

CHEMICAL INTELLIGENCE

No. 12, November 2014

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

Editorial

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2014 has been an eventful year for the history of alchemy and chemistry, including several conferences and meetings sponsored or organised by SHAC. We are pleased to bring you reports from the SHAC 'Crossing Oceans' meeting in Sao Paulo, the SHAC Postgraduate Workshop in Amsterdam, as well as other conferences.

But the year is not yet over, and we plan to end it with a bang at the special SHAC Autumn meeting called 'Making Chemistry: History, Materials, and Practices' at the Royal Institution. The meeting will end with an exciting 'fireworks lecture' by pyrotechnist Matthew Tosh at the UCL's Institute of Making. So, please book your tickets as quickly as possible as places are limited!

Since 2015 is soon upon us, we would like to remind you that your membership

fees for 2015 or 2015-2016 are due. See page 35 on renewing your membership for 2015 or 2015/16, which you can do immediately if you wish.

The November issue of *Ambix* is a special issue on 'Analysis and Synthesis in Medieval and Early Modern Chymistry.' It is guest-edited by Joel A. Klein (Columbia) and Evan R. Ragland (Alabama Huntsville).

We are also pleased to report that the SHAC Award was given to seven applicants from topics ranging from alchemical music to pharmaceuticals in Bengal.

The *Chemical Intelligence's* special feature comes from Dr Rafał Prinke of University of Poznan, who describes his 'alchemical' summer trip in Central Europe. He has visited Altdorf, Třeboň,



Salzburg, and Zgorzelec, where famous alchemists and alchemical philosophers such as Theophrastus Paracelsus, Michael Sendivogius, John Dee, and Jacob Boehme lived and practiced.

We use this opportunity to encourage our readers to highlight places of interest or events that we may feature in future *Chemical Intelligences*.

Until next issue, have a wonderful (al)chemical winter!

Jo (Georgiana) Hedesan
Editor

SOCIETY FOR THE HISTORY
OF
ALCHEMY AND CHEMISTRY



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UPCOMING SHAC EVENTS

SHAC Autumn Meeting: 'Making Chemistry: History, Materials, and Practices'

Royal Institution and Institute of Making (UCL), London

Programme

December

8

2014

9.30 – Coffee and Registration at the Royal Institution

10.00 - Welcome from **Simon Werrett** (UCL Science & Technology Studies)

10.05 - Welcome from **Frank James** (Royal Institution and UCL Science & Technology Studies)

10.15 - **Emma Tobin** and **Chiara Ambrosio** (UCL Science & Technology Studies): 'Theory Choice and the History of Chemistry.'

10.45 - **Hilary Powell** (Artist in Residence in the UCL Chemistry Department): 'Chemistry and Art'

11.15 - **Kaori O'Connor** (Department of Anthropology, UCL), **Julian Evans** and **Theodore Hayes** (Department of Chemistry, UCL): 'Practical Everyday Alchemy: Chemistry and Domestic Cleaning'

11.45 – Society for the History of Alchemy and Chemistry AGM

12.15 – Sandwich Lunch at the Royal Institution

1.15 - **Marie Thébaut-Sorger** (CNRS; Centre Koyré): 'Firefighting Devices in the Eighteenth Century: Towards a New Approach of Mastering Matter and the Elements in an Urban Context.'

1.45 - **Simon Werrett** (UCL Science & Technology Studies): 'Making Fireworks Chemical.'

2.15 – Travel from the RI to the Institute of Making, UCL (participants need to pay for their own travel).

3.00 to 5.00 – Fireworks Lecture with Pyrotechnist **Matthew Tosh** (Institute of Making, UCL)

Directions to the Royal Institution may be found at: <http://www.rigb.org/visit-us/find-us>

Directions from the RI to UCL will be emailed to participants in advance of the meeting.

Directions to the Institute of Making may be found at: <http://www.instituteofmaking.org.uk/contact>

The registration fee for the meeting is £15 for SHAC members (£20 for non-members), which includes refreshments and a sandwich lunch at the RI.

Due to restrictions of space, there are only **fifteen places** available for the Fireworks Lecture. These will be allocated on a first-come-first-served basis by the organisers, with priority given to SHAC members. For further information on how to register for the meeting see www.ambix.org. To inquire about the availability of places for the Fireworks Lecture, please contact the Membership Secretary, Anna Simmons (a.simmons@ucl.ac.uk).

UPCOMING SHAC EVENTS

'Sites of Alchemy and Chemistry, 1550-1730' Conference - Call for Papers *Museum Boerhaave, Leiden, the Netherlands*

Deadline for proposals: 29 December 2014.



The 'Sites of Chemistry' series of conferences and publications, so far covering 18th to the 20th centuries, is a research project supported by the Wellcome Trust and sponsored by the Society for the History of Alchemy and Chemistry. Its final conference will take place at the Museum Boerhaave, Leiden, on 24-25 June 2015. This will form the first part of a 'double-conference' meeting, and will be followed immediately by the concluding meeting of the 'Situating Chemistry, 1760-1840' programme, a related research network which grew out of the conference in Oxford in 2011 on Sites of 18th Century Chemistry, and is centred at the University of Twente and supported by the

Netherlands Research Organisation.

'Sites' has covered a wide variety of types of locations for the pursuit of chemistry and chemically-related activity, and, in addition to the personnel involved, has focused particularly upon actual physical locations and their materiality: buildings, premises, apparatus, experimental, manufacturing and didactic material. Sites examined include laboratories and teaching spaces, manufacturing and industrial enterprises and their environmental consequences, apothecaries' workshops, pharmaceutical production and law courts. As we move back in time to the early modern period, further types and modulations of site are likely to emerge, as characteristic of alchemical-chemical practice: Court cultures, processes of institutionalisation of natural knowledge, princely and aristocratic patronage, political, religious and confessional contexts.

Colleagues with appropriate research topics and materials are invited to submit a 250 word abstract of their proposed paper for consideration by the organisers for inclusion in the conference programme.

Organisation

The organisers envisage a conference of 15 to 18 pre-circulated papers, with speakers organised in session panels of 3, each speaker allotted a time slot of 20 minutes to present a summary of their paper, followed by a commentator's remarks (approx. 15 minutes), and then by a discussion period of 30 minutes.

The conference will start at lunchtime on June 24 and finish with a conference dinner on the evening of June 25.

The 'Situating Chemistry, 1760-1840' Workshop will take place in the same venue on Friday and Saturday, June 26 and 27. Attendees at the 'Sites' conference are welcome to register for and participate in the 'Situating Chemistry' Workshop. Registration for the Workshop is free.

Proposals for Papers

Proposals in the form of a 250-word summary should be sent to the organisers Antonio Garcia Belmar, belmar@ua.es, John Christie, jrrc@hotmail.com and John Perkins, jperkins@brookes.ac.uk. **Decisions will be announced by 15 January 2015.**

Fuller versions of papers are due to be submitted for pre-circulation by 10 June 2015. Papers should be no more than 6,000 words in length. They will be made available only to registered participants in the conference two weeks before the conference. We particularly welcome proposals from doctoral students and post-doctoral researchers. As with the previous conferences we intend to publish a selection of the papers in a special issue of *Ambix*.

Funding

There will be no registration fee for the conference. The accommodation will be at a hotel near the Museum Boerhaave, pre-booked by the organisers. The project will pay for two nights of accommodation for those giving papers. We will be able to subsidise the travel costs of those giving papers up to a maximum of £250, or €300. It may be possible to increase this amount especially for doctoral students and those who do not have access to research funds, as well as those travelling from outside Europe.

SHAC-SPONSORED MEETINGS

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

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

AD HOC (Cambridge)

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

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

24 November—'The Chemical Bond in Quantum Chemistry', discussion led by Charissa Varma

AD HOC (London)

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

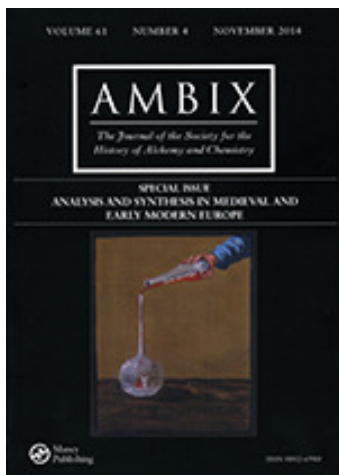
The spring sessions of Ad Hoc London are scheduled as follows:

Monday 19 January	Charlotte Connelly (Cambridge) - Invisibility	Foster Court 235
Monday 2 February	Sophie Osiecki (Cambridge) - Sharpness	South Wing G14 Committee
Monday 2 March	Anna Maerker (Kings College) – Waxiness	South Wing G14 Committee
Monday 13 April	Anna Leendertz-Ford (Bristol) and Alaena Turner (UCL)– Spiciness	Foster Court 219
Monday 11 May	Simon Werrett (UCL) - Stickiness	Foster Court 217
Monday 8 June	Jenny Rampling (Princeton) – Shininess	Foster Court 219

More information will be available in due course from the Ad Hoc secretary.

AMBIX**November Issue**

Ambix 61.3 (2014) is a special issue on 'Analysis and Synthesis in Medieval and Early Modern Chymistry.' Guest-edited by Joel A. Klein (Columbia) and Evan R. Ragland (Alabama Huntsville), it includes the following papers:



Joel A. Klein and Evan R. Ragland, 'Introduction'

William R. Newman, 'Mercury and Sulphur among the High Medieval Alchemists: from Rāzī and Avicenna to Albertus Magnus and pseudo-Roger Bacon'

Joel A. Klein, 'Corporeal Elements and Principles in the Learned German Tradition'

Vera Keller, 'Hermetic Atomism: Christian Adolph Balduin (1632-1682), *Aurum Aurae*, and the 1674 Phosphor'

John C. Powers, 'Fire Analysis in the Eighteenth Century: Herman Boerhaave and Scepticism about the Elements'

New Deputy Editor of Ambix

The Society for the History of Alchemy and Chemistry is delighted to announce that Alan Rocke, Henry Eldridge Bourne Professor of History and Distinguished University Professor at Case Western Reserve University, will be the next Deputy Editor of *Ambix*, starting from 1 January 2015. He succeeds Peter Morris, who has served two years as Deputy Editor following a previous eleven years as Editor of *Ambix*. The Society welcomes Alan, and thanks Peter for his outstanding service. Dr Morris remains on the Editorial Advisory Board of *Ambix*.

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).

Scientific Instruments on Display. Edited by SILKE ACKERMANN, RICHARD L. KREMER, MARA MINIATI. Pp. 230, illus., index. Brill: Leiden and Boston. 2014. ISBN: 978-90-04-26439-7.

The Chemistry of Alchemy. From Dragon's Blood to Donkey Dung. How Chemistry was Forged. By CATHY COBB, MONTY L. FETTEROLF, HAROLD GOLDWHITE. Pp. 364, illus., index. Prometheus Books: Amherst, New York. 2014. \$24.95. ISBN: 978-1-61614-915-4.

UCL Chemistry Department 1828-1914. By ALWYN DAVIES and PETER GARRATT. Pp. 287, illus., index. Science Reviews 2000 Ltd: St Albans, Herts. 2013. ISBN: 978-1-900814-46-1.



Books Received for Ambix Review

Literature and Chemistry. Elective Affinities. Edited by MARGARETH HAGEN and MARGERY VIBE SKAGEN. Pp. 338, illus., index. Aarhus University Press: Aarhus. 2013. ISBN: 978-87-7124-174-7.

Salz: Weisses Gold oder Chemisches Prinzip? Zur Entwicklung des Salzbegriffs in der Frühen Neuzeit. By JÜRGEN HOLLWEG. Pp. 102, illus., index. Peter Lang: Frankfurt. 2014. € 19.95. ISBN: 978-3-631-64865-0.

Prisoners, Lovers & Spies. The Story of Invisible Ink from Herodotus to al-Qaeda. By KRISTIE MACRAKIS. Pp. 378, illus., index. Yale University Press: New Haven & London. 2014. £ 18.99. ISBN: 978-0-300-17925-5.

Toward a New Dimension. Exploring the Nanoscale. By ANNE MARCOVICH and TERRY SHINN. Pp. 213, illus., index. Oxford University Press: Oxford. 2014. ISBN: 978-0-19-871461-3.

It started with Copernicus. Vital questions about Science. By KEITH PARSONS, illus., index. Prometheus Books: Amherst, New York. 2014. \$19.95. ISBN: 978-1-61614-929-1.

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

The Bet. Paul Ehrlich, Julian Simon, and Our Gamble over Earth's Future. By PAUL SABIN. Pp. 304, illus., index. Yale University Press: London. 2013. 18.99GBP. ISBN: 978-0-300-17648-3.

Biologics. A History of Agents Made From Living Organisms in the Twentieth Century. Edited by ALEXANDER VON SCHWERIN, HEIKO STOFF, BETTINA WAHRIG, illus., index. Pickering & Chatto: London. 2013. ISBN: 978-1-848934-306.

Ways of Making and Knowing. The Material Culture of Empirical Knowledge. Edited by PAMELA H. SMITH, AMY R. W. MEYERS, HAROLD J. COOK. Pp. 430, illus., index. The University of Michigan Press: Ann Arbor. 2014. ISBN: 978-0-472-11927-1.

Feeding France. New Sciences of Food, 1760-1815. By EMMA C. SPARY. Pp. 418, illus., index. Cambridge University Press: Cambridge. 2014. ISBN: 978-1-107-03105-0.

The American Synthetic Organic Chemicals Industry. War and Politics, 1910-1930. By KATHRYN STEEN. Pp. 403, illus., index. The University of North Carolina Press: Chapel Hill. 2014. \$39.95. ISBN: 978-1-4696-1290-4.

Wirkstoffe. Eine Wissenschaftsgeschichte der Hormone, Vitamine und Enzyme, 1920-1970. By HEIKO STOFF. Pp. 396, illus., index. Franz Steiner: Stuttgart. 2012. € 52. ISBN: 978-3-515-10099-1.

Aus der Luft gewonnen. Die Entwicklung der globalen Gaseindustrie, 1880 bis 2012. By RAYMOND STOKES and RALF BANKEN. Pp. 464, illus., index. Piper: München. 2014. € 29.99. ISBN: 978-3-492-05681-6.

Une histoire de la chimie du solide. Synthèses, formes, identités. By PIERRE TEISSIER, illus., index. Hermann: Paris. 2014. € 28. ISBN: 978-2-7056-8807-3.

Art and Alchemy. The mystery of transformation. Edited by BEAT WISMER and SVEN DUPRÉ. Pp. 280, illus., index. Hirmer: Düsseldorf. 2014. 39.90 EUR. ISBN: 978-3-7774-2207-7.

Le origini chimiche della vita. Legami tra la Rivoluzione di Lavoisier e la Biologia di



BOOKS RECEIVED FOR AMBIX REVIEW

Lamarck. By ANGELA BANDINELLI. Pp. 252, index. Leo S. Olschki: Firenze. 2013. E* 27. ISBN: 978-88-222-6270-7.

Panacea's Daughters. Noblewomen as Healers in Early Modern Germany. By ALISHA RANKIN. Pp. xiv + 296, illus., index. The University of Chicago Press: Chicago and London. 2013. \$40. ISBN: 978-0-226-92538-7.

Voyaging in Strange Seas. The Great Revolution in Science. By DAVID KNIGHT. Pp. 336, illus., index. Yale University Press: New Haven. 2014. \$35. ISBN: 978-0-300-17379-6.

SHAC PRIZES & AWARDS

2014 SHAC Award Scheme

SHAC would like to congratulate the following Award winners:

Cesare Pastorino (Berliner Zentrum für Wissensgeschichte and TU Berlin), ‘Minerall Tryalls’: Metal Assaying and Experiment in Early Modern England’

Hilde Norrgrén (University of Oslo), ‘Alchemy on Greenland: Hans Egede and the Philosopher’s Stone’

Masanori Kaji (Tokyo Institute of Technology), ‘The International Workshop on the History of Chemistry: “Transformation of Chemistry from the 1920s to the 1960s”’

Judith Mawer (University of London, Goldsmiths), ‘Research on alchemical manuscripts of the mid-seventeenth century listed in the Ashmolean catalogue at the Bodleian Library, Oxford, in connection with doctoral thesis on Thomas Vaughan (1621-1666)’

Fabrizio Bigotti (Warburg Institute), ‘Alchemical Melodies: the Quest for the Musical Quintessence in the Seventeenth Century’

David Singerman (Rutgers University), ‘Sweetness and Control in the American Sugar Empire, 1860-1930: Sugar workers and chemical control in Hawaii’

Malika Basu (Vivekananda Mission Mahavidyalaya), ‘History and Development of Four Indigenous Pharmaceuticals in Colonial Bengal (1855 – 1947)’

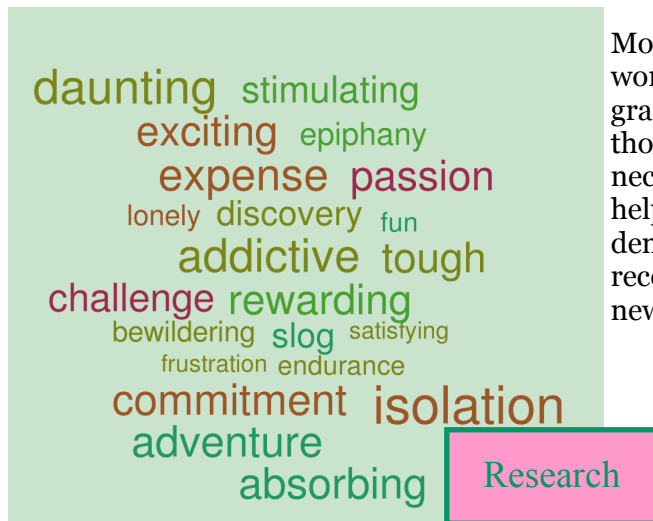
GRADUATE NETWORK

The SHAC Graduate Network aims to stimulate research into the history of alchemy and chemistry worldwide, by providing research training, grants and networking opportunities for postgraduate students and postdoctoral researchers working in these fields. As part of this scheme, postgraduates and early career researchers are eligible to apply for grants towards the cost of research (the New Scholars Award). The Society also organises an annual workshop for students and junior scholars, focusing on methods, sources and approaches in the history of alchemy and chemistry. The 5th annual workshop, 'Geographies of Alchemy and Chemistry', took place in Amsterdam on 24 October 2014. Next year, the workshop will likely be held in or near London. If you have suggestions for a suitably broad topic that is relevant to the history of alchemy as well as chemistry, do not hesitate to get in touch.

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

The current SHAC Student Representatives are **Mike Zuber**, International Student Representative and PhD candidate at the University of Amsterdam (studentrepint@ambix.org) and **Judith Mawer**, UK Student Representative and PhD candidate at Goldsmiths, University of London (studentrepuk@ambix.org).

An Invitation by the Student Reps



Most students engaged in research will relate to these words as descriptors of and feelings generated by the graduate studies experience. Hopefully positive thoughts prevail most days. Nonetheless, feeling connected to people on a similar journey can prove very helpful. The **SHAC Graduate Network** offers students the opportunity to present their work, offer and receive advice, share ideas and helpful tips, exchange news and communicate with like-minded people.

Judith Mawer and Mike Zuber, your SHAC student representatives, are keen to encourage opportunities for interactive communication between members of the Graduate Network and welcome your thoughts on how this might best be achieved. Options might include a members' blog, a Q&A section or a 'Did you know?' spot for interesting discoveries or useful hints and tips.

In the meantime, why not share the wisdom of your experience by emailing studentrep@ambix.org with a short response to the statement: 'If I'd known then what I know now...'. Judith's wisdom, for instance, might be, 'If I'd known then what I know now I should have learned to use bibliographic software, such as EndNote, before, not after, I started my research'.

We look forward to hearing your ideas and insights. They are going to help us in supporting you and presenting your concerns to the SHAC Council.

GRADUATE NETWORK

Judith Mawer

University of London—Goldsmiths



It is time to know more about our SHAC Student Representatives! This time around we are presenting Judith Mawer, our UK Student Representative.

Self Introduction: My passion for the history of alchemy was ignited when I pursued the innovative Masters programme at the University of Exeter, graduating with the award of MA Western Esotericism (Distinction) in 2011. Sadly, the untimely death of my supervisor, the inspirational Professor Nicholas Goodrick-Clarke, led to an hiatus in my plans for doctoral study and I transferred this October to continue my research at Goldsmiths College, University of London, where my dissertation, under the supervision of Dr Ariel Hessayon, examines the life and work of the Welsh alchemist, Thomas Vaughan (1621-1666).

Vaughan is a fascinating character, not just because he lived and produced most of his written works during a tumultuous period in British History, when civil war led to the Interregnum and religious dissent polarised individuals and communities, but because his alchemy, and the cosmological framework within which he operated, were influenced by movements such as Rosicrucianism and Utopianism, and were predicated on Hermeticism, Neoplatonism and, significantly, the occult philosophy propounded by his magical influences. Citing the notorious Archimagus, Cornelius Agrippa (1486-1535), as a principle source, Vaughan, a Royalist and an Anglican, represents that peculiar breed of philosopher-practitioner about whom historians continue to argue: the spiritual or mystical alchemist. We know, however, from his recipe notebook, that he operated materially within a laboratory and that he employed his alchemy spagyrically.

Like most, if not all, early modern alchemists, Vaughan is a complex and enigmatic character, which is perhaps just as well, since I am intending to devote a further five years to his study.

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

Without doubt, as a part-time student, the biggest challenge I face is combining my research with my job and family responsibilities: I now have two children under the age of 3 years! My employment, with an NHS mental health trust in Liverpool, bears no relation to my studies, so intellectually, I inhabit two completely separate worlds. This is scarcely without precedent, however, and I consider myself fortunate to have the opportunity to be researching in such a fascinating subject area. A further challenge is, of course, finding people with whom to share my arcane interests, historians of alchemy being rare beasts in my daily round. Attending conferences and belonging to societies like SHAC is therefore highly recommended.

OTHER MEETINGS

14 Congreso Mexicano de la Historia de la Ciencia y de la Tecnología/ 14th Mexican Conference of History of Science and Technology *Mexico D.D., Mexico*

November

25-27

2014

This interdisciplinary conference in honour of the botanist and historian Enrique Beltrán Castillo is organised by the Mexican Society for the History of Science and Technology A.C. to commemorate his 50th anniversary.

For any other information please contact the organising committee: ilm.smhct@gmail.com. For more details, see <http://www.h-mexico.unam.mx/node/14461>

'Toxic Atmospheres II' Second Part of Seminar Series on Atmospheric Pollution and Toxics

Instituto de Historia de la Medicina y de la Ciencia 'López Piñero', Valencia

November

26

2014

Paul-André Rosental, Catherine Cavalin and **Michel Vincent** (ERC Silicosis Project, Sciences Po - Centre d'études européennes) : 'Dust, environment and pulmonary diseases: historical and sociological roots of medical uncertainty'

For more information and programme, see <http://redescts.wordpress.com/2014/04/30/4escts-programa-provisional-draft-programme/>

Recorded sessions are available at:

<http://www.uv.es/uvweb/instituto-universitario-historia-medicina-ciencia-lopez-pinero/es/videos/industrial-pollution-and-risk-the-great-french-shift-1750-1850-1285901090268/Recurs.html?id=1285901609204>

RSCHG Meeting: 'The Life and Work of Sir John Cornforth AC FRS' *Burlington House, London*

March

18

2015

The meeting will commence at 13.30 at the Royal Society of Chemistry, Burlington House, Piccadilly, London.

This meeting, organised by the Historical Group of the Royal Society of Chemistry, celebrates the life and work of the gifted organic chemist Sir John ('Kappa') Cornforth AC FRS (1917-2013), who was awarded the Nobel Prize for Chemistry in 1975. His research was characterised by a perceptive, innovative and elegant logic. Over 60 years it ranged from work on the structure of penicillin, the chemistry of oxazoles, steroid synthesis and biosynthesis, plant hormones, the stereochemistry of enzyme reactions, to models of enzyme action. His studies on the biosynthesis of steroids transformed biogenetic speculation into an experimentally established biosynthetic pathway in which the stereochemistry of each of the steps leading to cholesterol was clearly defined. The presentations at this meeting will highlight the influences on Sir John's life and his lasting legacy to organic chemistry.



OTHER MEETINGS

'[I] could hope for nothing better than to retain fresh curiosity and wonder at the chemistry of Nature', Sir John Cornforth, Nobel Prize Lecture, 1975.

There is no charge for this meeting, but prior registration is essential. Further details and the meeting programme will be available on the webpage of the RSC Historical Group <http://www.rsc.org/Membership/Networking/InterestGroups/Historical/index.asp> or from the Group's Secretary, Professor John Nicholson (john.nicholson@smuc.ac.uk), in January 2015.

8th European Spring School on History of Science and Popularization. 'Living in a toxic world (1800-2000): experts, activism, industry and regulation'

Mahón (Menorca), Spain

May

15-17

2015

The workshop 'Living in a Toxic World (1800-2000)' is addressed to postgraduate students and young scholars interested in topics related to environmental history, risk management, experts and toxics. Papers are expected to cover issues related to the regulation of toxics, public controversies, activism, public health, toxic torts and so on. They may be focused on a particular substance or group of products: chemicals, drugs, tobacco, cosmetics, pesticides, fumes, air and water pollution, fertilisers, asbestos, food adulterants and additives, genetic modified organisms, nanomaterials, criminal poisons, etc. As in previous years, the School is structured in three key-note lectures and a research workshop, including the following topics:

The keynote lectures will be delivered by three outstanding scholars covering three particular toxics (fumes, pesticides and lead) from the beginning of nineteenth century to the end of the twentieth century:

Thomas Le Roux (Centre de Recherches Historiques, CNRS/EHESS) 'Fumes: the great shift of risk management' (France, Great Britain, 1750-1850)

Nathalie Jas (RiTME Research Unit, INRA) 'Pesticides. How and why regulating "unruly technologies"? An historical analysis'.

Gerald Markowitz (John Jay College and Graduate Center, CUNY) 'Lead Wars: The Politics of Science and the Fate of Children'

Andrew Cunningham (University of Cambridge): 'Mercury Rising, Mercury Falling'

Registration will be opened in December 2015. A limited number of grants (covering lodging and meals) might be available. Please direct proposals or queries to Ximo Guillem (ximo.guillem@uv.es) and José Ramón Bertomeu-Sánchez (bertomeu@uv.es).

For more information: <http://blogs.iec.cat/schct/activitats-2/escola-de-primavera/8th-european-spring-school/>

OTHER CALLS FOR PAPERS

British Society for the History of Science Annual Conference 2015 *Swansea University*

July

02-05

2015

The Conferences Committee now invites proposals for individual papers and for sessions from historians of science, technology and medicine, and from their colleagues in the wider scholarly community, on any theme, topic or period. Proposals are welcomed from researchers of all nationalities at all stages of their careers. Participation is in no way limited to members of the Society, although members will receive a discount on the registration fee. Offers of papers and sessions should be directed to bshs2015programme@bshs.org.uk, which is the address for all enquiries about the programme (see below for enquiries about local arrangements).

Proposals for individual papers should include an abstract of no more than 250 words, be comprehensible to a non-specialist audience and avoid footnotes. Sessions, of either ninety minutes or two hours, should normally consist of three or four papers. They may also have a commentator. Proposals for alternative types of session, such as 'round-tables', are strongly encouraged. Please discuss your ideas for such alternative sessions well in advance of the submission deadline.

The deadline for proposals is 31 January 2015.

For more information, please see <http://www.bshs.org.uk/conferences/annual-conference/2015-swansea>

14th ICHSEA Conference: Sources, Locality and Global History: Science, Technology and Medicine in East Asia *Paris, France*

July

06-10

2015

The organisers of the 14th ICHSEA encourage the submission of papers and panels devoted to the chosen conference theme 'Sources, locality and global history: science, technology and medicine in East Asia'.

As all specialists in this field are only too aware, studies of 'the West' still dominate the history of science, technology and medicine. As a consequence, the tools, concepts and assessment criteria that are most familiar to specialists have been shaped mainly or solely on the basis of the European historical experience.

Working on a different part of the world, in this case East Asia, therefore entails a tension that historians need to live with. On the one hand, they need to construct analytical tools based on the evidence available; this means giving priority to a close reading of sources. On the other hand, they need to construct a continuing dialogue with colleagues, be they 'occidentalists' or specialists of other cultural areas; this dialogue must aim at making respective studies commensurable with one another. This dialogue is all the more necessary for those who study the globalisation of knowledge in history: the varied representations of this phenomenon need to be studied and compared. This implies taking full account of the situation of the objects historians study in time and space — the latter being understood as not only geographical but also social, political and cultural— or in other words, of locality.

Deadline for proposals submission: 1st December 2014.

For any request or additional information regarding the conference, please contact the organisers at: 14ichsea@sciencesconf.org

For more information, please see <http://14ichsea.sciencesconf.org/resource/page/id/12>

OTHER CALLS FOR PAPERS

10th International Conference on the History of Chemistry (10th ICHC): Chemical Biography in the 21st Century

University of Aveiro, Portugal

<http://10ichc-2015.web.ua.pt/>

September

09-12

2015

This interdisciplinary conference welcomes participants from a range of academic disciplines including history of science and technology, science and technology studies (STS), economic and business history, and the history of material culture and museum studies. We also warmly welcome participants from chemistry and related disciplines with an interest in the history of their discipline.

Biographies—whether in the form of books or articles—have always been an important genre in the history of chemistry. General histories of chemistry have often taken a biographical approach, most notably the four volume work of J. R. Partington. Many chemists, especially in the German-speaking world, have written autobiographies which along with the formal obituaries produced by national academies of science have formed an important source of information for historians of chemistry. More recently the American Chemical Society published the ‘Profiles, Pathways and Dreams’ series, which extended the autobiographical form up to the end of the 20th century. For several decades in the latter half of the 20th century, professional historians of chemistry avoided the biographical approach as being inherently too hagiographical and ‘Whiggish’. However following the pioneering work of scholars in the history of physics the biography has been taken up anew as a framework for analysing thematic problems and social-cultural questions. This conference will critically examine this conceptual ‘turn’ in the historiography of chemistry and explore ways in which the biographical approach can be fruitfully employed by historians of chemistry.

The conference will embrace all aspects of the history of alchemy and chemistry including the history of materials and the history of biochemistry. Papers which simply present the biography of a chemist will not be accepted, as there must be a line of argument or a historical problematic. Papers might address:

1. Autobiographies as a source for historians of chemistry
2. Biography and discipline building
3. Biographies and nationalism
4. The making and unmaking of chemical heroes
5. Myths and misrepresentation
6. Iconography as a mode of self-representation in the visual arts, sculpture and photography
7. The historiography of the biographical mode
8. Collective biographies including biographical dictionaries and the ‘biographies’ of research groups

Proposals for papers on other topics can be submitted, but preference will be given to papers reflecting the conference theme. Proposals can be made for sessions, standard papers (20 minutes), short papers (10 minutes) and posters. Proposals (abstracts) should be uploaded using EasyChair on the website <http://10ichc-2015.web.ua.pt/> and be a minimum of 150 words and a maximum of 300 words. The session proposals should also contain the abstracts of the proposed papers. Further details of the conference, including local arrangements and accommodation, will be found on the website. Please address any queries to the chair of the programme committee, Peter Morris, at peter.morris@sciencemuseum.ac.uk.

The deadline for all proposals is midnight (Universal Time/GMT) on 31 March 2015.

OTHER NEWS, EVENTS & GRANTS

Beckman Center for the History of Chemistry 2015-16 Fellowships in the History of Sciences, Technology, Medicine, & Industry

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.

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 25 fellows each year, creating a vibrant international community of scholars whose work is in some way tied to the history of materials and materiality, chemistry, and all related sciences. Applications come from scholars in a wide range of disciplines across the humanities and social sciences. To see this year's list, go to:

<http://www.chemheritage.org/research/beckman-center/fellows-and-staff.aspx>.

Senior Fellowships (available to those receiving PhDs before July 2010)

9 Months in Residence

open to PhD scholars • \$60,000

Postdoctoral Fellowships (available to those receiving PhDs between July 2010 and July 2015)

9 Months in Residence

open to PhD scholars • \$45,000

Dissertation Fellowships

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

Short-Term Fellowships

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

Application Deadline: **15 January 2015**

For more information visit:

<http://www.chemheritage.org/BeckmanCenter>

HIST Award: Call for Nominations

The Division of the History of Chemistry (HIST) of the American Chemical Society solicits nominations for the 2015 HIST Award for Outstanding Achievement in the History of Chemistry. This award, formerly known as the Dexter Award and then the Edelstein Award, continues a tradition started in 1956. **The deadline for nominations is 31 Dec 2014.** For more information see:

http://www.scs.illinois.edu/~mainzv/HIST/awards/nomination2015-hist_award.php

OTHER NEWS, EVENTS & GRANTS

The 2014 Liebig-Wöhler-Freundschaftspreis Prize

The 2014 Liebig-Wöhler-Freundschaftspreis of the Göttinger Chemischen Gesellschaft was awarded to Dr Catherine Jackson. She is currently an Honorary Fellow of the Department of History of Science at the University of Wisconsin, where she will be an Assistant Professor from 1 January 2015. The award was given for her research and publications on the history of synthetic organic chemistry and specifically for her paper, 'Synthetical experiments and alkaloid analogues: Liebig, Hofmann and the origins of organic synthesis', *Historical Studies in the Natural Sciences*, 44 (2014), 319-63.

The Chemical Breakthrough Awards

This scheme, promoted by the History of Chemistry Division of the American Chemical Society (HIST), gives recognition to advances in chemistry that have been revolutionary in concept, broad in scope, and long-term in impact. Such advances are judged from published 'breakthrough' papers. First proposed in 2004 by the then HIST chair-elect, Jeffrey I Seeman, the first awards were made two years later (see *Bulletin of the History of Chemistry*, 38 (2013), pp.4-6. The award itself consists of a plaque on which the key message of the paper is engraved. Ten of these were awarded in 2006, including the breakthroughs made by G N Lewis at Berkeley, and Linus Pauling at Caltech.

This year a plaque has been awarded to the University of Glasgow for Frederick Soddy's paper 'Intra-atomic Charge' which appeared in *Nature*, 92 (1913) pp.300-400. It was in this that he coined the word 'isotope' for those atoms which occupy the same place in the periodic table but which have different atomic weights. Soddy was Lecturer in Physical Chemistry and Radioactivity at Glasgow from 1904 to 1914.

The Chemistry Department of the University of Glasgow organised a meeting on 20 November to celebrate both the award and the opening of its Laboratory for Chemical Biology. SHAC's chair, Robert Anderson, delivered a lecture on the history of chemistry at Glasgow.

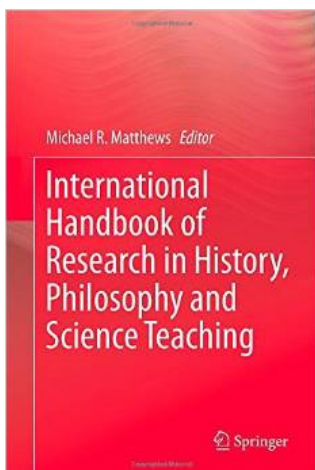
BBC Radio 4 'In Our Time' Episode on Robert Boyle

On 12 June at 9:30pm BBC Radio 4 hosted an 'In Our Time' episode on Robert Boyle. Melvyn Bragg and his guests, Simon Schaffer, Professor of the History of Science at the University of Cambridge, Michael Hunter, Emeritus Professor of History at Birkbeck College, University of London, and Anna Marie Roos, Senior Lecturer in the History of Science and Medicine at University of Lincoln, discussed the life and work of Robert Boyle, a pioneering scientist and a founder member of the Royal Society. Born in Ireland in 1627, Boyle was one of the first natural philosophers to conduct rigorous experiments, laid the foundations of modern chemistry and derived Boyle's Law, describing the physical properties of gases. In addition to his experimental work he left a substantial body of writings about philosophy and religion; his piety was one of the most important factors in his intellectual activities, prompting a celebrated dispute with his contemporary Thomas Hobbes.

The episode is available online at: <http://www.bbc.co.uk/programmes/b0460p63>.

OTHER NEWS, EVENTS & GRANTS

New Publications



We signal the publication of Edgar W. Jenkins, 'E. J. Holmyard and the historical approach to science teaching' in M. R. Matthews, ed., *International Handbook of Research in History, Philosophy and Science Teaching*, 3 vols. (Springer Science: Dordrecht, 2014), vol. 3, pp. 2383-2408.

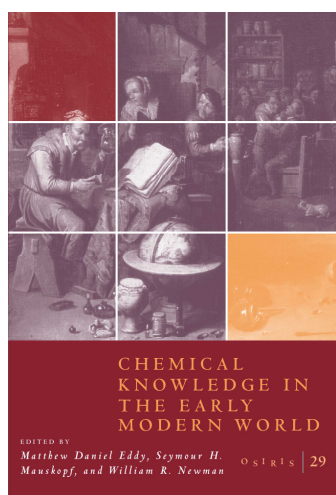
Eric Holmyard (1891-1959) was a founder-member of SHAC and was Chairman of the Society between 1948-1959.

CHEMICAL KNOWLEDGE IN THE EARLY MODERN WORLD

Osiris, volume 29

Edited by Matthew D. Eddy, Seymour H. Mauskopf and William R. Newman

450 pages | 7 x 10 | © 2014



The last twenty-five years have witnessed some provocative transmutations in our understanding of early modern chemistry. The alchemist, once marginalized as a quack, now joins the apothecary, miner, humanist, and natural historian as a practitioner of 'chymistry.' In a similar vein, the Chemical Revolution of the eighteenth century, with its focus on phlogiston and airs, has been expanded to include artisanal, medical, and industrial practices. This collection of essays builds on these reappraisals and excavates the affinities between alchemy, chymistry, and chemistry from the sixteenth to the eighteenth centuries. It reveals a rich world of theory and practice in which instruments, institutions, inscriptions and ideas were used to make material knowledge. More generally, the volume will catalyze wide-ranging discussions of material and visual cultures, the role of expertise, and the religious and practical contexts of scientific inquiry.

OTHER NEWS, EVENTS & GRANTS

‘The Making and Knowing Project’: Craft and Science in a Sixteenth-Century Artist’s Manuscript: An Open-Access Digital Edition and Translation of BnF Ms. Fr. 640

In the last decades of the sixteenth century, an anonymous French-speaking craftsman took the unusual step of setting down on paper his techniques for a number of processes that we would now classify as part of the fine arts, of craft, and of technology. The processes included drawing-instruction, pigment-making, metal-colouring, counterfeit gem production, life-casting in metal, cannon-casting, tree-grafting, land-surveying, a practice of taxidermy to manufacture monstrous composite animals (kittens and bats), making paper mâché masks, and much more. The manuscript testifies to the widespread interest in processes of making art, as well as to the constant experimentation with natural materials undertaken in early modern workshops.

The ‘Making and Knowing Project’ aims to produce an open-access digital edition and English translation of this intriguing text. The digital edition is only one dimension of this project, however, for the *process* by which this critical edition will be produced is as important as its product. Research for the edition will form an experiment in both pedagogy and humanistic research. It will involve students working alongside academic and museum-based historians of art and historians of science, in collaboration with experienced makers, to reconstruct the technical recipes contained in the manuscript. Their findings will be used to understand and annotate the digital edition, and their experiences will foster the sharing of expertise across disciplines as well as the engagement on the part of students with the material culture of the past.

The proposed digital edition of Ms. Fr. 640 will form the center of an experiment in collaboration and pedagogy that explores the value of hands-on experience as a form of research and learning, not just for makers, art conservators, and artists, but also, uniquely, for students of the humanities. Historians, paleographers, makers, art and technical experts, and conservation and materials scientists will teach and learn together as they collaborate on researching the manuscript.

The Project has three main components:

- 1) Summer Paleography Workshops
- 2) Laboratory Seminars
- 3) Working Groups

As part of this Project, Columbia University and the Chemical Heritage Foundation are pleased to announce the beginning of a collaboration to train the next generation of scholars in the history of science. This partnership aims to foster advanced scholarship in interdisciplinary work between the natural sciences and humanistic inquiry and research.

The Columbia-CHF Scholars will co-teach the course, ‘Craft and Science: The Making of Objects in the Early Modern World,’ in the Department of History, Columbia University, which integrates seminar-style discussion with work in a laboratory. This course is one component of a research and pedagogical initiative—the Making and Knowing Project—established by Pamela H. Smith, Seth Low Professor of History, to explore making practices, texts, and materiality in early modern science. The Scholars will also teach part-time in Columbia’s signature Core Curriculum. In addition, as members of the postdoctoral Research Group on Matter, Materials, and Culture



OTHER NEWS, EVENTS & GRANTS

within CHF's Institute for Research, the Scholars will focus on materiality, the laboratory, and culture, sharing their work through outreach opportunities available through CHF's museum and public events.

Bringing the CHF together with Columbia University will have benefits for joint work among the sciences, the humanities, and social sciences, and will provide opportunities to combine laboratory and humanistic research, as well as to explore digital dimensions of research on early modern history of science that can be shared beyond the two institutions. We are especially pleased to announce the appointment of the Columbia-CHF Scholars for 2014-17, selected after an extensive international search:

Donna Bilak, after a year as the Edelstein Postdoctoral Fellow at the Chemical Heritage Foundation, is conducting an interdisciplinary research project on Michael Maier's *Atalanta Fugiens*. Dr. Bilak received her PhD in 2013, from Bard Graduate Center, New York, with a dissertation on the American Puritan alchemist, John Allin. Dr. Bilak is also a practicing jeweler.

Jenny Boulboulé whose 2012 PhD (Maastricht), 'In Touch With Life - Investigating Epistemic Practices in the Life Sciences from a Hands-On Perspective,' combined a range of methods to investigate hands-on notions in relation to knowledge making. Dr. Boulboulé comes to the Project from her position as Research Policy Advisor to the executive board of the Free University Amsterdam, after postdoctoral work on the Art History Foresight Committee, Royal Netherlands Academy of Arts and Sciences, Amsterdam.

Joel Klein completed a PhD (2014) on Daniel Sennert under Professor William Newman at the University of Indiana, after a B.S. in chemistry and a stint as a research chemist. Dr. Klein has just completed a year of research as an Edelstein Fellow at the Chemical Heritage Foundation.

The following workshops will be organised in the next period:

3 December 2014 (Faculty House, Columbia University, 64 Morningside Drive), 6pm

Donna Bilak (Chemical Heritage Foundation)

'The Art of Encryption: Music-Image-Text in Michael Maier's Alchemical Emblem Book, *Atalanta fugiens* (1618)'

19 February 2015, 6pm (place tbd)

Lawrence Principe (Johns Hopkins University)

'Secret Materials and Chymical Exotica, or, How to Make the Luminescent Bologna Stone'

13 April 2015 (place tbd)

William Newman (Indiana University)

REPORTS

SHAC New Scholar Awards

Carolyn Cobbold

Cambridge University

A SHAC travel award enabled me to undertake valuable research in Berlin for my investigations into the use of synthetic dyes in food in the late nineteenth century. For my Phd thesis I am examining the introduction of new dyestuffs, synthesised from coal-tar waste, into the diet of an industrialising nation in order to gain knowledge of the complexities surrounding the interface between science and technology, social structures and culture and the co-production of transformation in science and society. Food is a particularly useful commodity to study the complex relations of science and society because food is universal and is consumed by all of us, thus becoming part of us. Industrial chemists and food manufacturers were seeking to introduce synthetic colourings during a period when food adulteration was of considerable social concern. At the same time, analytical chemists were being paid to identify harmful and fraudulently applied food additives, raising questions of whom to trust and how 'scientific' knowledge is formed and evaluated.

By the 1880s Germany had become the largest producer of synthetic dyes in the world. As a result, no study of how these new substances were introduced into our food could be complete without exploring the situation in Germany. Rather than concentrating on the archives of individual chemical manufacturers or regional food testing centres, I focussed on the Imperial health records in the state Bundesarchiv in Berlin. These extensive archives include detailed records of food regulations; studies and experiments conducted by state-sponsored analytical chemists; exchanges between food manufacturers, chemists and government officials as well as extracts from newspaper and periodical reports into food chemistry. I focussed my research on records dating between 1876, when the German Reich founded the Imperial Health Board (Reichsgesundheitsamt) and 1915.

The first unified food law in Germany was adopted in 1879, and was based on the British food legislation of 1875. The Imperial archives include details of similar food laws implemented throughout Europe as well as the US and Australia during the second half of the nineteenth century.

The archives provide a valuable insight into the way government oversight of food chemistry developed in Germany generally as well as the extent to which synthetic dyes were being used in food and how they were monitored and tested. Also revealed in the archives is the extent to which food companies, chemical manufacturers, and chemists lobbied the government. The archives include transcripts of written and verbal opinions expressed by chemists and officers of the health board; chemists advising the food monitoring stations in more than 100 German cities; as well as chemists employed by food and chemical companies, demonstrating the divergent opinions as to how and to what extent chemical additives, including synthetic colourings, could and should be used in food production. As well as differences between various interest groups, the archives reveal differences in food tastes and monitoring between different geographical regions throughout the German states.

REPORTS

June 2014

**Report on the RSC Historical Group meeting ‘Chemistry as a Hobby’
Held on 19 June 2014 at Burlington House**

This half-day meeting was organised by the RSC Historical Group on Thursday 19 June 2014 and was held at Burlington House, though not at the RSC but at the Society of Antiquaries of London (opposite). About 40 people attended the meeting and shared their many experiences of chemistry. There were four talks addressing different aspects of ‘chemistry as a hobby’ and each talk was followed by a lively session of questions and observations. Discussions continued over tea and coffee in the library.

Peter Reed

From Candles to Cabinets

‘Familiar chemistry’ flourished in early Victorian Britain. This set of texts and practices advocated drawing scientific lessons from the habitual activities of daily life, in which the hidden chemical contents of common objects and quotidian processes were revealed. Through sensory interactions in the family environment – enlightening conversation and hands-on explorations – a wide range of phenomena could be introduced to childish bodies and minds. In this talk, Dr Keene argued that familiar chemistry succeeded by reworking the popular literary genre of the familiar introduction with an emphasis on embodied interactions with emphatically real things, and gave a central role to the familial domestic context. In these ways, children could first learn elementary chemistry from candles and cups of tea, before moving on to specialist chemical cabinets and youth’s laboratories, and even to a chemical career.

Melanie Keene, University of Cambridge

Michael Faraday and the Chemical History of a Candle

Frank James talked about Faraday’s *The Chemical History of a Candle* which must count as one of the most successful science books ever published. It has been continuously in print in England and America since it was first published in 1861 and has been translated into many languages including French, German, Polish, Japanese, Bulgarian and Basic English. More recently it has been translated into Portuguese and a new Japanese edition has been issued, since the first 1930s edition was translated from the German text.

James outlined how the series of Christmas lectures at the Royal Institution, on which the book was based, came to be delivered. It was not inevitable that Faraday would give the Christmas lectures during the 1860–61 season, but the internal politics of the Royal Institution forced this outcome. Faraday was thus given short notice that he would be delivering them and so used a notebook for a course that he had delivered twice before. The notebook, which has been published in facsimile in James’s sesquicentenary edition of the *Candle* shows signs of having been too close to a candle.

Professor James considered how Faraday’s attitude towards publishing lectures changed: he was opposed to this in 1859, but shortly after changed his mind. This was probably a response to the rise of spiritualism during the decade and illustrates how the lectures fitted in with Faraday’s deeply theistic view of the world. Finally Professor James discussed the reasons why this book remains so popular, something which he attributed to it covering a wide range of basic scientific knowledge, much of which is still correct and of relevance today. For example Faraday’s calculation of the amount of carbon dioxide produced in London each year. Furthermore, many of the experiments that are described in it are spectacular, if not dangerous, and involve loud bangs, always attractive to an audience.

Frank James, Royal Institution



REPORTS

June 2014

Report on the RSC Historical Group meeting ‘Chemistry as a Hobby’ *Held on 19 June 2014 at Burlington House*

When Chemistry sets Became Toys

This talk examined the transition from the first commercial ‘chemical cabinets’ produced during the nineteenth century to the mass-produced and more affordable toy ‘chemistry sets’ marketed from around the First World War. Concentrating on the dominant American brands A.C. Gilbert and Porter Chemcraft, the talk described how toy manufacturers initially sought to exploit early twentieth-century enthusiasm for conjuring by advertising their sets as ‘chemical magic’ kits. But these companies quickly expanded the range of sets they sold, from basic kits for younger users to large-scale and more expensive ‘laboratories’ intended to encourage older children to see themselves as ‘junior chemists’ on the path to a career in professional science.

Marketing their kits as ‘career toys’, Gilbert and Chemcraft appealed to middle-class parents’ aspirations for their families by presenting chemistry sets as ‘an important, worthwhile investment’ in a child’s future. Part of a wider effort to combine the appeal of toys with the nation’s needs for industrial scientists, these companies presented the chemistry set as crucial for teaching their young users the connection between the ‘things we use every day’ and the world of industrial manufacturing. Reflecting on the iconic status of chemistry sets in the twentieth century, the reasons for their decline in the 1970s were also outlined. In conclusion, it was argued that in order to appreciate how chemistry sets were perceived and to understand their appeal, we need place them in the wider context of histories of leisure, toy manufacturing and advertising, and the status of chemistry in the twentieth century.

Salim Al-Gailani, University of Cambridge

My Home Laboratories: one, two, three, four, five, six and seven

This talk began with a 10-minute video presentation (with acknowledgement to Roly Jamision for the recording and editing) about the speaker’s background and present laboratory. This was followed by a visual tour of the seven laboratories he has owned to date. His chemistry fascination began with being given a Salters chemistry set when he was 11 (he’s now 40!). After being kicked out of the roof space lab by his mother for making obnoxious hydrogen sulphide gas, it expanded to a purpose-built shed with a small fume cupboard. A few years later it then expanded into an old converted dairy and a few years after that to an old house on the farm - including lab fixtures and fittings of beautiful teak benches from his School Methodist College which was refurbishing its old labs. After amassing an amount of chemicals and equipment from old schools and hospitals and setting up a charity called Saving Science, which sends old lab equipment to Ugandan Schools, it was time to build the lab of his dreams - including at one end a large 2 manual 30 stop pipe organ from St. Peter’s College, Oxford. It was during this phase that the speaker posted many videos on his YouTube channel (plasticraincoat1) showing many unusual and exciting chemical demonstrations. After a serious robbery and break-in, the lab was closed and the speaker moved house. He then went on to set up his present laboratory (including a smaller pipe organ and grand piano!). It was a lot of hard work and taught him many DIY skills, but the amount of enjoyment it has brought has been well worth it.

Adrian McLaughlin

REPORTS

June 2014

Report on the ‘Twice Upon A Time: Magic, Alchemy and the Transubstantiation of the Senses’

Held on 26 - 27 June 2014 at Birmingham School of Art

On the 26 and 27 June, the Centre for Fine Art Research (CFAR), based at the Birmingham School of Art, hosted ‘Twice Upon A Time: Magic, Alchemy and the Transubstantiation of the Senses’, a two-day conference composed of a series of speakers, performances and artwork. The conference centred on two aims: (1) to re-think the role of magic and alchemy in philosophy and the fine arts as a means of returning to and re-kindling the origins of the sciences and knowledge through the lens of contemporary fine art and philosophy, and (2) to critique the recent speculative realism and object-orientated philosophy movements, which seek a negation of the more experimental and wild curiosities we have in relation to the world, as well as setting up a bi-partite division between art and the sciences. Following from this, the conference incorporated papers, performances and artwork into the schedule to allow attendees to explore the diversity of research into the field, and the variety of outcomes that such research generates. The conference consisted of six panels with six keynotes, each exploring different areas such as consciousness, ontology, superstition, photography and music. Highlights included internationally renowned artist Ron Athey, Inventor and Engineer Martin Reinhart, researcher Grace Williams delivering a paper on three pieces while performing the classic ‘zig-zag’ magic trick, and an entertaining performance from research magician Stuart Nolan.

In today’s academic climate, researchers are faced with a grave dilemma. Often it is difficult in the extreme to allow oneself the ‘luxury’ to dare to know – a requirement to modern life, as Kant so long ago and so eloquently proclaimed in his 1784 essay *Was Ist Aufklärung?* (What is *Enlightenment?*) – but one that seems in disrepair and found to be somewhat ‘off piste’ today.

‘Twice Upon A Time: Magic, Alchemy and The Transubstantiation of the Senses’ grew out of a remarkable series of discussions and workshops held at The Centre for Fine Art Research (CFAR) where researchers both locally and internationally were intent on re-thinking the relation between art, materiality, philosophy and science. One of the many intriguing aspects emerging from those workshops and speakers series was a continual return to the age-old question of magic, alchemy, and transubstantiation, which was particularly crucial to forbears of contemporary intellectual achievements from music to physics and painting.

‘Twice Upon A Time’ was a conference that sought to re-visit the darker and altogether more experimental origins of the sciences, and analyse how the mystical and magical have provided a means by which one can navigate and understand the world.

The proceedings of ‘Twice upon a Time: Magic, Alchemy and the Transubstantiation of the Senses’ are due to be published in the international research journal *Zetesis*, published by the Centre for Fine Art Research and ARTicle Press, due out in December 2014. Footage of the entire conference is also available online at the Centre for Fine Art Research website at <http://cfar-biad.co.uk>.

Dane Worrallo, Centre for Fine Art Research

REPORTS

August 2014

Report on the São Paulo ‘Crossing Oceans’ History of Chemistry Conference
Held between 24–28 August 2014 at Sao Paulo, Brazil

Brazil has seen a renaissance in the history of alchemy and chemistry in recent years. This has been due in large part to the efforts of CESIMA (Centre Simão Mathias for Studies in the History of Science) at the Pontifícia Universidade Católica de São Paulo. This year, responding to the enthusiastic proposal of Professors Ana Maria Alfonso-Goldfarb and Marcia H. M. Ferraz, the Society for the History of Alchemy and Chemistry (SHAC) determined to hold a joint meeting in São Paulo to celebrate the Centre’s twentieth anniversary. CESIMA is one of the largest academic institutions dedicated to the history of science in Central and South America, and located in the continent’s largest city (São Paulo boasts over 20 million inhabitants); while the meeting was to be the first ever SHAC event to be held outside Europe in the nearly eighty years of the Society’s existence.

The theme of the meeting was ‘Crossing Oceans: Exchange of Products, Procedures, Instruments and Ideas.’ It was held over five days, from 24 to 28 August 2014, scheduled to coincide with CESIMA’s biennial series of lectures established in honour of the historian of the early modern ‘chemical philosophy’, Professor Allen G. Debus. This year, the Allen Debus Lectures were delivered by Dr Robert Anderson, Chair of SHAC, and Professor Frank James, of the SHAC Council. A further thirty-six papers were delivered over the course of the conference, to an audience of over 100 persons. In addition to the talks, a poster session was presented by about twenty history of science graduate students. The lectures and posters covered a broad range of topics, from Michael Maier’s sixteenth-century alchemical musical rounds, to the post-WW2 development of analytical instrumentation for chemists.



Participants of the international conference “Crossing Oceans” assemble on the terrace of our main conference venue, the Casa das Rosas.

The SHAC side was financially supported by the Society itself, with additional sponsorship from Maney, which helped defray the travel costs of the SHAC Chairman and the Editor of *Ambix*. The meeting also received very generous funding from Brazilian funding agencies, which allowed eight SHAC members to travel to Brazil to present their work, including speakers from the UK, India, Ire-



REPORTS

August 2014

Report on the São Paulo ‘Crossing Oceans’ History of Chemistry Conference Held between 24–28 August 2014 at Sao Paulo, Brazil

land, Sweden, and the USA. The meeting was organised in collaboration with the Centre of Logic, Epistemology and History of Science, Unicamp (CLE). The result was a remarkable series of exchanges between scholars of different nationalities, career stages, and disciplinary backgrounds, with a shared interest in mapping the spread of chemical knowledge, both globally and locally, between the early modern period and the present day. There was considerable discussion outside the formal meeting between the Anglophone and Latin American ‘groups’, thanks to a series of tours and social events organised by our Brazilian hosts, with wonderful assistance from CESIMA’s cohort of graduate students. SHAC members circulated copies of *Ambix*, *Sources of Alchemy and Chemistry*, and other materials, which were also prominently displayed throughout the meeting. Perhaps for the first time, SHAC had broken through its European and North American constraints.

To mark the event, SHAC and CESIMA plan to edit a special issue of *Ambix*. This will include the work of both European and Brazilian scholars on the theme of trans-Atlantic and trans-disciplinary exchanges of chemical knowledge, from the seventeenth century to the nineteenth. As at the conference itself, it will bring together the work of senior and early career scholars, under the shared editorship of Ana Maria Alfonso-Goldfarb, Marcia H. M. Ferraz and Silvia Waisse of CESIMA, and Hasok Chang and Jennifer Rampling of SHAC.



Conference participants at the Casa das Rosas (‘House of the Roses’). The greater part of the conference took place in this beautiful São Paulo landmark, one of the only early twentieth-century mansions remaining on the skyscraper-lined Avenida Paulista.



As part of the events programme, participants visited a real site of chemical knowledge – the Natura cosmetics factory outside São Paulo

The potential for developing the history of science and history of chemistry in South America would seem to be great. There is obvious enthusiasm to develop further the scholarly base, there is a youthful and talented student cohort, and there is a fascination with European and North American topics for research. In future, we hope to see increased membership and paper submissions from our South American colleagues, and many fruitful and ongoing conversations.

Robert Anderson, SHAC Chairman

REPORTS

September 2014

Report on the 2014 6th International Conference of the European Society for the History of Science, Session ‘Communicating Science, Technology and Medicine’: Pauling’s *Nature of the Chemical Bond* in post-WWII Chemical Curricula: Europe and Beyond*Held on 4-6 September 2014 at Lisbon, Portugal*

This session on Linus Pauling was organised by the Working Party on the History of Chemistry, EuCheMS, and co-sponsored by the Commission for the History of Modern Chemistry. The session was chaired by Danielle Fauque, GHDSO University Paris Sud, and Club d’histoire de la chimie, SCF, Paris, and organised by Brigitte Van Tiggelen (Chemical Heritage Foundation / Mémosciences and Université catholique de Louvain, Louvain-la-neuve), Danielle Fauque (GHDSO University Paris Sud, and Club d’histoire de la chimie, SCF, Paris), Gisela Boeck (Institut für Chemie, Universität Rostock, Rostock), and Annette Lykknes (Programme for Teacher Education, Norwegian University of Science and Technology NTNU, Trondheim).

The American chemist Linus Pauling began investigating the forces that held together atoms to form molecules using quantum physics in a series of articles published between 1931 and 1933. His quantum mechanical approach was further developed and later disseminated through his groundbreaking textbook *The Nature of the Chemical Bond* published in 1939, soon to be followed by a second revised edition in 1940. Considered a milestone in theoretical chemistry in the late 1940s already, its circulation in Europe was however hindered by World War II and the subsequent partition of the Old Continent in two blocks that added to the natural inertia of scientific curriculum to novelty. As a consequence, in some places it would take a generation before the implications of this new approach was fully incorporated into the scientific and teaching communities. This session explored how the appropriation developed, and how local cultures of chemistry and indigenous teaching policies and traditions adapted the main principles of Pauling’s quantum approach to chemical bond to their chemistry curricula at the higher education level, including continuing education.

In his paper ‘The Initial Reception in France of *The Nature of the Chemical Bond*’, Pierre Laszlo argued that Pauling’s ideas were introduced to French education piggy-backing on philosophical discussions. The first translation indeed was only done in 1949 by the *Académie des sciences morales et politiques*, and not by the *Académie des sciences*; it was published as science popularisation to document the new physical and chemical theories and to bolster philosophical inquiry. A professor at the Sorbonne, Gaston Bachelard, who held the chair of history of science, was nevertheless active in promoting Pauling’s ideas; he was not a teacher of chemistry but bypassed his colleagues in chemistry. His 1953 book, *Le matérialisme rationnel*, summarized Pauling’s valence-bond theory as applied to aromatic molecules. It did much to introduce Pauling’s chemical bond theory in France beyond the narrow circles of philosophers and a few physical chemists.

Gisela Boeck offered a fine grained study of the introduction of Pauling’s concept of the chemical bond in her paper ‘*The Nature of the Chemical Bond* and its Reception in the Chemical Education in the GDR’. Through a survey of the translation, its appearance in university libraries and its use in conferences, teaching and continuing education for secondary teachers, Boeck demonstrated that most GDR professors of Inorganic Chemistry got in touch with Pauling’s ideas through different sources well before the first translation in German in 1962. For example, Günther Schott



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(1921-1985), educated in chemistry in Leipzig and later professor of Inorganic Chemistry in Rostock, was one of the first teachers who not only knew, but also taught the chemical theory on valency based on quantum chemistry, adapting it in an understandable way.

Marco Taddia talked about ‘Footnotes to the First Italian Translation of Pauling: a Curious History’ and demonstrated how the translation was used in the Italian context not to spread new ideas but rather to establish the authority of a local school of Physical Chemistry. Though started as early as 1945, the first translation of *The Nature of the Chemical Bond* into Italian was published in 1949 by Dr. Eugenio Mariani (1912–2005). Giovanni Battista Bonino (1899-1985), one of the most influential scientists of his days, professor of Physical Chemistry at the University of Bologna, and Mariani’s mentor was also the author of the book’s foreword. The disappearance of such notes in the 2nd Italian edition (1961) goes back to the traditional aim of a translation, that is, providing direct access in local language to new and hopefully seminal ideas.

The case of an individual quest for up to date knowledge is developed in Glaucia Silva’s paper ‘Impact of Linus Pauling’s Ideas on the Activity of the Brazilian Professor Ricardo Ferreira’. Having heard about Linus Pauling in chemistry classes in college, Ricardo Ferreira (1928–2013) acquired *The Nature of the Chemical Bond*. Disappointed that the university teaching did not yet incorporate these ideas, he ended up corresponding with Pauling himself. Ferreira founded, together with Professor Ernesto Silva (1900–1970), the Centro de Estudos Linus Pauling at the Faculdade de Farmácia de Recife. Influenced by the ideas of Pauling, Ferreira and Silva wrote *Introdução ao Estudo da Química Geral e Inorgânica* in 1953. Personal contact was key to Ricardo’s publication of articles of theoretical chemistry in *Nature* and in the *Transactions of the Faraday Society*.

In their joint comments, Ana Simoes and Kostas Gavroglu underlined how the session chose a fascinating topic and examined perspectives that raised unusual challenges. Focusing on teaching and textbooks is indeed a difficult approach, because it involved taking into account the local context. Translation studies, a field in itself, and consideration on the issues of scientific peripheries inevitably stood in the background of such an investigation. All this reflected the complexity of the circulation and appropriation of knowledge. The very notion of textbooks is also problematic, as textbooks are supposed to convey coherent knowledge to educate but are also sometimes used to create rupture inside a field. In the case of Pauling’s *Nature of Chemical Bond*, the hybrid character of the textbook adds to the level of complexity. The different papers showed the role of specific individuals or research schools, and their local agenda. The cases explored show how the language barrier was in fact the most tenuous when actors and their personal ambitions were confronted with local institutional contexts, as well as political and cultural context. Point of discussion may focus on favorable or hindering factors, but also on the hybrid character of textbooks according to their use and usage.

Brigitte Van Tiggelen, Université catholique de Louvain

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October 2014

Report on the 2014 SHAC Workshop 'Geographies of Alchemy and Chemistry' Held on 24 October 2014 at the University of Amsterdam



The 5th SHAC Postgraduate Workshop began with a talk by Carmen Simioli, who introduced us to a culture of mercurial alchemy in Tibet, a geographical space rarely visited by Western histories of science and alchemy. Focusing on thirteenth-century Tibetan texts on the process of making Precious Pills, a cure-all containing mercury which is still in use today, Carmen's paper traced the itineraries of these practices and concepts. While much of Tibetan knowledge about mercury was said to come from India, it also sometimes purported to derive from imaginary mythical places.

The theme of knowledge itineraries was continued in Peter Forshaw's keynote lecture on 'Transmissions and Transmutations of the Emerald Tablet.' This influential but characteristically opaque alchemical text, attributed to the ancient Egyptian *magus* Hermes Trismegistus, can be traced back to two different Arabic versions. In the Middle Ages, these spawned three separate translations into Latin, and contin-

ued to be adapted and translated into various vernaculars over the early modern period. During these transmissions, the texts were highly prone to transmutation, as Peter demonstrated by asking other workshop participants for their take on some of the Tablet's most famous and most multivalent phrases, such as 'as above, so below.' Our own interpretations were as varied as those of medieval and early modern translators, which ranged from magical and alchemical readings to Andreas Libavius's view that the Tablet was something of a chemistry textbook, or the seventeenth-century alchemist Michael Maier who used it to read alchemical allegory back into ancient Greek myths.



Axel Petit's paper told another story of transmission across geographical space, focusing on the concept of the ion in nineteenth-century electrochemistry. Coined in 1834 in Cambridge by Michael Faraday as a term for a mobile entity which could explain conductivity through electrolytes, the concept of the ion was itself a very mobile and fluid one. Travelling across the channel and circulating in German laboratories, the ion changed. As a result of efforts to generalise Ohm's law so that it

would successfully explain the conductivity of liquids, by the 1870s the ion had become electrically charged as well as mobile. In 1900, back in Cambridge, J. J. Thomson continued the work of Faraday and changed the ion once more: it was now a mobile unit with an elementary charge. By this point, the nature of the ion was debated between three groups of researchers in Cambridge, London and Northern Europe. Although they shared a common culture of the ion, shaped by the itineraries of the concept across space, each retained a local interpretation.



Geographies of alchemy and chemistry can also be traced at a much smaller local scale. In my own paper, I argued that Hieronymus Brunschwig's books on medical distillation, published at the beginning of the sixteenth century, can be understood as products of a local artisanal network. Enmeshed in this local context, med-



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ical alchemy could draw on a common culture of proper craftsmanship and a range of artisanal skills.

In the second keynote lecture of the day, Lissa Roberts also took a locally focused approach. Tracing the geography of chemistry in eighteenth-century Amsterdam, she highlighted the importance of a local network of 'mundane' chemistry for the production of knowledge and goods. Both circulated between large manufactures of glass, pigments or Glauber salts on the outskirts of the city, artisans' and merchants' shops, pharmacies, and the docks, but also in global markets, thanks to Amsterdam's thriving overseas trade. All of these places could function as sites for producing chemical knowledge. Sugar manufacturers sought new ways to get rid of impurities, wine merchants were trying out additives to improve the taste of their wares, and even the harbour and its ships raised chemical questions, about building materials, but also about the preservation of health during long voyages. In this environment, 'mundane' chemistry was more connected to theoretical concerns than is often assumed. At the same time, this network of people, places and "mundane" concerns is an example of knowledge production which does not lend itself to the traditional narrative of well-defined centres of scientific inquiry and peripheries of things to be investigated. The everyday chemistry of eighteenth-century Amsterdam was in fact not only a question of pursuing



knowledge, but also one of governance and industry.

Thinking about alchemy and chemistry in geographical terms reveals not only networks of transmission, but also boundaries. In his paper on the chymistry of urine in Leiden around 1700, Ruben Verwaal showed what can be gained from following a material substance around as it moves from one bounded space to another. Crossing the boundary between the human body and the outside world, urine held important clues to the invisible inner workings of the body. While uroscopy, the inspection of urine, had a long tradition in medicine, at the beginning of the eighteenth century a group of scholars at Leiden university sought to develop more sophisticated ways of using this diagnostic tool, by subjecting urine to chemical analysis. In doing so, they had to negotiate disciplinary boundaries between the hands-on work of chymistry and academic medicine, which still had not fully broken down in this period.

Even in the early nineteenth century, chemistry often straddled the divide between the academy and more mundane pursuits, as Charlotte Abney showed in her talk on the discovery of the element Cerium in Gustavian Sweden. Drawing on correspondence between investigators, this paper illustrated how Cerium was negotiated in the Republic of Letters, between individuals of different generations, between academia and the mining industry, and between Sweden and the rest of Europe.

Carolyn Cobbold explored the effects of the increasingly widespread use of chemical dyes as food additives from the 1850s onwards. Their detection was as technically difficult as it was important to monitor their use in the interest of consumers, and efforts to develop better detection methods saw the collaboration of chemists from Argentina, France, Germany, and Spain. But chemical colorants not only fostered research efforts which transcended national boundaries, they also shaped new professional boundaries. In Britain, the widespread use of additives bred a new kind of chemist, the state-funded public analyst, soon to be swamped in both numbers and funding by industrial research chemists.



The roundtable discussion brought out issues connecting our individual papers, all of which had illustrated the importance of space and trajectories through space in shaping alchemical and chemical practices and concepts. It became clear that much is to be gained from investigating the local geographies of bounded spaces, but also their connection to the outside. Finally, alchemy and chemistry seem to hold a particular temptation to transgress boundaries – between alchemy and medicine, between the academy and mining, or between nations.

Tillmann Taape, University of Cambridge

REPORTS

November 2014

Report on the 2014 Forum for the History of Chemical Sciences (FoHCS) meeting and the History of Science Society/Philosophy of Science Association Joint Meeting*Held on 6-9 November 2014 in Chicago, USA*

The Forum for the History of the Chemical Sciences (FoHCS) held its fourth business meeting at the History of Science Society Annual Meeting in Chicago this November. This year, FoHCS presented its widest range of activities to date, with two conference panel sessions as well as the first FoHCS Distinguished Lecture, sponsored by the Chemical Heritage Foundation. FoHCS also hosted the award of the 2014 Partington Prize of the Society for the History of Alchemy and Chemistry. Evan Hepler-Smith, a graduate student at Princeton University, received the prize for his essay, "Just as the Structural Formula Does": Names, Diagrams, and the Structure of Organic Chemistry at the 1892 Geneva Nomenclature Congress.' Joel Klein (Columbia University) also received a certificate of commendation for his essay, 'Daniel Sennert, The Philosophical Hen, and the Epistolary Quest for a (Nearly-)Universal Medicine.' The awards were presented by Jennifer Rampling, the Editor of *Ambix*, on the Society's behalf. The presentation was hosted by the Forum for the History of the Chemical Sciences (FoHCS), immediately following the First FoHCS Distinguished Lecture – and, as such, attracted a large, international audience of historians and philosophers of science.

The Distinguished Lecture was delivered on the first day of the conference by Professor Hasok Chang (University of Cambridge), whose lecture title asked the question, 'If you can spray phlogiston, is it real?' Chang used Hacking's notion of experimental realism as a starting point for thinking about the ontological status of a range of entities theorised in the past – from phlogiston to electron orbitals and the mysterious 'frigoric'. Can we say that these entities 'exist', if the use of theories that presuppose them lead to successful experimental outcomes? The topic attracted an audience not only of historians of science, but also of philosophers from the PSA meeting, resulting in a lively discussion.

Friday morning continued the philosophical theme, with a joint session co-sponsored by FoHCS and the Commission for the History of Modern Chemistry (CHMC), on 'What Chemistry Has Brought to Philosophy: Philosophical and Historical Perspectives.' This session, organized by Yoshi Kikuchi and Brigitte van Tiggelen, included papers by Alfred Nordmann (Technische Universität Darmstadt), Minwoo Seo (University of Cambridge), and Jean-Pierre Llored (Ecole Polytechnique), followed by a commentary from Bernadette Bensaude-Vincent, and an extended discussion. Among the questions asked by panelists were the extent to which past and present chemistry helps elucidate important philosophical concepts (such as 'similarity'), and how chemical models and metaphors have been used historically by philosophers.

The official FOHCS-sponsored session, 'The Alchemy of the Unexpected: Interpreting Alchemical Sources from Antiquity to the Seventeenth Century,' organised by Jennifer Rampling, took place on Sunday morning. Four speakers took a comparative approach to the problem of alchemical secrecy, asking how chemical knowledge was both concealed and revealed in chemical writings, often in unexpected ways, and across very different territories. The papers covered Assyrian technical procedures (Eduardo Escobar, University of California, Berkeley), alchemy in early Tudor religious houses (Jennifer Rampling, Princeton University), Turkish alchemical poetry (Tuna Artun, Rutgers University), and Michael Maier's alchemical emblems (Donna Bilak, Columbia University), followed by group discussion.



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November 2014

Report on the 2014 Forum for the History of Chemical Sciences (FoHCS) meeting and at the History of Science Society/Philosophy of Science Association Joint Meeting*Held on 7-9 November 2014 in Chicago, USA*

This was a good year for the history of alchemy and chemistry at the HSS/PSA. In addition to the FoHCS sessions, panels with a chemical flavour included: 'Paracelsus and His Readers: Alchemy, Gender Identity, and Imagination' (organised by Jole Shackelford, University of Minnesota, see below Hiro Hirai's report), 'Replicating Early Modern Materials, Observations, and Experiments' (organised by Tawrin Baker, Indiana University, Bloomington), 'Between the Local and Global: National Pharmacopoeias in the Eighteenth and Nineteenth Centuries' (organised by Joseph Gabriel (Florida State University), 'Rot: Scientific, Social and Cultural Engagements with Putrefaction' (organised by Projit Mukharji, University of Pennsylvania), 'Historical Tracers and the Historiography of Science' (organised by Evan Hepler-Smith, Princeton). At the PSA, sessions included 'Causation, Kinds, and Structure in Chemical Theory' (organised by Michael Weisberg, University of Pennsylvania; sponsored by the International Society for Philosophy of Chemistry), and a symposium on 'Chemical Structure.'

For further information on FoHCS's activities, please contact Peter Ramberg (Chair of the Executive Committee) at ramberg@truman.edu; or Yoshi Kikuchi (Chair of the Programs Committee) at kikuchi_yoshiyuki@soken.ac.jp.

Jennifer Rampling, Princeton University

Panel: 'Paracelsus and His Readers'

The panel 'Paracelsus and His Readers,' composed of four papers, was held at the annual meeting of the History of Science Society (Chicago, 6–9 November 2014). In the first paper, 'Was Paracelsus a Transmutational Alchemist?', Andrew Sparling of Duke University reconsidered the dominant view that Paracelsus rejected the possibility of artificial gold-making. Charles Gunnoe of Aquinas College presented a paper entitled 'Toxites as Paracelsian Advocate', wherein he described the life and work of the less-studied early advocate of Paracelsus. Hiro Hirai, Radboud University, and Yohei Kikuchihara, Kyushu Institute of Technology presented a paper entitled 'Syphilis, Sexuality and Imagination in Paracelsus', wherein they addressed Paracelsus's theory of the generation of new diseases. In her paper 'Sex Differentiation in the Later Works of Paracelsus as Precursors to Psychological Theories of Sexuality and Gender', Amy Cislo, Washington University St Louis compared Paracelsus's works with modern psychological theories. Although the panel was scheduled at the very beginning of the annual meeting on Thursday afternoon, it attracted many keen listeners.

Hiro Hirai, Radboud University Nijmegen

SPECIAL (SUMMER) FEATURE

A True and Faithful Relation of an Alchemical Summer Trip

Vacation is the time when one is expected to forget about daily routine, think and read about topics which are not part of his or her professional life, devote oneself to recreational activities, and obviously travel a lot – but as a tourist, with no expectation for results that would be relevant to one's work and career. Thus, leisure theory says, one 're-creates' oneself, getting ready for the next round in the wheel-ruts of the yearly horse mill. Such approach to holiday tourism is similar to that of knights-errant in search of adventure or – for the more philosophically minded – to the attitude declared by Fynes Moryson (1566-1630) in his *Itinerary* (1617), describing his extensive travels during the 1590's (including a visit to Edward Kelley's house in Prague). Quoting the authority of Aristotle's precept that virtue is desired for itself only, he concluded: 'So I say the fruit of trauell is trauell it selfe'. To use an alchemically tinged metaphor, it is like delving into *spiritus mundi* and awaiting for the unexpected to happen. Of course, today people do not just go anywhere but choose a city or region to explore, constructing its meaning for themselves while doing that.

There is, however, the opposite approach to tourism, akin to the way of the pilgrim rather than that of the knight-errant. It involves going to a particular place – be it a building, a square, a field, or a garden – because it already is loaded with meaning for the tourist. If the place is not a generally recognised tourist attraction – so much the better. And it does not really matter whether the goal of the trip still exists in its original historical form, is completely rebuilt, just an empty place (like a battle field), or has been turned into a Disneylandised version of what may have been there centuries ago. The thing is to visit the place, take a symbolic possession of it, and feel and absorb its *spiritus loci* – which makes a complementary metaphor to describe this attitude.

Tourists who are also historians have the additional privilege of being able to identify the places related to the people of interest to them through meticulous study of relevant sources. Thus they have the chance to be the first conscious visitors, aware of the meaning the place has and therefore also its *spiritus loci*. But usually there is little chance for such trips to be funded from a research grant, unless a scholarly conference happens to be held in the same city or there is a library or archive which one can indicate as the official goal of research travel. In other cases the scholar has to assume the tourist persona and visit such places as part of his or her vacation.



The location of John Dee and Edward Kelley's house (marked in blue) juxtaposed over the current building on the same spot.

This year I had a chance to use both options. From last autumn until early spring I worked with Dr Kamila Follprecht of the National Archives in Cracow on identifying the house which had been rented by John Dee and Edward Kelley when they arrived in Cracow in April 1584. They stayed there until July or August 1585 (with two trips to Prague in the meantime) and it was that house where angels (or Kelley – depending on what one believes) dictated the invocations or Calls in angelic language, together with translations into English and some other information pertaining to what is today called Enochian Magic. The language is genuinely intriguing and was studied by at least two linguists (Donald Laycock and Piotr Klafkowski) with ambiguous

results but it certainly stands as a monument to Edward Kelley's uncanny intelligence and his ingenuity in using Dee's library and constructing new magical systems, acceptable in the light of the



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learned Doctor's extensive knowledge.

The efforts of Dr Follprecht and myself proved successful and we presented the results at a conference in Cracow at the end of May. Needless to say, the first thing I did after arrival was to visit that place. The original house does not survive – it was rebuilt in the 17th century to make one building with the neighbouring house, and eventually both were pulled down in 1907 and replaced with a huge Art Nouveau-style edifice. Now there is a cafe and hotel-like apartments on higher floors. I did not stay there but on my next visit to Cracow I will certainly book an apartment on the first floor where both Dee and Kelley had their separate studies, as recorded in the former's diaries.

In early August my wife and I went on vacation to Venice and Florence, without having in mind any alchemically meaningful places there – even though there are potentially a lot of them. For the lack of time, we did not go to Careggi just outside Florence, where Marsilio Ficino lived in a house near Villa Medici and presumably there formulated his theory of *spiritus mundi* that was to be so seminal (to use a pun) for one important current of the Renaissance alchemical tradition. Neither had I had time to investigate the possible 'sites of alchemy' in Venice, which was the home of many fascinating characters, from the early 16th century Giovanni Agostino Panteo, whose *Voarchadumia* was studied by Dee and may have been an inspiration for Kelley to create the angelic language, until the late 17th century Marquis Francesco Maria Santinelli, who moved there from Rome (having been expelled from Queen Christina's court) and joined Federico Gualdi, a most curious Rosicrucian alchemist, believed to have found the elixir of life and lived for over 400 years.



However, as we were driving from Poland to Italy and back again, I chose a number of places to stop at on our way. Thus for the first night we stayed at a hotel in Altdorf, a nice old town where there used to be a university (founded in 1578 and closed down in 1809), whose building survives. The most famous of its graduates was Gottfried Wilhelm Leibniz, as one of the memorial plaques reminds visitors, but it was also one of the universities attended by the influential Polish alchemical author Michael Sendivogius. He was enrolled in 1594, already as the courtier of Rudolf II, and there is a record showing that on 18 March 1595 he loaned the university coach (*Universitätskutsche*) to go the nearby Nuremberg. So we likewise went there in his footsteps and spent some two hours admiring the beauty of late gothic architecture and visiting the houses of Albrecht Dürer.

On our way back we stopped for one night at Salzburg, in a hotel just next to St. Sebastian Church with the famous cemetery, displaying a great number of epitaphs in the cloisters around it, and with the graves of members of Mozart's family in the centre. Our main purpose of making the stopover there was not so much connected with the great composer (even though his *Magic Flute* is said to have alchemical and masonic inspirations), as with the grave of Paracelsus. The epitaph is on the wall, just right of the entrance, at the bottom of the stairs leading to the church. Both his remains and the original gravestone were moved there in 1752, and a newly made monument with his medallion portrait was placed above it.

From Salzburg we went to Třeboň in the Czech Republic, one of the most picturesque small towns with the adjacent castle of the Rožmberks, practically unchanged from the times when it was rebuilt in Renaissance style in the 15th/16th centuries, except for the 19th century brewery just outside the city walls. The



SPECIAL FEATURE

walls themselves fully encircle the town, so that one has to use one of the gates to enter it. Beyond the moat there are parks and large fish ponds, for which Třeboň is famous. They were established by William of Rožmberk (1535-1592) and still provide the majority of carp for Czechs. The person who planned, engineered and managed the ponds for him was Jakub Krčín (1535-1604), who in 1589 received a small land estate for his service and established an alchemical laboratory there. His interest in the art may have been inspired by John Dee and Edward Kelley because it was in Třeboň where they found refuge after Rudolf II expelled them from his lands but then allowed them to stay on the estates of William of Rožmberk. They certainly must have met Krčín, whose house was just beside one of the gates leading to the castle – and equally certainly they ate carps from his ponds



because it was the most easily available meat. So when we had a delicious carp in a local inn, I imagined it was a descendant of the carp eaten by the English magi.

But the most exciting place in Třeboň would be where Dee and Kelley conducted their alchemical experiments. The only clue was a note in the diaries that on 28 and 29 October 1587 “Jo[hn] Carp [io] did begin to make furnaces over the gate”. That Czech friend of theirs was Jan Kapr (with three carp in his arms) but the problem was identifying the correct gate. There are two gates in the

city walls – but these may be excluded, as Kelley and Dee were guests of Rožmberk, so presumably lived at the castle (and it also appears so from three different notes in the diaries). But the castle also has two gates leading to it from the town (one of them near Krčín’s house), and one more between two parts of the castle itself. More research is clearly needed in the Castle Archives of Třeboň – and for the time being, my wife took pictures of me at all of the gates, and we had a pint of excellent local beer in ‘At Kelley’s’ pub at the castle.

On leaving the Czech Republic we stopped for lunch at Zgorzelec/Görlitz, the home town of Jakob Böhme. After 1945 it was divided between Poland and East Germany, so that the house where he had his shoemaker’s workshop (he owned three other houses, too) is now on the Polish side of the river and there is a small exposition with the tools of his trade and some information, arranged on the first floor. The curator of the local museum explained to us that the workshop was obviously on the ground floor but because there is a gallery of a local artist there, Böhme’s workshop had to be arranged upstairs – and nothing in it is genuine. Then we went to the other side of the river, the German part of the town with its beautiful cathedral, to visit the alchemical mystic’s grave. There are two tombstones, one vertical from the early 20th century, the other horizontal and quite new. The original cross with the Rosicrucian inscription *Aus Gott geboren / In JHSVH gestorben / Mit dem Heiligen Geist versiegelt* has not survived and it was not repeated on the replacements.



And so we returned to Poznań, where – to quote John Dee again – ‘I lay this night first at my house’.

Rafał Prinke (University of Poznań, Poland)

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SHAC welcomes the following new members:

Burnham, Daniel	New York, USA
Collins, James	Toronto, Canada
Deluzarche, Michel	Strasbourg, France
De Vries, Lyke	Radboud University, Nijmegen
Félix-Díaz, Alfredo	Berlin, Germany
Irish, Stephen	University of Cambridge, UK
Koutalis, Vangelis	University of Ioannina, Greece
Lloyd, Harriet (Hattie)	STS Department, University College London, UK
Harvey-Chadwick, Terence	SV Educational Services, Cumbria, UK
Maufort, Danielle	Antwerp, Belgium
Roberts, Lissa	University of Twente, the Netherlands
Singerman, David	MIT, USA
Smith, John Lucian	Brown University, USA
Sterkenburg, David	University of Amsterdam, the Netherlands
Van Driel, Joppe	University of Twente, the Netherlands
Verwaal, Ruben	University of Groningen, the Netherlands

MEMBERSHIP MATTERS

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- access to the online *Ambix* archive.



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

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

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

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

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

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

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

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Society for the History of Alchemy and Chemistry

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

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

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

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

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

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

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