Chemical Society and the Chemical Heritage Foundation. The conference programme will include historical papers on the development of all aspects of the material and life sciences, such as:

- Chemistry, professors, textbooks and classrooms
- Teaching and didactics of history of chemistry
- Chemistry and law: controversies, expertise, counter-expertise, fraud and activism
- Toxics regulation, risk assessment and public health
- Environmental chemistry, energy and regulation
- Chemistry, industry, and economy
- Spaces and sites of chemistry
- Instruments, collections and material culture
- Biographies and prosopographies, and databases
- Chemistry, war and exile
- Representation of chemistry, and visual cultures
- Alchemy, Chemistry and Early Modern Science and Medicine
- Gender and chemistry



The steering organising committee consists of Christoph Meinel, Universität Regensburg, and Ignacio Suay-Matallana, Centro Interuniversitário de História das Ciências e da Tecnologia, Lisbon (chairs of the advisory committee), Annette Lykknes (chair of the local organising committee) and Brigitte Van Tiggelen (Mémosciences, Chemical Heritage Foundation, and chair of the WP).

For more information see: <http://www.ntnu.edu/11ichc> Contact information for practical questions: 11ICHC@videre.ntnu.no

OTHER MEETINGS: CALLS FOR PAPERS

Centre for Medical History of the University of Exeter Humours, Mixtures and Corpuscles: A Medical Path to Corpuscularism in the Seventeenth Century *Domus Comeliana, Pisa*



Organised by Dr Fabrizio Bigotti and Professor Jonathan Barry, this conference aims to explore the interplay between *minima naturalia*, corpuscles, and atoms in the medical thought of the seventeenth century (broadly considered, 1550-1720) by especially focusing on the legacy of the Italian physician **Santorio Santori (1561-1636)**. Santorio, who is credited to be the first to introduce a quantitative approach into medicine and biology by means of his studies on the insensible perspiration of the body (*perspiratio insensibilis*), was also the first to conceive the action of corpuscles and atoms mechanically as a result of his experiments on

the properties of drugs and mixtures. As the impetus towards the quantification of compound substances, which led European physicians to embrace corpuscular theories, remains largely unknown to scholars, this conference will shed light not only on the context and influence of Santorio's legacy, but also on the many directions taken by medical experimentation in the seventeenth century.

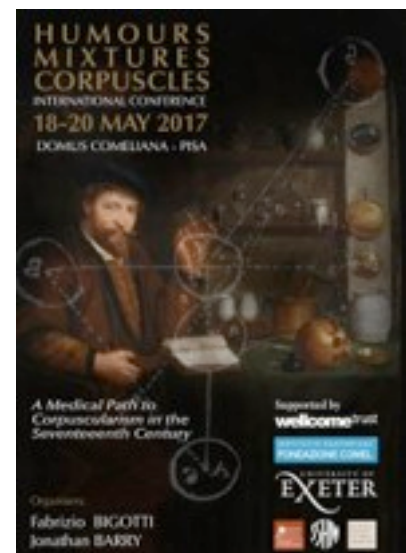
Keynote Speakers:

Georgiana Hedesan (*University of Oxford*)

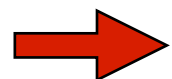
Christoph Lüthy (*Radboud University*)

William R. Newman (*Indiana University*)

Vivian Nutton (*First Moscow State Medical University*)



Papers from scholars of any nationality are invited on any aspect of early modern medicine and science. Contributions on general aspects (e.g. Renaissance Aristotelianism and Galenism, Medical School of Padua, alchemical medicine, properties of mixtures, preparation of drugs, etc.) as well as on single authors (Baglivi, Basson, Boyle, Descartes, Falloppia, Fracastoro, Glisson, Iungius, Santorio, Sennert, Spinoza, etc.) are equally welcome.



In the spirit of the conference, however, particular attention will be devoted to papers referring to Santorio and the history of *perspiratio insensibilis* (from Dodart to Keill).

PhD students are strongly encouraged to join the event which will be supported by five **Santorio Fellowships for Medical Humanities and Science** (500 euros each) funded by the **Fondazione Comel - Institutio Santoriana**. More information about the application process is available from the following webpage: <http://www.fondazionecomel.org/>.

Papers should be a maximum of 20-25 minutes followed by 10 minutes of reply. Abstracts of a maximum 300 words should be sent to Dr Fabrizio Bigotti at f.bigotti@exeter.ac.uk by the end of January 2017 with successful papers notified by the end of February.

A publication of the conference proceedings is anticipated from Springer in 2018.

XIII Conference of the Spanish Society for the History of Science and Technology: ‘Science and Technology in the University’

Alcalá de Henares, Faculty of Medicine (UAH)



In 2017 it will be the fifth centenary of the death of the founder of the Cisneriana University, Francisco Jiménez de Cisneros, and this is to be celebrated jointly with the 40th anniversary of the creation of the present University of Alcalá. The Board of SEHCYT and the Organising Committee of the XIII Conference both felt that this joint anniversary year offered a good opportunity to meet together in order to reflect on the historical development of university science and technology. The overarching theme for the conference is ‘Science and Technology in the University’ and papers are invited under that broad heading. Although the theme may be interpreted freely, papers that are accepted will be organised thematically within the conference programme.

The **deadline** for the submission of stand-alone paper proposals/abstracts is: **28 February 2017**

Further details at: http://ciuhct.org/Media/Default/Online/Docs/XIII_Congreso_1_circular.pdf

Fifteenth Ischia Summer School on the History of the Life Sciences: ‘Cycles of Life’

Ischia, Italy

Proposals are invited for this week-long summer school, which provides advanced training in history of the life sciences through lectures, seminars and discussions in a historically rich and naturally beautiful setting. The theme for 2017 is ‘Cycles of Life’ and the conference organisers are: Janet Browne (*Harvard University*), Christiane Groeben (*University of Naples*), Nick Hopwood (*University of Cambridge*), Staffan Müller-Wille (*University of Exeter*) and the *Stazione Zoologica Anton Dohrn*.



Historians have investigated only a few biological cycles and largely in isolation; this school aims to encourage synthesis. We shall explore shared properties of cycles, and the differences



and relations between one discipline or research programme and another and over the centuries. Modern metabolic and diurnal cycles oscillate. Life cycles are directional and their individual spans finite. Heredity and evolution work through their succession and endless variation. Ecological cycles are open-ended — and yet the ideal of a return to an original state underpins all modern conservation and restoration work. Concepts of cyclicity in the life sciences thus operate on vastly different spatial and temporal scales, and at the same time constitute a productive point of intersection with physics, chemistry, geology and economics. How much the various modern and premodern cycles have in common, or what biological cycles share with those in other sciences, and other domains of knowledge and practice, are open questions. The theme ‘cycles of life’ invites fresh engagement with the history of the life sciences over the long term.

Applications should include:

- a statement specifying academic experience and reasons for interest in the course topic (max. 300 words),
- a brief cv,
- a letter of recommendation.

And be submitted to: administrator@ischiasummerschool.org

The **deadline** for the submission of proposals/abstracts is: **28 February 2017**

For further important information, please visit: <http://ischiasummerschool.org/2017-theme>



HELLENIC REPUBLIC
National and Kapodistrian
University of Athens

8th *Tensions of Europe* Conference: ‘Borders and Technology’
National and Kapodistrian University of Athens, Greece



Keynote Speakers:

Huub Dijstelbloem (University of Amsterdam and Netherlands Scientific Council for Government Policy in The Hague)
Dina Vaiou (National Technical University of Athens)

The 8th *Tensions of Europe* Conference will have as its main theme the history of borders and technology. We invite papers studying:

- the history of the relationship between national borders and transnational infrastructures
- hidden technological linking and delinking that reinforced or challenged border delineations and demarcations
- the relationship between borders and technologically induced environmental crises and disasters
- the virtualisation of borders and the territories that they contain through the use of electronic and related technologies



- geopolitics and technology
- the redefinition of borders due to the use of technology (and vice versa), all the way from the production to the circulation and use of goods and commodities.

One central aim is to cross-fertilise between disciplines and we therefore invite contributions from a wide variety of historical disciplines as well as from fields like Migration and Border Studies, Migration History, Mobility History, etc, especially in connection to borders and migrations from, to and within Europe.

More details about the call for papers can be found on the conference website: <http://8toe2017.phs.uoa.gr/>

The **deadline** for the submission of proposals is **15 February 2017**

SHAC PRIZES AND AWARDS

SHAC Award Scheme Recipients, 2016

The SHAC Award Scheme granted funding to four applicants in 2016, two from each award category

New Scholar Awards:

Anna Gielas, PhD student, University of St Andrews, UK: ‘The establishment of Lorenz Crell’s *Chemisches Journal* as an instrument of knowledge production’

Marieke Hendriksen, postdoctoral researcher, Utrecht University, The Netherlands: ‘Boerhaave’s mineral chemistry and its influence on eighteenth-century pharmacy’

Subject Development Awards:

Fabrizio Bigotti, University of Exeter, UK: conference Pisa, Italy, May 2017: ‘Humours, mixtures, and corpuscles – a medical path to chemical corpuscularism in the seventeenth century’

Elena Serrano, postgraduate fellow, Max Planck Institute, Berlin, Germany: workshop Oxford, UK, Spring 2017: ‘Domesticating the air: the chemistry, material culture, and politics of breathing safely’

SHAC Award Scheme 2017

Opening date for applications: 1 March 2017

Please see page 3 of this issue of *Chemical Intelligence* for details of the SHAC Award Scheme for 2017. Your attention is drawn to the increase in the maximum grant awarded, which now stands at £750 in each category. Applications from all eligible candidates are welcome and encouraged.

Please note that applications must be received by SHAC by the **closing date of 31 May 2017**.

Oxford Part II Thesis Prize

The Oxford Part II Prize for 2016 was awarded to Andrew Brocklehurst of Keble College, Oxford for a thesis entitled 'A scientific diet: elucidation of the structure of vitamin D and cholesterol, and related food analysis 1910-1945'. Andrew was supervised in his research by Dr Allan Chapman. The prize was presented by Dr Robert Anderson following SHAC's AGM, on 12 November 2016.



OTHER NEWS, EVENTS AND GRANTS

Obituary: Professor Masanori Kaji (1956-2016)



In the August 2016 issue of *Chemical Intelligence*, we advised readers that we had just learned of the death of one of the Society's members, Professor Masanori Kaji. We are grateful to three of his colleagues; Yasu Furukawa, Ernst Homburg and Elena Zaitseva, for providing this obituary in commemoration of his life.



Masanori Kaji passed away in Yokohama, Japan, on 18 July 2016 at the age of sixty. Many of his colleagues, friends, and students were present to mourn for him at a Buddhist funeral held on 23 July.

Masanori was born in Yokohama on 8 February, 1956. In 1974 he enrolled in the Department of Chemistry at the Tokyo Institute of Technology (Tokyo Tech). As a junior, his interest shifted from chemistry to history. Encouraged by Tatsumasa Doke, professor of the history of science, he began studying the history of science in Tokyo Tech's graduate programme in social engineering. In 1988, he was awarded a doctoral degree upon completion of his dissertation on the Russian chemist Dmitri Mendeleev and his discovery of the periodic law.

Masanori was amused to say that he and Mendeleev shared the same birthday (although the latter's was in the Gregorian calendar). In 1990 he was selected as a Soviet government-sponsored foreign student for Russian language training and study of the history of Russian chemistry at Leningrad State University. The following year saw the collapse of the Soviet Union. By the time he left for Japan in 1992, the Soviet Union had been renamed the Russian Federation, and his university Saint Petersburg State University. As he was specializing in the history of chemistry, Masanori was assigned to I.S. Dmitriev, who had just been appointed in September 1991 as the Director of the D. I. Mendeleev Museum-Archive at Leningrad State University. The latter advised him to further focus on Mendeleev, and, following this advice, Masanori became one of the leading scholars in the world on Mendeleev's life and work. In 1997, he published the first scientific biography written in the Japanese language about the eminent Russian scholar: *Mendeleev's Discovery of the Periodic Law of Chemical Elements* (Sapporo: Hokkaido University Press, 1997). This was followed by numerous journal articles on that topic, including some publications in Russian. One often cited article was on 'branches of Mendeleev's genealogical tree' that investigated Mendeleev's Japanese relatives, in particular his granddaughter.

He received the 2005 Outstanding Paper Award from the American Chemical Society's Division of the History of Chemistry for his paper 'D. I. Mendeleev's Concept of Chemical Elements and The Principles of Chemistry', *Bulletin for the History of Chemistry*, vol. 27, no.1 (2002), pp. 4-16. He co-edited *Early Responses to the Periodic System* (Oxford University Press, 2015).

Over the past decade, he eagerly worked on the history of organic chemistry in Japan, with a special focus on the work of Riko Majima and Tetsuo Nozoe.

Masanori later also contributed important publications on the eminent Russian scholar V. I. Vernadskii, including a translation of his work on the history of science. One of the most interesting of Masanori's publications about Vernadskii was a study of his role in the Soviet atomic project. Prompted by an article published by E. O. Lawrence in *The New York Times*, Vernadskii advocated for the formation of the Commission on the Problems of Uranium in the USSR in 1940, similar to what Einstein



had done in the United States.

Thus, Masanori was a leading scholar of Russian and Japanese chemistry. A prolific writer, he published and edited over 10 books and wrote nearly 40 papers either in Japanese, English, or Russian.

Masanori became an associate professor of the history of science at the Tokyo Institute of Technology in 1994. He was promoted to professor in 2014. He served the Japanese Society for the History of Chemistry for many years as a Council member and was Secretary in Chief from 2007 to 2013. He was also an Executive Council member of the Commission for the History of Modern Chemistry (CHMC), of the International Union of History and Philosophy of Science, Division of History of Science and Philosophy. Masanori played a major role in organizing the International Workshop on the History of Chemistry (IWHC 2015), ‘Transformation of Chemistry from the 1920s to the 1960s’, held in March 2015 at Tokyo Tech.

He was a real cosmopolitan who tirelessly took part in many international conferences in Europe, America, Middle East, and Asia. In Japan, he always showed warm hospitality to foreign scholars who visited the country. Masanori had many friends and colleagues in Russia. He maintained close scholarly ties with the Chemistry Faculty at Moscow University and the Russian Chemical-Technological University, named after D. I. Mendeleev. Over the course of many years, Masanori forged many direct ties among scholars in Japan, Russia, and the West. Also, more generally, Masanori played an important role in Europe. He was present at the business meeting at the 4th International Conference on the History of the Chemistry (ICHC) in Budapest in 2003, organized by the Working Party on the History of Chemistry (WP) of the European Association for Chemical and Molecular Sciences (EuChemS), when it was decided to organize these conferences in the future also in locations outside Hungary. At all the next ICHC meetings – Lisbon 2005; Leuven 2007; Sopron 2009; Rostock 2011; Uppsala 2013 – he was present and attended not only the conferences but also the business meetings. As a result, he was appointed in 2009 observer and (honorary) member of the Working Party, and became in that role the only non-European member of the WP. During the same conference in Sopron he organized two sessions on the ‘Early Responses to the Periodic System’ that ultimately resulted in the book published in 2015. Masanori also played a crucial role during all these conferences by always taking the group picture. He will be remembered dearly by all who attended, and he will be greatly missed as a careful ‘visual historian’ of the history of chemistry as a field. (see his picture below of the Uppsala 2013 meeting, with Masanori standing in the front row on the left). It was thus very unusual for the European community not to meet him in the Aveiro edition of the ICHC, in September 2015, where the paper he intended to deliver was read by a colleague.





In September 2015 indeed, out of the blue, Masanori was diagnosed with pancreatic cancer and diagnosed with only months to live. While receiving chemotherapy, he was forward-looking and continued to be active in writing papers and attending meetings. In December, he delivered a paper on the history of Japan's chemical community at the Pacificchem conference held in Honolulu. Climbing Diamond Heads and swimming at Waikiki, he looked cheerful at the time.

Masanori was hospitalized two days after he attended the annual meeting of the Japanese Society for the History of Chemistry, held at Mie University between 9-10 July 2016. We were deeply saddened by the news of his subsequent death, even though we felt the day might come in the near future. He is survived by his wife, Michiko Akamatsu, a scholar of Russian history. His death was a great loss to the history of chemistry community. Masanori Kaji and his contributions to the historical scholarship of chemistry shall long be remembered by many of us in Japan as well as worldwide.

Yasu Furukawa, Ernst Homburg and Elena Zaitseva

Chemical Heritage Foundation Beckman Center for the History of Chemistry

Fellows for 2016-17

The Chemical Heritage Foundation is pleased to announce the appointments of 2016-17 Beckman Center Fellows:

Cain Senior Fellow (4 months in residence)

1. Frank Zelko (University of Vermont). “Precious Bodily Fluids: What the History of Fluoride Tells Us About Science, Public Health, and the Politics of Knowledge”

Long-Term Postdoctoral Fellows (9-months in residence)

1. Thomas Apel (Menlo College). Haas Fellow: “Translating Lavoisier: French Chemistry and the Making of American Science, 1790-1830.”
2. Agnieszka Rec (Yale University). Herdegen Fellow: “Blood is Thicker than Aqua Regia: Alchemical Networks in Sixteenth-Century Central and Eastern Europe.”
3. Jean-Olivier Richard (Johns Hopkins University). Cain Fellow: “Mixture Makers: The Role of Mankind in Père Castel’s Matter Theory.”

Long-Term Dissertation Fellows (9 months in residence)

1. Cari Casteel (Auburn University). Price Fellow: “The Odor of Things: Deodorant, Gender, and Olfaction in the United States.”
2. Kirsten Moore-Sheeley (Johns Hopkins University). Haas Fellow: “Nothing But Nets: History of Insecticide Treated Nets, 1980s-Present.”
3. Elisabeth Moreau (Université Libre de Bruxelles). Haas Fellow: “The Composition of Life and Health: Elements, Particles, and Atoms in Late Renaissance Physiology.”

Short-Term Fellows

1. Sarah Ehlers (University of Leicester). Doan Fellow: “Pharmaceutical Crossings: Chemotherapeutic Research between Europe, Colonial Africa, and the US.” (2 months)
2. Lynne Friedmann (Freelance Science Writer). Société de Chimie Industrielle Fellow: “Ink Chemists of the Industrial Revolution.” (3 months)
3. Ute Frietsch (HAB Wolfenbüttel). Allington Fellow: “Hidden helpers? An investigation into women’s activities in early modern alchemy/chymistry.” (3 months)
4. Spring Greeney (University of Wisconsin-Madison). Doan Fellow: “Line Dry: An Environmental History of Doing the Wash.” (3 months)
5. Marieke Hendriksen (Utrecht University). Ulliyot Scholar: “Boerhaave's mineral chemistry and its influence on eighteenth-century pharmacy.” (1 month)
6. Gabriel Moshenska (University College London). Doan Fellow: “The development of gas masks in the early twentieth century.” (2 months)
7. Ingemar Pettersson (Uppsala University). Doan Fellow: “Masters of flavor: Sensory analysis and high industrial food.” (2 months)
8. Marlise Rijks (Ghent University). Doan Fellow: “By human hands. Counterfeiting nature in early modern Europe.” (1 month)



9. Michael Rossi (University of Chicago). Ulliot Scholar: “Between Objectivity, Subjectivity, and Aesthetics: Color Chemistry, Measurement and Manufacture, 1830 to 1930.” (2 months)
 10. Sharon Ruston (Lancaster University). Allington Fellow: “The Collected Letters of Sir Humphry Davy.” (2 months)
 11. Oscar Torres (Colegio de Mexico). Doan Fellow: “Miners, Oilmen and Chemists: Globalization and Technology in Mexican Sulphur Industry (1920 - 1972).” (2 months)
 12. Mark Waddell (Michigan State University). Allington Fellow: “The Devil's Cure: Magical Medicine and the Problem of Plausibility in the Seventeenth Century.” (1 month)
-

Beckman Center for the History of Chemistry Information about Fellowships

The Beckman Center for the History of Chemistry at the Chemical Heritage Foundation (CHF), an independent research library in Philadelphia, PA, invites applications for short-term and long-term fellowships in the history of science, medicine, technology, and industry (<https://www.chemheritage.org/apply-for-a-fellowship>).

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.

We support roughly 20 fellows each year, creating a vibrant international community of scholars. Applications come from scholars in a wide range of disciplines across the humanities and social sciences. To see this year's list, go to: <https://www.chemheritage.org/current-fellows>.

Current rates of Award, Academic Year 2017-18

Senior Fellowships

1 or 2 Semesters in Residence — available to those who received their PhD before July 2012 • \$30,000/Semester

Postdoctoral Fellowships

9 Months in Residence — available to those who received their PhD after July 2012 • \$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

The application deadline for 2017-18 has now passed but, for more information and application schedules visit: <http://www.chemheritage.org/BeckmanCenter>

Postdoctoral Historian of Chemistry and Recipient of SHAC Award appointed to position at the Science Museum, London

Profile of Haileigh Robertson



In December 2015 I passed my PhD thesis: “‘Imitable Thunder’: the role of gunpowder in seventeenth-century experimental science”. I undertook my PhD research at the University of York, and as an AHRC funded Collaborative Doctoral Award holder, I also worked with the Royal Armouries (Leeds). In my thesis I explored a wide variety of gunpowder experiments conducted by Francis Bacon, Robert Boyle and the fellows of the Royal Society in the seventeenth-century. These experiments, for the most part, were inquiries into nature; using gunpowder as a conduit for exploring matter and its often-hidden behaviours. Working closely with staff at the Royal Armouries, I reworked a small but carefully-chosen selection of early modern gunpowder experiments. For example, I studied methods of testing gunpowder’s strength as described by Robert Hooke and Prince Rupert

and uncovered challenges, practicalities and experiences that were not evident in the early modern practitioners’ reports. In focussing on the practical experiences of early modern scientists, I was able to complement text-based and archival research to develop a new understanding of how gunpowder was employed and perceived by scholars in the seventeenth-century. I argued that for many, the material was transferred from the battlefield to the laboratory where it could be made to fulfil a new range of inquisitional and practical functions.

In 2013 I received a SHAC New Scholars Award, which I used to fund a research trip to the Middelaldercentret (Medieval Centre) in Nykøbing-Falster, Denmark. On this trip I worked with the Medieval Gunpowder Research Group, comprising an international group of scholars and museum professionals, which meets annually at the museum to conduct research into various aspects of medieval ordinance. The research trip was an invaluable experience, and I followed it up with a second visit to the centre in 2014. The research conducted at the Medieval Centre formed the basis of my paper ‘Reworking seventeenth-century saltpetre’, *Ambix* (63:2), 2016, 145-61. In this paper I examined how seventeenth-century natural philosophers approached the difficult practical procedure of making saltpetre. This publication followed my participation in a SHAC sponsored workshop on ‘Experimental History of Science’ in March 2016 at the University of Uppsala. In this workshop participants explored the values and challenges of replicating or reworking experiments in the history of chemistry, and examined how this approach can be used to complement research in the field.



My experiences thus far have taken me to the Science Museum (London) where I work as Assistant Curator of Technologies and Engineering. It has long been my goal to work in the museum sector. Previously, I have worked in voluntary roles and internships with, for example, the Burrell Collection (Glasgow) and Glasgow Museums Resource Centre. At present, I am delighted to be part of the core-team working on the display of British astronaut Tim Peake's Soyuz spacecraft in the Science Museum. I enjoy working with the Science Museum's fantastic history of science and technology collections. I hope that my career-path will allow me to remain in the museum sector, whilst still maintaining a research profile in the history of alchemy and chemistry.

Haileigh Robertson

Read Haileigh's article; 'Re-working seventeenth-century saltpetre' in issue 2 of the latest volume of *Ambix* (63), pp. 145-161.

Franklin-Lavoisier Prize awarded to Professor Lawrence Principe

Professor Lawrence Principe, a Member of the SHAC Council, has been awarded the 2016 Prix Franklin-Lavoisier by the Chemical Heritage Foundation and the Fondation de la Maison de la Chimie in recognition of 'his remarkable contributions to the understanding of the history of the chemical sciences. The prize, consisting of a silver medal and a monetary award, was conferred during a formal ceremony in Paris on 9 November 2016. The Franklin-Lavoisier Prize acknowledges commendable work in the preservation and highlighting of any aspect of our common scientific or industrial heritage in the fields of chemistry and its related applications, the promotion of the history of the chemical and molecular sciences and industries, or the fostering of closer Franco-American ties and the promotion of significant activities in the chemical sciences or industries.



Lawrence M. Principe is the Drew Professor of Humanities at Johns Hopkins University in the Department of History of Science and Technology and the Department of Chemistry. He earned undergraduate degrees in chemistry and in liberal studies at the University of Delaware (1983), a PhD in organic chemistry at Indiana University (1988), and a PhD in history of science at Johns Hopkins University (1996). He currently teaches both history of science and organic chemistry.

Principe's research focuses on the late medieval and early modern periods (1400-1750), with particular emphasis on the history of alchemy/chemistry and the interactions of religion/theology and science. His books include *The Aspiring Adept: Robert Boyle and His Alchemical Quest* (1998) and *Alchemy Tried in the Fire: Starkey, Boyle, and the Fate of Helmontian Chymistry* (coauthored with William R. Newman; Chicago, 2004), winner of the 2005 Pfizer Prize. He has also authored two books for general readership: *The Scientific*



Revolution: A Very Short Introduction (2011) and *The Secrets of Alchemy* (2013), and produced the DVD courses ‘Science and Religion’ and ‘History of Science to 1700’ for the Teaching Company.

Over the past few years Principe’s research has dealt predominantly with chymistry in France during the 17th and 18th centuries. He is now completing a book about the intellectual, theoretical, social, and institutional changes within chymistry at the Parisian Royal Academy of Sciences from 1666 to the 1720s. The book is provisionally entitled *Wilhelm Homberg and the Transmutations of Chymistry at the Académie Royale des Sciences*.

SHAC extends its congratulations to Professor Principe on what is a notable achievement.

Further information about the Franklin-Lavoisier Prize and its awarding to Professor Principe is available at <https://www.chemheritage.org/franklin-lavoisier-prize> and acknowledgement is due the Chemical Heritage Foundation, from whose website this text derives.

Dr Robert G. W. Anderson Named President and CEO of the Chemical Heritage Foundation



In Issue 16 of *Chemical Intelligence* (August 2016), we advised readers of the news that SHAC Chair, Dr Robert G.W. Anderson, had been appointed interim president of the Chemical Heritage Foundation, with effect from 28 July 2016. I am delighted to report that Dr Anderson has since accepted the offer of the post on a substantive basis. Laurie Landeau, Chair of CHF’s Board of Directors, issued the following statement:

‘The process of searching for a new president and CEO took us far afield but in the end we found the perfect person close to home: Robert Anderson, former Director of the British Museum, longtime CHF board member, and internationally recognized historian of science, has agreed to share his knowledge and expertise to lead CHF into the future. We are so fortunate to have Robert step into this role.’ Dr Anderson assumes his new role effective immediately.

Dr Anderson has wide-ranging interests in the history of chemistry, including the history of scientific instrumentation, the work of Joseph Black and Joseph Priestley, the history of museums, and the involvement of the working class in material culture. He has held posts at the Royal Scottish Museum; the Science Museum, London, where he was Keeper of Chemistry; and the National Museums of Scotland, Edinburgh, where he was Director. As Director of the British Museum, London, he presided over the creation of the £110 million Great Court. Dr Anderson is a recipient of numerous awards and honors, including the Dexter Award of the American Chemical

Society and the Paul Bunge Prize, which he was awarded in 2016 for a lifetime of ‘outstanding achievement in writing about and promoting the understanding of historic scientific instruments.’

Robert G. W. Anderson graduated from St John’s College, University of Oxford, and, in addition to the posts listed above, he has held visiting academic posts at the Institute for Advanced Study, Princeton University, and at the Centre for Research in the Arts, Social Sciences, and Humanities at the University of Cambridge (2002–2003). He is an emeritus fellow of Clare Hall, Cambridge, and has served as vice chair of the Chemical Heritage Foundation’s Board of Directors since 2012.

CHF fosters dialogue on science and technology in society. Our staff and fellows study the past in order to understand the present and inform the future. We focus on matter and materials and their effects on our modern world in territory ranging from the physical sciences and industries, through the chemical sciences and engineering, to the life sciences and technologies. We collect, preserve, and exhibit historical artifacts; engage communities of scientists and engineers; and tell the stories of the people behind breakthroughs and innovations.

For more information about Dr Anderson’s appointment and about the CHF in general, please visit: <https://www.chemheritage.org/news/january-11-2017-211pm/robert-g-w-anderson-named-president-of-chemical-heritage-foundation> We acknowledge our appreciation of the CHF for providing much of the text for this item.

REPORTS

SHAC New Scholar Awards

Anna M. Gielas

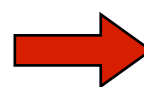
University of St Andrews, Scotland

The New Scholar Award enabled me to carry out research in Berlin. Here, I studied the correspondence of Lorenz Crell (1744-1816), the founder of the first chemical journal, the *Chemisches Journal* (1778) as well as the renowned *Chemische Annalen* (1784-1804). For historians of chemistry, Crell’s periodicals are a notably rich and valuable source due to the fact that (leading) men of science published their newest findings as well as theories on Crell’s pages.

Despite Crell’s omnipresence in scholarly research, we know surprisingly little about his periodicals. The commonly quoted source on his journals is a chapter in Karl Hufbauer’s book on *The Formation of the German Chemical Community (1720-1795)* (1982).

I located about eighty letters written by Crell between 1777 and 1785 at the Staatsbibliothek zu Berlin and used the New Scholars Award for an introductory study of this important correspondence which Hufbauer did not include in his work.

The two aspects which make this correspondence particularly interesting to me as a historian are the facts that (1) they cover the crucial period in Crell’s editorial life: he published his first chemical journal in 1778 and his *Chemische Annalen*, in 1784; moreover, (2) all letters are addressed to the same person, namely Friedrich Nicolai (1733 – 1811), a leading



thinker and publisher of the German Enlightenment. Since the other ca. 40 surviving letters of Crell address different men of science, they prevented me from studying continuities as well as disruptions and developments in Crell's editorial undertaking. Therefore, the correspondence at the Staatsbibliothek has been particularly intriguing to me.

The New Scholar Award allowed me to engage with the letters for ten days. Likely the most interesting observation I made is Crell's strategic way of using Nicolai's infrastructure of social networks, knowledge, and logistics to foster his chemical journal. Put differently, the Crell-Nicolai-correspondence provides a vivid illustration (individual case study) of how the Enlightenment 'enabled' chemical research. From the very beginning in 1777, when Crell was but an obscure professor of medicine at the University of Helmstedt, his links to Nicolai proved most useful. They, for example, allowed him to approach and quickly recruit notable chemists as authors for his publication, including Johann Christian Wiegleb (1732–1800) und Johann Friedrich Götting (1753–1809).

I will use the findings from my research in Berlin to pen an article and plan to submit it for publication in *Ambix* next year.

I wish to thank the Society for the History of Alchemy and Chemistry for its generous support of my research and hope to shed light on Crell as an architect of chemical research.

Anna Gielas, amg23@st-andrews.ac.uk

SHAC Autumn Meeting and AGM

Royal Institution, 21 Albemarle Street, London, W15 4BS

12 November 2016

The SHAC Autumn Meeting had an open theme, which attracted a diverse and fascinating range of papers for the audience, at this well-supported event, to enjoy. First to present was **John Christie (Oxford)**, whose paper examined 'Joseph Priestley and the Politics of Nitrous Air Eudiometry'. The eudiometer, John explained, was a tube for collecting gas over water, its employment enabling chemists to demonstrate a counter-intuitive phenomenon: when two gases were mixed over water, the resulting mixture was less than twice their volume. Priestley's experiment was named the 'nitrous air test', but he was really demonstrating phlogiston; showing gas devouring gas to reduce its volume.

As indicated by the title of the paper, however, Priestley's adoption of phlogistic philosophy was charged with political meaning, as evidenced by a cartoon John displayed to reveal the apocalyptic subtext to the science. The Bishops Bench in the House of Lords are depicted as an obstruction to the progress of science; the Pope as the antichrist; and Priestley's very breath is withering a passing angel. Priestley was a dissenter and, like Newton and Locke, he had to be circumspect with regard to expressing post or anti-trinitarian beliefs.



John ably demonstrated, nonetheless, that philosophers of this generation interweaved their chemistry with radical political and religious meaning and analogy.

In 'Science or Art: Pharmacy in 19th Century England and Austria', **Tobias Schoenwitz (Cambridge)** traced the progression of pharmacy as a profession from the late eighteenth to the nineteenth centuries, charting the rise in status of pharmacists as they formed closer connections with chemists and chemistry. In charting the landmarks against which the advancements could be measured, Tobias revealed too that, despite the conservative backlash in the post French Revolution era of Metternich, chemistry as a discipline had continued to progress. Institutional advancements in the teaching of chemistry, and linking this to medical education, led eventually to the recognition that chemistry was both theoretical and practical.

In England, the *Apothecaries Act*, 1815, regulated the apothecaries in their new medical role, elevating them above the unregulated chemists and druggists and creating the professional chemist. Inherent to this were the strict educational requirements of the Pharmaceutical Society, which was formed in England in 1841. Tobias evidenced, therefore, how in both Austria and England, pharmacy achieved professional status by being recognised as a branch of chemistry, by setting a rigorous educational standard and through regulation.

Steven Turner (Washington DC) turned to geology in his paper 'Spectacle and Vision in 19th Century English Chemistry'. Starting with Humphry Davy, who had applied his learning to lectures on geology, Steven described the fashionable demand for models of volcanos that emerged to accompany such public presentations. Sir William Hamilton had given a description of volcanos and to satisfy their audience, some lecturers burnt sulphur and introduced sound effects, while lighting might be added for further dramatic effect. The purpose for which Davy used his models, however, was to illustrate what was happening scientifically during an eruption. Henry Cavendish had demonstrated the likelihood of the Earth having a metallic core and analysis by James Smithson in 1813 of sample erupted material from Vesuvius had found metals and minerals. Smithson concluded that the Earth must at one time have been in a state of continual combustion.

Steven focused the latter part of his paper on the Swiss philosopher, Jean Andre De Luc (1727-1817), describing how his access to the English Court sanctioned his attack on Davy and his subsequent targeting of Smithson. A devoutly religious protestant, De Luc mounted a conservative opposition to Smithson's chemical geology. In doing so, Steven concluded, he and his colleagues managed to delay the progress in this field that men like Cavendish, Davy and Smithson had initiated.

William Brock, by reference to Roberts and Mackie's *Biographical Database of the British Chemical Community, 1880-1970*: <http://www.open.ac.uk/ou5/Arts/chemists/publications.htm>, chose to examine one of the foot-soldiers of chemistry in his paper: 'The Fortunes of Robert Hunter, a Younger Rival of Christopher Ingold'. Hunter (1904-1963) is an example of the many ordinary chemists who, because they achieved no major breakthroughs or patents, have been totally overlooked by historians of chemistry. Nonetheless, the career patterns and fortunes of these lesser known chemists merit closer study and Bill started by presenting a brief chronology of Hunter's working life, which was spent in both academic posts and in industry. Of particular interest was his chemical journalism and contributions to *Chemical News*, an activity he started while an undergraduate at Imperial College, London. *Chemical News*



was a failing publication, which subsequently folded, and the articles Hunter sent detailing his research were, Bill admitted, totally unsuited to the readership.

In addressing the invisibility of the ordinary chemist, Bill posited the view that Hunter might have rivaled Christopher Ingold and was seeking to explore whether factors could be identified that determined who became a celebrated chemist and who remained obscure. Hunter had displayed academic excellence; he had held academic positions in prestigious universities at home and abroad, having access to state-of-the art laboratory facilities; he had worked in industry; his lectures had been published, with a foreword by Ingold, in *The Electronic Theory of Valency*, (London: 1934); and he had worked as a biochemist at the London School of Tropical Medicine. But was this brilliant experimental chemist, with a sound knowledge of the ideas surrounding the electronic theories of the 1920s, on a par with Ingold? He was not a Fellow of the Royal Society; he failed to gain the chemistry Chair at Imperial College in 1938, which scuppered his academic career and, in a pattern observed by Roberts and Mackie, he moved between academic and industry posts, with periods abroad. These, Bill concluded, may be factors that determine the invisibility of the ordinary chemist.

The final presentation of a packed morning schedule, ‘Astonishing Transformations’, came from **Simon Werrett (UCL)**, who spoke about the *Situating Chemistry* project, which was started by John Perkins (Oxford Brookes) and Lissa Roberts (Twente). Simon explained that he had assumed the editing of a book related to the project, covering the period 1760--1840, which identifies chemistry with major progress in innovation-driven change. The book, which considers chemistry from the perspective of Materials, Production and Governance, aims to highlight the evolutionary rather than the revolutionary nature of industrial development and agricultural improvement.

Simon emphasised that during this period of incremental change, chemistry was a field central to many others. Historians of chemistry, he said, have talked little about the materiality of chemistry and this subject is something the book will address, examining the evidence uncovered by archaeologists and explored through the contemporary concept of socio-materiality. Laboratories set up in domestic settings, in which chemical practitioners used and adapted for use their household goods and furnishings represent an untapped source of information for historians, shedding new light on developments and practices.

In a final section, Simon used the example of coal to evidence how, by analysing the materiality of chemistry, historians are able to identify a much wider range of applications for substances and for the instruments and equipment used in their processing. The narrow focus on coal as an energy source, traditional in historical accounts, can through material approaches be replaced by an expansive view of coal as a feature of public health; as having medical uses; as a source of new airs and gases; and as a material used in innovative fumigation machines.

The afternoon session started with a paper from **Edwin Rose (Cambridge)** looking at the ‘Late 18th Century Reception of Joseph Black’s Discovery of Fixed Air’. Edwin sought, with this paper, to redress the emphasis traditionally placed by historians on the environment and conditions under which Black (1728-1799) conducted his research by focusing instead on the reception of his work. His starting point was to consider the use of Black’s work in the teaching and experimental demonstrations of John Hadley (1731-1764) at Trinity College, Cambridge. David MacBride offered his own system with regard to fixed air in his



Experimental Essays, having suggested that Black's was merely a replication, illustrating the experiments of Stephen Hales. Black dismissed MacBrides method as ill founded.

In charting the influence of Black, Edwin cited the work of Cavendish, who experimented with keeping fixed air in mercury, and Daniel Rutherford (1749-1819), who attended Black's lectures and went on to discover noxious air. Joseph Priestley (1733-1804) replicated Black's experiments on gases and credited him with the discovery of calciferous substances containing fixed air. Lavoisier also used Black's experiments and credited him with the discovery of fixed air. Experimenting with fixed air, Lavoisier noted that substances, such as sulphur, gained weight when burned, and he initially attributed this to the absorption of fixed air. On the evidence presented, it was apparent that Black's work was widely received and proved influential in developing knowledge and understanding of the chemical composition of air.

Focusing on a chemist Steven Turner had cited earlier for his analysis of volcanic material, **Steven Irish (Cambridge)** presented his paper on 'Calamines and Crystallography: Chemical Combination in the Work of James Smithson'. In a paper entitled 'A Chemical Analysis of Some Calamines' (1803), Smithson (1765- 1829) had distinguished three species of calamine, the non-sulphurous ores of zinc. His mineralogy was informed by crystallography and, although the published paper may not have offered sufficient evidence for the context of his reasoning, Steven wanted in his paper to argue that the text was fundamentally about chemical combination.

Having presented a brief biography of Smithson, Steven proceeded to identify as his key influences the French mineralogists and crystallographers Jean Baptiste Romé de l'Isle (1736-1790) and René Just Haüy (1743-1822), the latter of whom suggested that mineral crystals could be distinguished by six basic primitive forms that might be combined to form various gross structures. Minerals existed as species and therefore the distinctions by which they were classified should have a chemical basis. In addition to Romé de l'Isle and Haüy, other scientists contributing to the development of chemical mineralogy included Torbern Bergman (1735-1784), Richard Kirwan (1733-1812), Bertrand Pelletier (1761-1797) and Balthazar Georges Sage (1740-1824). Smithson experimented using calamine in the process to make brass, an alloy of copper and zinc. His emphasis, therefore, was less on analysing the chemical composition of minerals and more on developing his understanding of the crystalline structure of calciferous ores to inform chemical chemical combination.

Karoliina Pulkkinen (Cambridge) chose to examine in her paper; 'What classification of Chemical Elements Can Teach Us on Epistemic Values', the impact of values in science, arguing that differences in the stress placed on accuracy, completeness and simplicity would be influential in determining the classification of chemical elements. In order to explore this thesis, she considered examples from each of the three categories, starting with Julius Lothar Mayer (1830-1895), who emphasised accuracy over the other values in constructing his periodic table. John Newlands (1837-1898), on the other hand, stressed simplicity, privileging numerical neatness and employing ordinal numbers rather than measured values in his table of elements. Dmitri Mendeleev (1834-1907) provided an example in which emphasis was placed on completeness, all elements discovered at the time being included in his periodic table and rows of compounds being integrated into the classification. Mendeleev also considered the qualitative properties of the elements.

Karoliina suggested that these variations in conceptual values had implications for



philosophers of science and raised a number of interesting questions. Why, for instance, were certain failures of completeness tolerated and others not? What if properties have not been determined by careful and accurate observations? What if the considerations upon which classification is based are too narrow? And what about the possibility of other elements entering the field? These issues have significance and account needs to be taken of the impact of epistemic values when considering the basis upon which chemical elements have been classified.

Revisiting the Situating Chemistry project discussed earlier by Simon Werrett, **Michael Jewess** offered a significant warning to those whose research interests rely on locating sites and addresses in London, especially prior to 1857. In his presentation; ‘History of Science Sites: Beware of the Great London Street Re-naming’, Michael drew attention to the impact of *The Metropolis Local Management Act, 1855*, which saw a significant rationalisation of street names across what is now central London between the period 1857-1945. Over the centuries a problem had arisen with regard to the duplication of street names and, in some cases, the same name had been used on multiple occasions. At one time there were, for instance, approximately forty Charles Streets, the number now having been reduced to just one. Indeed, prior to the Act of 1855, it had become difficult for postmen to deliver mail.

Among the sites affected by the great renaming, so that finding them would be difficult but for their continuous fame since the nineteenth century (and but for plaques that have been erected), are the Broad Street pump responsible for the Soho cholera epidemic of 1854 and, in Marylebone, Michael Faraday’s place of apprenticeship as a bookbinder 1805-1812. But, in general, the researcher was recommended to use the following sources to locate sites he or she is dealing with: (1) *London. 1852, Drawn & Engraved Expressly for the Post Office Directory by B R Davies* (viewable online on the British Library website), which precisely locates streets as they were before the renaming; and (2) a 4984-page e-book, Bruce Hunt, *Bruce’s List of London Street Name Changes*, 2nd ed., 2013 (available from <http://www.maps.thehunthouse.com>).

The capital city remained the location in focus as **Edward Werner Cook (New York)** presented his paper; ‘August Wilhelm Hofmann in London’. This paper examined the phenomenon of the privately funded institution for the study of chemistry, starting with the independent laboratory that Justus von Liebig (1803-1873) had established in Giessen in 1826, when the Senate had denied his request to create an institute of pharmacy based in the university itself. Liebig’s laboratory gained international renown and there was a groundswell of interest in his agricultural chemistry. He was asked by Albert, Prince Consort to Queen Victoria to come to London to promote the advancement of chemistry in Britain, but he declined the invitation, leaving the opportunity to be taken up by his student, Hofmann (1818-1892).

Hofmann became the director of the Royal College of Chemistry in 1845, modeling the institute on Liebig’s laboratory in Giessen and relying for funding on donations from private sources and the patronage of Prince Albert. The College’s students were not awarded degrees, but merely received a certificate of attendance. Hofmann was looking ahead, however, to a time when chemistry could move beyond being solely analytical and could begin to synthesise organic compounds. The unexpected death of Albert in 1861 eventually persuaded Hofmann to return to Germany, where he had already been the consultant designer for new laboratories in Bonn and Berlin. In April 1865 he delivered a valedictory evening discourse at the Royal Institution, entitled “On the combining power of atoms”. With HRH Prince of Wales in the Chair, Hofmann lectured on the combining power of atoms, using painted table croquet balls as a two-dimensional model denoting different atoms.

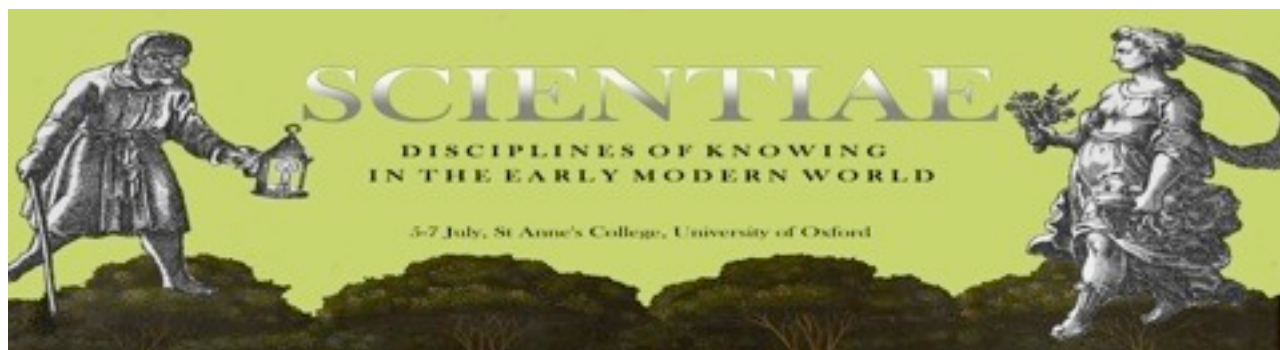
The final paper of the day was presented by **Will Scott (Cambridge)**, who spoke on ‘The Electron in Early 20th Century Organic Chemistry’. His focus was the period 1916-1926, the start date being the year in which Gilbert Lewis (1875-1946) had published his seminal paper describing the rule of eight, which holds that a molecule is most stable when it shares electrons. He contrasted this model with the instability of molecules with an uneven number of electrons. The rule of eight suggested that a chemical bond is a pair of electrons shared jointly by one atom, which Lewis depicted using dots to represent the pairs of electrons shared between atoms.

The theory of the shared electron-pair was revived and elaborated by Irving Langmuir (1881-1957) in 1919 in an article; ‘the Arrangement of Electrons in Atoms and Molecules’ and became known as the Lewis-Langmuir theory. Lewis’ evidence for the phenomena of electron pairing was circumstantial and the English organic chemist Sir Robert Robinson (1886-1975) focused on Langmuir’s, rather than Lewis’ works. Lewis and Robinson disagreed about the model for bonds, but many of Robinson’s ideas were assumed by Christopher Ingold, although he disagreed with Robinson’s theoretical model of electronic structures and developed his own models for his work on reaction mechanisms.

Will’s paper brought to an end a packed programme of stimulating papers on a broad range of topics within the history of chemistry.

Judith Mawer, Goldsmiths University of London

Other Reports



Scientiae

St Anne's College, Oxford

5-7 July 2016

Scientiae is an international conference organised every year by an international research group situated at the nexus of Renaissance/early modern intellectual history and history/philosophy of science. The *Scientiae* conference is targeted at scholars of early modern intellectual culture, whose research finds a focal point in issues relating to the period’s emergence of modern natural science. The conference alternates every year between North America, UK and continental Europe, and previous locations have included University of Toronto, University of Warwick and University of Vienna. For more information please see *Scientiae*’s website at <http://scientiae.co.uk/>.



For its 5-year anniversary session in 2016, *Scientiae* was organised between 5 and 7 July (3 full days) at St Anne's College, University of Oxford. The conference's lead convenor was Dr Georgiana (Jo) Hedesan (Oxford), with the support of Prof Howard Hotson as senior adviser. The conference benefited from the assistance of Karen Hollewand (Oxford) and Kees-Jan Schilt (Sussex/Oxford), and the contribution of three postgraduate assistants, Celine Shepherd, Philippa Machin and Christy Ford (Oxford). Logistical support was also provided by the staff of St Anne's College, the staff of the Oxford University Online Store, as well as members of the History Faculty.



Scientiae is mainly self-financed by conference fees. Nevertheless, the Oxford conference benefited from important funding from the Oxford's Fell Fund and MEHRC, as well as from financing provided by the British Society of the History of Science (BSHS) and the Society for the History of Alchemy and Chemistry (SHAC). This allowed the provision of a total of 34 bursaries dedicated to postgraduate students and early career researchers.

With 210 participants, *Scientiae* Oxford was by far the biggest *Scientiae* conference yet. Presenters came from across UK, Europe, and North America, but also from India, Japan, New Zealand, and Australia, turning *Scientiae* in a truly international festival of early modern knowledge. There were five parallel sessions taking place in conference rooms across St Anne's. Although panels were the preferred mode of presenting, *Scientiae* Oxford also featured, for the first time, two workshops. A number of roundtables were also organised, as well as a hybrid session on digital humanities.

Three plenary speeches were organised in the St Anne's Mary Ogilvie Lecture Theatre in each of the three conference days. The first was given by Professor Martin Kemp (Oxford) and entitled 'Mona Lisa: Leonardo's Quest for a Universal Picture'. By delving into Leonardo's theories of vision and light, of earth formation and change, of his underlying microcosm-macrocosm association, Professor Kemp was able to show how elements of these were brought into the Mona Lisa painting. This allowed Kemp to argue persuasively that Mona Lisa represented an emblem of the 'universal science' Leonardo attempted to develop.





The second plenary speech was given by Professor Wouter J. Hanegraaff (Amsterdam) on the subject of ‘What Happens When Historians Imagine the Occult?’. Hanegraaff investigated the historiography of esoteric studies, such as contemporary attempts at providing a framework for the scholarly analysis of esoteric disciplines. Hanegraaff observed how the writings of pioneer western esotericism scholars were essentially imaginative accounts with little base in reality. Hanegraaff concluded by challenging scholars to write poetic but factual narratives about the history of imagination.

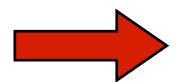
Finally, the third plenary speech was provided by Professor Tara Nummedal (Brown), on ‘Alchemical Bodies: Transmutations of Self and Substance’. Professor Nummedal presented the fascinating case of Anna Zieglerin, a prophetess and alchemist whose story proved the existence of a particularly heady mix of prophecy, apocalypticism and alchemy in the early modern period. Anna and her followers believed that her body had been alchemically transmuted by the tincture and could impart perfection onto others as well. Professor Nummedal convincingly argued that studying the link between alchemy and bodies and embodiment could be a new avenue of research in the historiography of alchemy.



The case of Zieglerin made a particular impression on the audience, resulted in a very lively question and answer session. As one later commented in the feedback form, ‘who would have guessed there was a female alchemist with such a colorful story’!

Apart from these keynotes, *Scientiae* participants also benefited from a lively presentation by Professor Howard Hotson (Oxford), which focussed on the surviving seventeenth-century Oxford architecture. Professor Hotson piqued the audience’s interest by showing how much the current Oxford owes to seventeenth-century developments, such as the founding of the Ashmolean (the current Museum for the History of Science) or the construction of the Sheldonian.

Other highlights of *Scientiae* included the three free tours of the Museum of the History of Science, kindly offered by the staff of MHS (Silke Ackermann and Stephen Johnston), the two workshops given by Cheryl Periton (Saint Mary’s College / Canterbury Christ Church) on medieval counting techniques, and by Samuel Gessner, Janine Rogers and Stephen Johnston on astrolabes, the welcome reception and the conference dinner.





The panels and presentations featured a wide variety of subjects and topics. Strongly represented subjects were the humanities, alchemy, demonology, medicine, philosophy and literature, but there were many more strands of knowledge represented at the conference, including mining practices and early modern views of extraterrestrials. Amongst other things, participants learned about fascinating topics from demonic haircuts, to viper wine, Bombay

wizards, amputation techniques used in Shakespearean theatre, miracles in the Ming empire, and the 200 books written by Girolamo Cardano!

Alchemy was a particularly well represented topic. This strong showing was due to a combination of factors: SHAC's sponsorship, the vibrancy of the alchemy scholarly community, the fact that the 'Alchemy, Universal Medicine and Prolongation of Life' workshop took place one day before *Scientiae*, and the convenor's biased scholarly inclinations. There were five sessions on alchemy or alchemical topics, such as 'Seventeenth Century Alchemy' chaired by Tara Nummedal (Brown), which included presentations by Rafał Prinke on a seventeenth-century project for an alchemical society, Judith Mawer on religion and chymistry, and Mike Zuber on alchemical manuscripts, patronage and correspondence at the end of the seventeenth century. Other relevant sessions were: 'Continuity and Change: Theories of Matter in Early Modern Medicine', chaired by Joel Klein (Columbia), featuring presentations by Elisabeth Moreau (Brussels/Nijmegen), Joel A. Klein (Columbia), and Georgiana Hedesan (Oxford), 'Thinking with Images', chaired by Jennifer Rampling (Princeton), with Alexandra Marraccini (Chicago), Giulia Martina Weston (Courtauld London), Rebecca Whiteley (UCL), 'Alchemy and Religious Orders in Early Modern Italy', chaired by Andrew Campbell (UCL), with Neil Tarrant (Edinburgh), Andrew Campbell (UCL), Lorenza Gianfrancesco (Goldsmiths, London), 'Practicing Medicine in Early Modern Europe', chaired by Georgiana Hedesan (Oxford), featuring Michael Stolberg (Würzburg), Tillmann Taape (Cambridge), Allen Shotwell (Ivy Tech Community College), and Katherine Allen (Oxford).

Scientiae Oxford had a strong presence on Twitter, with many delegates tweeting summaries or commentaries on the hashtag #Scientiae2016. Despite our best efforts, the hashtag did not manage to reach trending status, but surely that was only because the Chilcot Report on Tony Blair's Iraq war happened to be issued during the same period. We will try harder next time. Feedback was overwhelmingly good, the conference being rated 9 and 10 out of 10 by 71.4% of respondents. Remarkably, no one has rated the conference below 6. Respondents praised the lively atmosphere, the intellectual quality, the registration process, the flow of information, the food and the events on offer.

Report compiled by Jo Hedesan (Oxford)

‘Pseudo-Paracelsus: Alchemy and Forgery in Early Modern Medicine and Natural Philosophy’, organised by Didier Kahn and Hiro Hirai

Villa Vigoni, Italy

25-28 July 2016

As explained in the last issue of *Chemical Intelligence*, the production of forgeries under Paracelsus’s name was an integral part of the diffusion of Paracelsianism. Many of those forgeries were extremely influential in the fields of medicine and “chymistry” (alchemy/chemistry), but also in cosmology, anthropology, theology and magic. Some of these texts were long considered authentic although the circumstances of their genesis are unknown. Their authors, the date of their first attribution to Paracelsus and their connection to his genuine works have yet to be studied, shedding more light, reciprocally, upon the latter’s internal chronology and manuscript circulation. That was the aim of this conference, held at the magnificent Villa Vigoni overlooking beautiful Lake Como in Italy, over two and a half days.

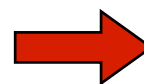
The programme included thirteen papers and three small workshops. Jennifer Rampling (Princeton) provided valuable background by presenting the criteria which led medieval alchemists to elaborate pseudepigraphic *corpora*. Following upon her remarks on Paracelsus, Dane T. Daniel (Wright State) showed the significance of theological criteria in classifying authentic and fake, as exemplified by the case of the *Astronomia magna*.

Paracelsus’s *Archidoxis* (ca. 1525) served as a starting point of several forgeries. Georgiana Hedesan (Oxford) showed how its alleged tenth book, *Clavis* (first published in 1624), emerged from the puzzling textual tradition of the treatise. Jiří Michalík (Olomouc) traced the origins of the spurious *Archidoxis magica* back to medieval magic, by showing its connection to the famous *Picatrix*.

Elisabeth Moreau (Brussels) examined how Petrus Severinus and Daniel Sennert interpreted the matter theory expounded in the *Philosophia ad Athenienses*: the former in a Platonic, the latter in an Aristotelian and atomistic dimension. Didier Kahn (Paris) analysed the first edition of the same text, revealing its models in Paracelsus’s genuine works and Renaissance Platonism as well.

Charles Gunnoe (Aquinas College) featured the *De pestilitate* by systematically comparing it with Paracelsus’s authentic works on plague. Hiro Hirai (Radboud) contextualized the first appearance of the *De natura rerum* (1572) in publishing history.

As one of two ongoing editorial projects on pseudo-Paracelsian transmutative alchemy, Tobias Bulang (Heidelberg) offered an overview of the issues emerging from the *Aurora philosophorum*. Kathrin Pfister (Heidelberg), in her turn, explained the principles of her coedition with Julian Paulus of the *De tinctura physicorum*. Amadeo Murase (Seigakuin) addressed the prophetizing image of Paracelsus provided by the latter treatise.



In connection with those Paracelsian forgeries, Lawrence Principe (Johns Hopkins) examined the genesis of the corpus attributed to Basilius Valentinus by identifying three phases in its growth and transformation up to the late 17th century. Claude Rétat (Paris) illustrated Paracelsus's presence in the work of a 19th-century French masonic figure, Jean-Marie Ragon.

Three workshops were devoted to: 1) the textual problems of the uncreated matter in Paracelsus; 2) a digitization project of Paracelsus' works, which probably faces too many challenges for the present times; and 3) the publication of the conference proceedings along with the scope of further research and meetings.

Didier Kahn (Paris)

7th SHAC Postgraduate Workshop: 'Colouring and Making in Alchemy and Chemistry'

Utrecht University

26 October 2016

As reported in the article on pages 7 & 8 above, this year's postgraduate workshop, organised by SHAC student representative, Mike Zuber, took place at Utrecht University and attracted the maximum thirty participants, which was an excellent response. Mike started the workshop with a brief opening address, welcoming participants and introducing the theme and format for the day. The History of Chemistry panel then commenced.



Amélie Bonney (Oxford) presented a well-received paper on ‘Creating Toxic Colours: Explosions, Poisoning and Occupational Hazards in the French and British Colour Industry, 1800–1914’. She explored three case studies in which colours made using chemical substances and methods were also found to pose risks for manufacturers as well as consumers: arsenic green, fuchsine and picric acid. Arsenic green, for instance, was widely used for wallpapers before its toxic properties became generally known, but occupational diseases, as well as environmental pollution and the death of locals around production sites noted in the 1830s, caused customers to favour other shades of green instead. In the ensuing discussion, many questions returned to this fascinating example.



Victor de Seauve (Paris, Muséum national d’histoire naturelle) was next to take the

stage and spoke on ‘Edmond Becquerel’s First Colour Photographs: Monitoring the Evolution of Colours’. In the course of his PhD project, De Seauve is reproducing the methods employed by Becquerel in 1848 for his photochromatic images on silver plates. As he explained during the discussion, these images still exist but they are extraordinarily sensitive to light and cannot be viewed for conservational reasons. De Seauve’s project is chiefly concerned with understanding the physicochemical nature of the colours captured using Becquerel’s method, but in order to study them, he needs to be able to reliably reproduce specific colours, one among many difficulties faced by researchers who work by reproducing historical processes.



Following a vivid discussion moderated by **Brigitte van Tiggelen (Chemical Heritage Foundation)**, **Ernst Homburg (Maastricht)** delivered the workshop’s first keynote lecture, ‘From Phosphorus to Magenta: Colour in Chemical Science and Industry, 1680–1860’, from the early days of the Royal Society to industrial France. The bright light of phosphorus and the hue of magenta as the first successful aniline dye form the beginning and end of Homburg’s account, while also drawing attention to the vastly different, sometimes incommensurable understandings of colour. These include the traditional understanding of colours as essential, primary attributes rather than accidental and secondary; Isaac Newton’s prism experiments; contemporary colour printing using mixtures of CMYK (cyan, magenta, yellow, black); artists’ non-verbal expertise in recognizing, making and using colours. Homburg



insistently drew attention to the enormous complexity of colour and its problematic relation to chemistry, which remains insufficiently understood.



After a formal discussion, there remained much food for debate during the lunch break. Moderated by **Marlise Rijks (Leiden)**, the History of Alchemy Panel started with **Vincenzo Carlotta (Berlin, Humboldt-Universität)**, whose talk took us back to antiquity. Drawing on his new edition and translation of the *Dialogue of the Philosophers and Cleopatra* (to be published by SHAC as part of the series ‘Sources of Alchemy and Chemistry’), Carlotta wrestled with the arcane vocabulary of this pseudepigraphic text. In contrast to earlier research, which highlighted the religious dimension of the text, Carlotta drew attention to its theoretical and practical contributions on metallic transmutation.

Based on research conducted in connection with ‘The Making and Knowing Project’ at Columbia University, **Kathryn Kremnitzer** and **Siddhartha V. Shah** presented on their replication of historical recipes for making emerald. Initial attempts failed miserably, but after a number of trials they succeeded in making emerald. Kremnitzer and Shah expanded on the implications of their findings by drawing on their expertise in art history. In particular, they pointed out that it would be mistaken to project modern attitudes about man-made gemstones – often called fake – back into the past. Many priceless relics and works of art include genuine and imitation gemstones, so attitudes towards the latter were likely to be very different from what we would assume: the knowledge and ability that flows into the creation of precious stones may even have rendered them more precious than natural ones that merely need to be found.



Lastly, **Thijs Hagendijk** presented his research on a manuscript written in the hand of the Antwerp apothecary and botanist Peeter van Coudenberghe (ca. 1525–after 1590). He particularly focused on two azure recipes that betray hints of alchemical theory. He argued that these would not have yielded a blue pigment; instead they seem to point at transmutational theory as underlying the manufacture of colours. Departing from the example of Coudenberghe’s recipe collection, participants discussed how exactly such collections were formed and whether they were actually used in practice. Suggestions ranged from the view that the recipes led a solely bookish existence with hardly any ties to actual practice to the suggestion that they could be documents created throughout the course of years of apprenticeship. The History of Alchemy Panel thus concluded with a vigorous discussion.

For the second keynote lecture, **Tara Nummedal (Brown)** drew on her extensive research on German manuscripts. As her title suggested, she portrayed ‘Early-Modern Alchemy as the Art of Colour’, specifically by studying the manuscript reports Andreas Orthelius (fl. 1630) wrote for the benefit of his patron, Elector Johann Georg I of Saxony (1585–1656). Over the course of several years, Orthelius pursued an alchemical experiment and vividly described the spectacle of colours he and other courtiers witnessed throughout its duration. Orthelius’ experiment appears as a private, slow-motion spectacle. For alchemists pursuing the great work of transmutation, colours played an important role as indicators that the process was unfolding as desired. Nummedal concluded by comparing the role of colours in alchemy to the one they played in the widespread medical practice of uroscopy. Ironically, as both chryopoeia and uroscopy eventually found themselves discredited, painters even combined the two in genre paintings of the alchemist.



To close proceedings, **Prof. Sven Dupré** – the head of the ARTECHNE research group – moderated a concluding discussion and challenged participants to conceive of a large-scale history of colours and their production. But after a long day packed with stimulating presentations, processing the information and digesting earlier discussions seemed like enough of a challenge to most. Nevertheless, one can only hope that Dupré’s input and the pronounced interdisciplinarity of the workshop as whole will encourage researchers to be ambitious and become collaborative on a scale that remains rare in the humanities.

Mike Zuber, University of Amsterdam



14th Meeting Catalan Society for the History of Technology and Science (SCHCT)

Castelló de la Plana (Community of Valencia, Spain)

27-29 October 2016

The 14th Meeting for the History of Science and Technology was held in Castelló de la Plana (Community of Valencia, Spain) from the 27th to the 29th of October. The conference was organised by the Catalan Society for the History of Technology and Science (SCHCT) - possibly the most active group of historians of science in Spain - that this year celebrates its 25th anniversary. The SCHCT also organises every year seminar series on different history of science topics in Valencia, Barcelona and Vic, as well as an international spring school in Menorca every two years.

History of chemistry was widely discussed in different sessions, such as the one focused on science teachers (coordinated by **María Rosa Muñoz Bello**), or the session entitled 'Toxic products (1800-2000)' (coordinated by **José R. Bertomeu** and **Ximo Guillem Llobat**), which studied the role played by both experts and activists in the control and regulation of different toxics, from radioactive products, poisons or drugs to pesticides or plastic industries in the last two centuries. This conference also included an opening plenary lecture by **Ignacio Suay-Matallana (CIUHCT)** entitled 'Sites, experts and regulation: customs laboratories and merchandise controls (1880-1930)', a key-note plenary lecture by **Naomi Oreskes (Harvard University)** entitled 'The place of history of science in current affairs', and a closing plenary lecture by **Carolyn Smith** entitled 'Sick people, users and medical pluralism: What history of the patient offers to history of medicine in Early Modern Spain?' The conference was attended by almost 150 STM historians, as well as science teachers, students, and the general public. Furthermore, many of them enjoyed a cultural visit to the secondary school Francisco de Ribalta, which preserved (thanks to the effort of their teachers) an excellent collection of natural history, physics and chemistry instruments, enriched since its creation in 1846. It is expected that some of the papers presented during the conference will be published at the journal *Actes d'Història de la Ciència i de la Tècnica*, which has been published by the SCHCT since 2008.

Ignacio Suay-Matallana, Interuniversity Center for the History of Science and Technology (CIUHCT, Lisbon)

Artificial Catastrophes: Seminar and Cinema Series

Institute for the History of Medicine and Science, Valencia (Spain)

November 2016

The 'Artificial Catastrophes' seminar series took place during November 2016 at the [Institute for the History of Medicine and Science](#) (University of Valencia). It included three talks and three movies: all of them were related to nuclear and chemical disasters during the second half of the 20th century. **John Howard**, author of the photo-book, *White*



Sepulchres (<http://puv.uv.es/white-sepulchres.html>), described the consequences of the atomic bombs dropped 50 years ago in Palomares (Spain) due to an aircraft crash. Using a broad range of sources, some of them recently disclosed by the USA government, Howard reviewed the control of the information by means of both censorship and propaganda (for instance, the famous pictures of the Spanish Minister swimming in the Mediterranean sea with the American ambassador). The combination of military top secrecy, the Franco dictatorship and the Cold War was decisive in the invisibility of ‘the worst nuclear weapons accident in history’. And yet a reduced but creative group of American cartoonists could publish some corrosive images alerting the American (but not the Spanish) public to this episode, which involved nuclear contamination in a populated area. All these ingredients shaped the politics of compensation, which were made at the individual level by placing the burden of proof on the victims.

Similar procedures were followed in the well-known Bhopal chemical disaster, in which victims were classified according different categories of compensation, after being required to provide the necessary proofs. The different civil and criminal legal processes were marked by bureaucratic errors, neglected scientific investigation, mistrust, fraud and unfairness. These were the main topics of the talk by **Bridget Hanna**, who is preparing a book based on her dissertation ‘Toxic Relief: Science, Medicine and Uncertainty after Bhopal’. Among other issues, she analysed the limited scope of the epidemiological studies conducted by the Indian Council of Medical Research. Relying on a large number of interviews, she discussed the failures of medical treatments and the many illness narratives.

Oral history was also at the center of the talk by **Timothy Cooper** on the most famous oil spill accident in Britain: the Torrey Canyon disaster of 1967, which has been regarded as a turning-point in the emergence of the British environmental movement. The interviews made by Cooper offer a more nuanced picture by incorporating the voice of the working-class victims, whose concerns were very different from organised environmental groups. Like the Cumbrian farmers studied by Brian Wynne after Chernobyl, fishermen in Cornwall could challenge the reports of governmental experts by providing their local experience-based knowledge concerning tides and weather. This ‘everyday environmentalism’, which emerged from economically disadvantaged communities, was not always consequent and coherent, but it offered resources for critical responses to the disaster and resilience.

All in all, the three talks provided reviews of the blooming historical studies on toxic disasters. The authors covered a broad range of actors, scenarios and methodological issues. The talks were complemented by several movies, starting with the most recent Indian movie on Bhopal (*A Prayer for Rain*, Ravi Kumar, 2014). The other two movies were the famous *Darwin Nightmare* (an award-winning documentary by Hubert Sauper on the ecological catastrophe in Tanzania’s lake Victoria) and the disturbing film *Into Eternity* (Michael Madsen, 2010) on the Onkalo nuclear waste repository in Finland. This excellent documentary, which is addressed to an audience in a remote future, addresses the physical and linguistic challenges of building a site conceived to be isolated from human beings for several thousands of years. It deals with many of the topics discussed in the more recent documentary by Peter Galison and Robb Moss (*Containment*, 2015). While exploring new sources and narratives, both movies and talks highlighted the relevance of historical analysis in dealing with ‘artificial catastrophes’ related to toxic products. A session on similar topics will be organized at the 11th ICHC meeting in [Trondheim](#).

José Ramón Bertomeu
Ximo Guillem

NEW MEMBERS

SHAC welcomes the following new members:

Andrew Brocklehurst	King's College London, UK
Geoffrey Blumenthal	Bristol University, UK
Jean-Baptiste Dubois	Lille University, France
Pere Grapi	Spain
Ann Harman	US
Martin Howse	Germany
Thomas Moenius	University of Hagen, Germany
Ellen Packham	Aberdeen University, UK
Mariana Pinto	Utrecht University, The Netherlands
Stephen Plant	UK
Peter Ramberg	Truman State University, US
Sophie Waring	Science Museum, London

STOP PRESS: ADDITIONAL OTHER MEETING

Crystals of Power: The Knowledge on Saltpeter in the Early Modern and the Revolutionary Period

University of Augsburg



Up to now, the history of saltpeter has been treated mainly within the discipline of the history of science and technology. This interdisciplinary workshop wants to take into account a broader spectrum of knowledge relevant to the production and use of saltpeter within European societies, up to the advent of Chilean saltpeter in the early 19th century. It will examine this knowledge in the context of how it relates to the state and sources of power, analysing historical paradigms. The workshop is bilingual, but any German contributions will be supplemented by English summaries.

Jens Soentgen (WZU, Universität Augsburg), 'The materiality of saltpeter'

Lothar Schilling (Lst. für Geschichte der Frühen Neuzeit, Universität Augsburg), 'Saltpeter as an object of state-relevant knowledge'

Daniel Jütte (Centre for Research in the Arts, Social Sciences and Humanities, Cambridge; Department of History, New York University), 'Jews and the premodern economy of saltpeter'

Susan Richter (Lst. für Neuere Geschichte, Universität Heidelberg), 'On the global history of the saltpeter trade in Early Modern Times'

Marius Mutz (Lst. für Geschichte der Frühen Neuzeit, Universität Augsburg), 'Saltpeter in gunmaker's books of the 16th and 17th century'

Dino Leon Güldner (Institut für Soziale Ökologie, Univ. Klagenfurt), 'Saltpeter production and soil ecology at the transition of Early Modern and Modern Era'

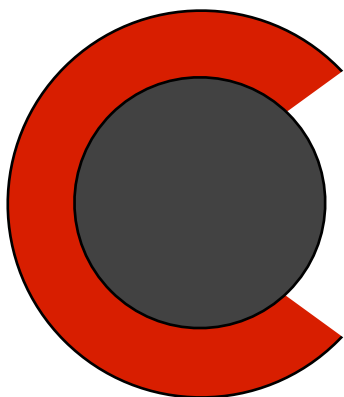
Peter Fiener (Institut für Geographie, Universität Augsburg), 'Nitrogen in the Soil'

Jens Soentgen (WZU, Universität Augsburg), 'Rudolf Glauber and Saltpeter: Pumping up the Leviathan'

Patrice Bret (Centre Alexandre Koyré, Paris), 'Lavoisier's Programme for Improving the Amount and Quality of Saltpeter'

Lucas R. Clawson (Manuscripts and Archives Department, Hagley Museum and Library), 'Eleuthère Irénée du Pont de Nemours, DuPont and Black Powder Manufacturing in the United States'

For further information, please contact the workshop organisers: Prof. Dr. Lothar Schilling, lothar.schilling@philhist.uni-augsburg.de and PD Dr. Jens Soentgen, soentgen@wzu.uni-augsburg.de



We welcome any contributions that newsletter readers might wish to make to *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: Judith Mawer**, Email: chemintel@ambix.org

WWW.AMBIX.ORG

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 chemistry. 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 Taylor & Francis and appears quarterly. Members also receive the Society's newsletter, *Chemical Intelligence*, twice yearly, and any new editions from the Sources of Alchemy and Chemistry volume.

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

For all membership questions, please contact the **Membership Secretary, Dr Anna Simmons**.
E-mail: a.simmons@ucl.ac.uk