CHEMICAL INTELLIGENCE

Summer 2023 issue

Society for the History of Alchemy and Chemistry

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SHAC news & announcements

September Webinar – Gabriele Ferrario. The next SHAC webinar will be live on Zoom on Thursday 28 September 2023 beginning at 5.00pm BST (6.00pm CET, 12 noon EST, 9.00am PST). It will be given by Gabriele Ferrario of Bologna University on his forthcoming publication in the series Sources of Alchemy and Early Chemistry, entitled “On Alums and Salts”. The format will be a talk of twenty to thirty minutes, followed by a moderated discussion of half an hour. Look out for registration details in a SHAC member email and also information posted on SHAC social media, Mersenne and Chem-Hist. The final webinar of 2023 will take place on Thursday 9 November, details nearer the time.

SHAC

news & announcements

SHAC Autumn Meeting – Saturday 25 November 2023 in London. SHAC's autumn meeting will explore the theme "Alchemy and Chemistry in the Long Eighteenth Century". It will take place in London on 25 November 2023, most likely at UCL. Please send offers of papers to Frank James, frank.james@ucl.ac.uk by 15 September.

John Perkins

We were very saddened to learn that John Perkins, SHAC Treasurer from 2007 to 2013, passed away in May. John helped transform the Society's activities during his tenure as Treasurer, introducing our grants scheme, co-founding the Oxford History of Alchemy and Chemistry Seminar Series and bringing together the series of conferences on Sites of Chemistry, 1600-2000. This conference series investigated the wide and diverse range of physical spaces and places where chemistry has been practised and led to several special issues of *Ambix*. John will be greatly missed by all who knew him. An appreciation of John's life and work will appear in the November *Ambix*.

Society of Apothecaries' Research Grant Scheme

The Friends of the Archives of the Society of Apothecaries have launched a Research Grant Scheme to encourage greater use of the Society's Historical Collections.

Please follow the links below for the application form and a copy of the Applicant Guidance that sets out the nature and terms of this new funding opportunity for those researching into the history of medicine, pharmacy, and other related topics.

- For the application form: please click here
- For the guidelines: please click here

For further information contact friends@apothecaries.org

Symposium “Heritage of Chemistry / Patrimoine de la Chimie” To be held in Rennes (France) on 23-24 November 2023.

The Laboratory: its buildings, its instruments, and its chemists

The heritage of chemistry has long been neglected by historians of science, technology, and industry. This is especially true of laboratories, as used for both research and teaching. Many of us have watched helplessly as archives, books, instruments, and other equipment have been dumped, and buildings devoted to chemistry have been refitted for quite different purposes or even demolished, often with no regard for their historical significance.

In 2011, an international symposium in Paris addressed the broad issue of the conservation of the archives and other aspects of the heritage of chemistry, including the growing challenges of conservation in the digital age. At about the same time, the Society for the History of Alchemy and Chemistry (SHAC) organized a series of international workshops on “Sites of chemistry” and devoted three issues of its journal *Ambix* to the subject (2013-2015). In 2016, a special issue of the journal of the Comité mation et de Liaison pour l’Archéologie (CILAC), Patrimoine industriel, was given to the heritage of chemistry. And in 2021, the programmes of two online national congresses, mounted by the Société Française d’Histoire des Sciences et des Techniques (SFHST, Montpellier) and the Comité des Travaux Historiques et Scientifique (CTHS, Nantes), included symposia on the history of collections, though with chemistry occupying only a minor place.

In these initiatives, laboratories have never been a major focus. Yet the chemical sciences are inseparable from their experimental dimension, which calls for suitable buildings, material installations, and apparatus, as well as a wide range of personnel, from laboratory assistants to specialized technicians, engineers, and researchers. Beyond their walls, too, laboratories draw on suppliers of equipment and chemicals, who also form part of the system of teaching and research in chemistry.

In this symposium, we want to direct attention to chemical laboratories, with special reference to the following aspects:

- buildings specially designed for the training of chemists;
- laboratories for both teaching and research;
- the facilities that allowed laboratories to carry out their research;
- the instruments they used, including those that have since become common but were innovative in their time; also instruments specific to a given research activity;
- publications used in laboratories, such as textbooks, guides, dictionaries, directories, or wall charts;
- the chemists who were behind the creation of the laboratories, including their archives and laboratory notebooks.

Symposium Organization and Call for Papers

The symposium, which is open to all, is organized by three associations that have come together in their common goal of exploring, through laboratories, the forgotten or neglected aspects of teaching and research in chemistry:

La Société Française d'Histoire de la Chimie (SFHC), https://www.sfhc.fr/
L'Association de Sauvegarde et d'Étude des Instruments Scientifiques et Techniques de l'Enseignement (ASEISTE), http://aseiste.org/
Rennes en Sciences, http://www.rennesensciences.fr/

The symposium will take place over two days:

- On Thursday, 23 November, a day of case studies, preceded by a lecture on the heritage of chemistry for the general public, primarily though not exclusively teachers and schoolchildren. There will also be an opportunity of visiting an exhibition and demonstrations of instruments.

- On Friday, 24 November, a day of visits to see something of the remarkable scientific heritage of Rennes: the scientific collections of the University of Rennes 1; the collections and nineteenth-century chemistry laboratory of the Cité scolaire Émile Zola, with the support of the Amélycor association; the collection of medical equipment of the Conservatoire du Patrimoine Hospitalier de Rennes (CPHR); and the permanent and temporary exhibitions of the association "Espace des Sciences", etc.

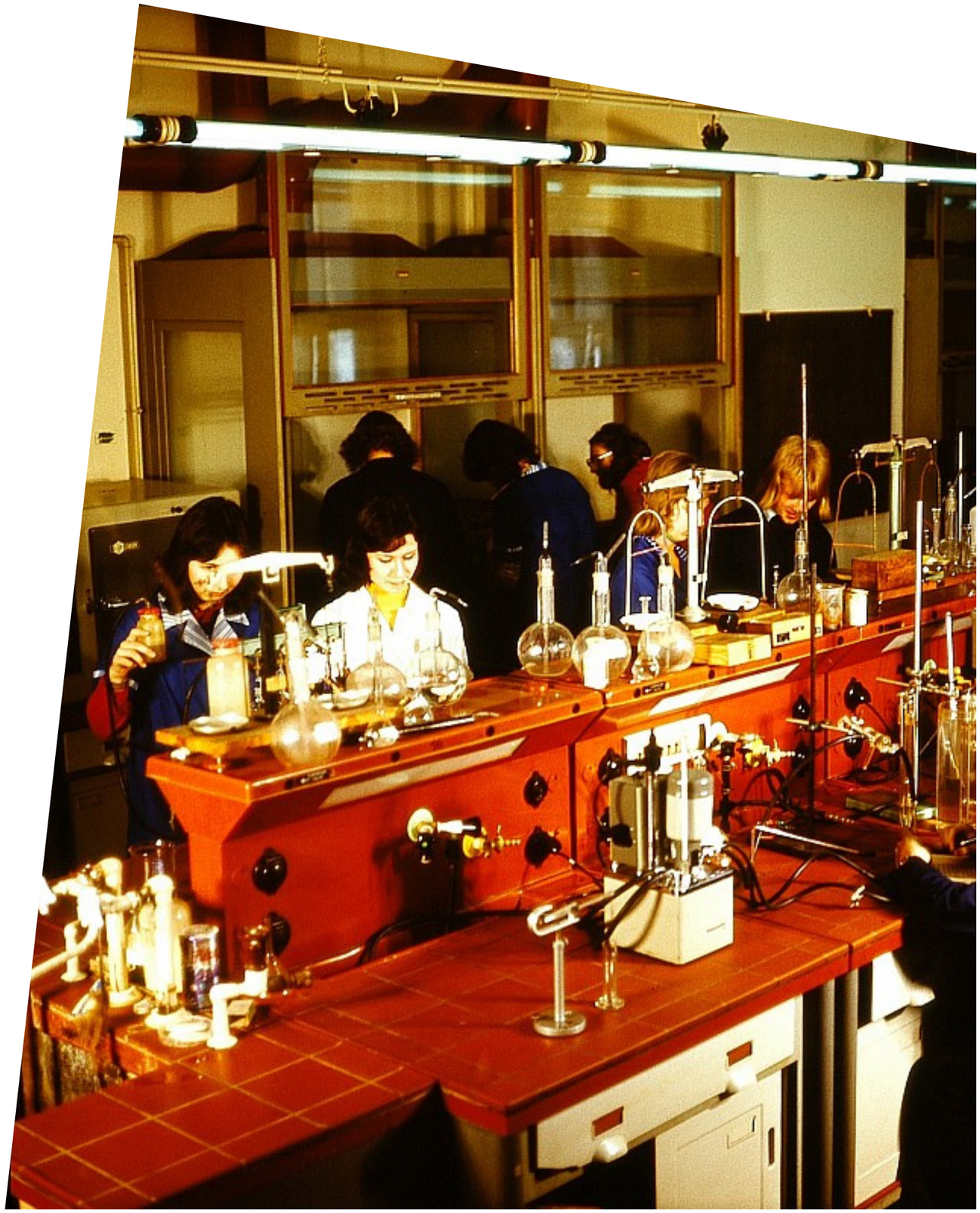
If you are interested in the theme of the symposium, please send an abstract of your contribution in English or in French (2500 characters, spaces included, or 350 words maximum) before July 10, 2023 to:

PatrimoineChimie.2023@gmail.com

In response, the symposium's organizing committee will propose either an oral presentation or the possibility of participation in a poster session.

The members of the organizing Committee: Danielle FAUQUE (SFHC); Julie PRISER (ASEISTE); Jacques ROLLAND (Rennes en Sciences)

NB. French is the main language of the symposium. Power point presentations and posters must be in French, although talks may be delivered in English.



SHAC Special ICHC13 Award Scheme reports

Christopher Halm

I would like to thank the Society for the History of Alchemy and Chemistry (SHAC) for presenting me the "ICHC Special Award Scheme" that enabled me to participate at the 12th International Conference on the History of Chemistry (ICHC) in Maastricht, Netherlands (29 July - 2 August 2019). My paper "Chemists in Agriculture. The Implementation of «Field-Laboratories»" was part of the panel "Making, Knowing, and Performing Outside the Laboratory: Different Sites of Chemical Knowledge Production".

This panel was designed by me in cooperation with other participants. The idea behind the panel was to follow up on recent studies that have shown that the production and presentation of chemical knowledge encompass a wide range of different sites and practices. Beginning with the 18th century, the panel's four papers investigated how chemical knowledge was produced outside the ideal laboratory. The sites studied were the arable field, the courtroom, the observatory, and the surface of Mars. Thanks to the excellent commentary and a rich final discussion with the audience, at least three connections between the four individual contributions could be highlighted: (1) In the attempt to succeed even in rather unconventional spaces, chemists temp to set up laboratory-like structures or even new forms of the laboratory into these spaces. (2) In so doing, they face issues of how to justify the efforts and the costs involved in such ventures. (3) During the subsequent implementation of the project, the chemists and their laboratories consistently had to adapt to temporarily changing circumstances. In conclusion, the papers given in the panel construed the problem of how chemists may create stability in spaces that are offbeat, somehow less well-known, inherently (by nature) unstable and occasionally very changeable.

One of the surprising results of this panel was the strong mobility of the laboratory: Laboratories can be packed into a suitcase and brought as such onto the farmland. They can even drive independently as a rover on Mars. Moreover, laboratories seem to have an invasive character. They alter the way how people do

research in a particular space, what equipment they use and what questions they ask. Laboratories change the perception of a certain space. Eventually, they change the space itself and create a new version of it.

I am very grateful to SHAC for giving me the opportunity to present my research and to communicate my idea of the «field-laboratory» to an internationally highly respected audience. Thanks to the excellent exchange, I was able to prove and strengthen my argumentation, which encourages me to publish my results in the very near future.

Konstantin Kiprijanov

The SHAC ICHC Special Award offered me the unique opportunity to present the results of my recently completed PhD dissertation at ICHC12 in Maastricht. My contribution to this conference built on an earlier paper that I presented at ICHC11 in Trondheim, and which was also sponsored by a SHAC award that I had received in that year. By attending this year's meeting, I was able to discuss my progress with world-leading scholars who I met two years ago, and whose feedback made a significant and valuable contribution to the successful completion of my thesis.

In my PhD thesis, I investigated how structural formulae became established as the default graphic notation of organic chemistry during the last third of the nineteenth century. Aiming to provide a detailed account of the iconographic evolution of the modern chemical notation, my ICHC12 paper combined perspectives from history of chemistry with history of print culture to examine the practical challenges of printing and circulating different forms of chemical diagrams in the nineteenth century. I argued that, as a result of being printed by means of letterpress, structural formulae acquired several practical and economic advantages over competing diagrams that were proposed in the 1860s. Building on historical case studies of different printing technologies, I demonstrated that typeset formulae were faster to print and easier to reproduce than diagrams rendered by means of wood and copperplate engravings. The paper concluded that these advantages made structural formulae the most convenient representation of chemical structure with regard to the highly competitive market for chemical literature. In so doing, I showed that the iconography and lasting success of structural formulae did not derive from theoretical reasons alone, but were to a very large degree based on economic and practical aspects of print communication.

I was very excited to see the most recent developments in the history of chemistry and related fields, and to follow up on the research projects that were presented at the ICHC11 meeting in Trondheim two years ago. Most notably, I was thrilled to see that many of the papers presented at this year's conference were closely related to my own research. Papers presented in Session B3 ('Communication and Education') argued that we cannot understand the formation and operation of scientific disciplines without understanding how they are produced, reproduced, and gradually transformed by systems of pedagogy. Furthermore, contributions to Sessions A5 ('Sites of Chemical Knowledge') and A8 ('From the Lower Rhine Area into the World') emphasised that the acquisition of new skills and practices can only be understood in the local institutional context, for instance in the context of teaching and learning in the laboratory, but also in the field. I would like to express my gratitude to SHAC for its generous support of this project in the form of this grant and its continuous assistance through a vast network of international scholars in the discipline.

Sarah Lang

The 13th International Conference on the History of Chemistry (13ICHC), a premier event for historians of chemistry, was held in Vilnius, Lithuania, from 23–27 May 2023. This year, the conference was conjoined with the Jędrzej Śniadecki Memorial Conference "Frontiers in Molecular Life Sciences". The conference presented an exciting array of panels and keynote lectures, offering unique perspectives on the history of chemistry. One particularly noteworthy panel was organized by the Society for the History of Alchemy and Chemistry (SHAC), aptly named 'New approaches to the history of chemistry'. The SHAC-sponsored panel was organized by Anna Simmons and Frank James.

The first presentation of the panel, delivered by Meagan Allen, centered on the role of modern experiment in understanding the alchemical medicines of the Late Middle Ages. Her talk argued the usefulness of replications to identify substances and practices from medieval alchemical medicine. However, she cautioned against reducing the complexity of medieval alchemical medicine to modern chemistry, as it could overshadow the original beliefs and contexts of practitioners.

As the second speaker, I discussed the application of Digital Humanities to the history of alchemy. My presentation illustrated how digital humanities methods can be applied to decrypt alchemical ciphers and identify laboratory apparatus in metallurgical tracts. I referenced successful case studies, and advocated for the use of text and image mining for a better understanding of the historical laboratory processes and the cultural practices of depicting them. Of course, the revolutionary potential of ChatGPT for the future of the history of science came up in the discussion.

Adrian Wilson's talk explored the origin and evolution of the "Chemical Revolution" concept. He traced its origins back to 1890 when it was used by Berthelot in a book title. Wilson argued that the concept as we know it today - signifying a singular, definitive shift in chemical understanding - is a product of later historiography. He also touched upon the diverse interpretations of the term over time, marking a need for future exploration to fully grasp how the concept became dominant.

Lastly, Frank James (paper co-authored by Anna Simmons) presented a captivating case on the marginalization of William Thomas Brande in the history of science. He argued that the focus on scientific research in historiography, neglecting aspects like lecturing, administration, and consulting, contributed to Brande's relative obscurity, despite him being a prominent figure in his time. The talk urged a broader look at Brande's contributions, contributing to a more comprehensive view of the historical landscape.

The panel discussions were insightful, challenging preconceptions, and inviting historians to consider fresh methodologies and perspectives in their work. From the application of modern experiments and digital humanities to the analysis of historiographic biases, these presentations showcased the diversity within the history of chemistry. SHAC, along with conference organizers, contributed to fostering an enriching environment for scholarly discourse, thereby enabling meaningful strides in the understanding and appreciation of the history of chemistry and supporting early career researchers.

Sarah Lowengard

It was the best of times (a reunion with colleagues and chance to meet formerly-unknown-to-me historians of chemistry), it was the worst of times (there's never enough time), it was the age of wisdom (4 plenaries, 59 presentations, 3 posters plus field trips! and social events!), it was the age of foolishness (see: trying to cram the age of wisdom into 3½ days), it was the epoch of belief (in the conference format as a still-viable means of academic communication), it was the epoch of incredulity (not naming names here), it was the season of Light, . . . it was ICHC13, in Vilnius 23-26 May 2023.

I confess I did not make it to everything, but I left Vilnius with my brain aching from the new scholarship and new research trends crammed into it. Some of that will certainly affect my own work going forward, as will the helpful comments offered me. The grant from SHAC helped to fund my travel to this conference, which I expect will be as useful to me as the practical chemistry I study strives to be to society.

Thomas Mougey

The grant I was generously awarded by SHAC enabled me to take part in the ICHC 2023. In Vilnius, I have presented a paper on May 25th as part of the special panel 'Face to Face for Science: Chemistry Conferences and Scientific Practice' organized by Geert Somsen on face-to-face interactions, its functions and design at International Conferences over the period 1870-1970. The panel generated curiosity and interest from a number of attendees who seemed to have taken up our call to consider more seriously the role of international conferences in understanding the development of the chemical sciences in the 20th century. I have also participated in the closing round table 'Conversations on the History of Chemistry' on May 26th organized by the Program Organizing committee as part of an initiative launched by the Commission on the History of Chemistry and the Molecular Sciences. In this roundtable, I have presented my 'takeaways' from the rich program of the ICHC 2023 and shared my views on the future directions of the history of chemistry. The outcome of this roundtable will contribute to the report Sarah Hijmans will present as part of a global 24-hour symposium on the "future of history of Science and Technology/History of Science and Technology for the future" organized on September 29th by the Division for the History of Science and Technology of the International Union of Philosophy and History of Science. Finally, my participation in ICHC enabled me to meet and establish working relationships with a number of participants with respect to my on-going project Museums and Industry: Long Histories of Collaboration.

Silvia Pérez Criado

I was granted the SHAC Grant for the Vilnius Conference, which provided me with a remarkable opportunity to present the findings of my ongoing thesis project at the 13rd International Conference on the History of Chemistry 2023 in Vilnius, Lithuania, held from 23 May to 26 May 2023. During the conference, I delivered a paper titled "The making of ignorance in the regulation of DDT in Franco Spain" within a thematic session centered around known and unknown risks and hazards. Additionally, I had the privilege of participating in a roundtable discussion during the closing session alongside my esteemed colleagues, Meagan Allen, Christopher Halm, Thomas Mougey, Alessio Rocci, and Umberto Veronesi. This roundtable involved reflecting upon two pivotal question: "What are your "takeaways" from this conference?" and "What are your views on the future directions of

the history of chemistry?". Following the roundtable, a plenary discussion with all conference attendees took place, which was aimed at fostering further engagement. It is worth noting that this session aligns with an initiative undertaken by the Commission on the History of Chemistry and the Molecular Sciences (CHCMS), which seeks to organize a series of online roundtables. Furthermore, I am delighted to share that I have been unanimously elected as the Secretary of the Working Party on the History of Chemistry, an international group specializing in the historical aspects of chemistry and an integral part of EuChemS, the European federation of chemical societies.

Alessio Rocci

From May 23, 2023, until May 27, 2023, I had the opportunity to participate in the 13th International Conference for the History of Chemistry (13-ICHC). This conference gave me the chance to know a community of researchers that I never met. I've already taken part in other meetings, but they were conferences on the history of science or focused on the history of physics. I presented a talk as part of a panel and the question-and-answer session has been very helpful. I've also discussed my work and new ideas with my new colleagues in an informal but very fruitful environment. I was also invited to give my impressions at the end of the conference with other young researchers. It is always interesting to understand colleagues' point of view on many problems correlated to history, education and conservation of all the heritage we have, e.g. laboratories and industrial sites. During the conference, I also explored the possibility of coordinating a "special issue" with the journal of SHAC.

Besides the institutional moments, many informal activities helped me to discover the city of Vilnius and the culture of Lithuania. I profited from a tour that taught me how interesting this city's story is. This tour gave me the coordinates to appreciate the work of one of the local organizers, who mapped some sites that had a role in the history of chemistry in Vilnius. After the last day of the conference, many participants, including me, had the opportunity to explore other cities in the region.

During the day, we appreciated the local food, and I learnt more about the archaeological history of the area, but I also had the opportunity to discuss with colleagues new perspectives for my future work. Therefore, my participation in 13-ICHC was an essential occasion for networking, discussing my research and introducing myself to a well-established community of scholars.

S H A C

Project & Subject Development Reports

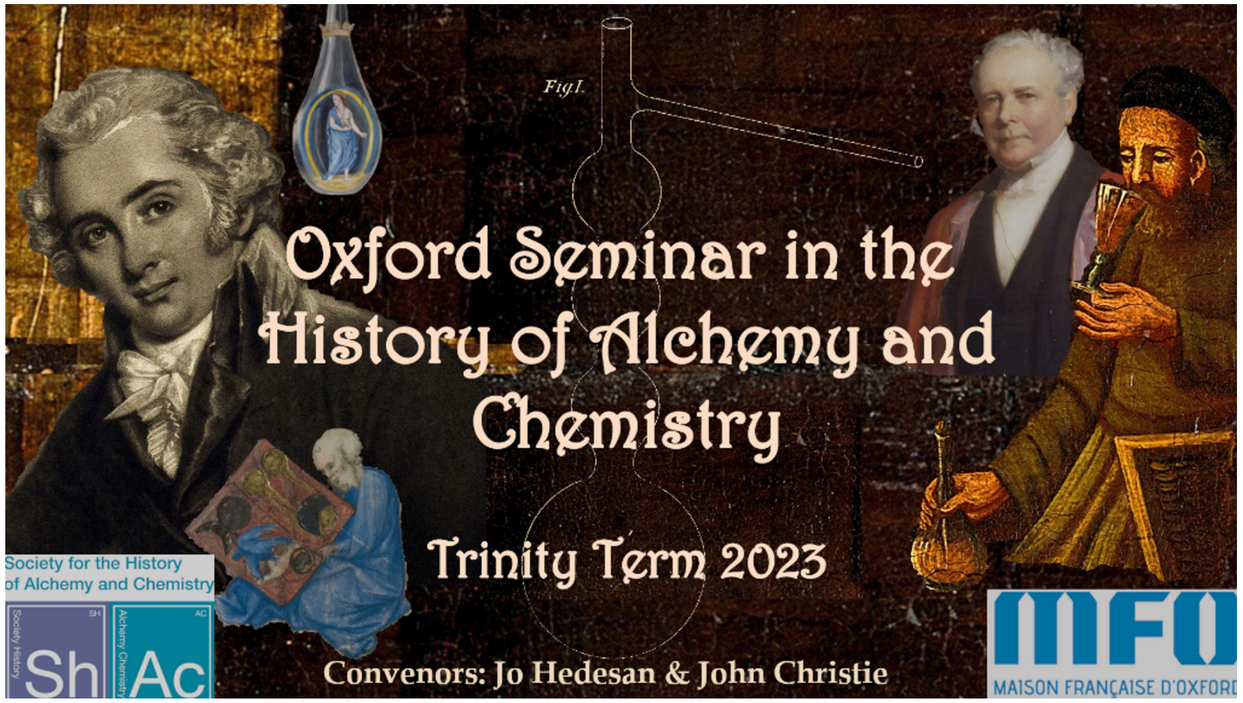
Jargonium

Established by early-career researchers with a shared research interest in history and philosophy of chemistry, the website *Jargonium* has been showcasing short essays on chemistry and alchemy from the perspective of humanities since 2020. Our first objective is to show a wider public that chemistry is a source of insight for anyone with an interest in philosophy, history, art, sociology, or any other facet of humanistic inquiry. We also aim to provide a platform for current work in the history and philosophy of chemistry, focusing especially on the work of PhD candidates and early-career researchers.

In the summer of 2022, Jargonium received a subject development award from SHAC in order to help fund the costs of keeping our domain name online. Thanks to SHAC's support, we have been able to continue publishing essays on various philosophical and historical topics. For example, Armel Cornu provided a fascinating look into her PhD dissertation on the history of mineral waters in an article that analyzed the role of chemistry in developing methods to evaluate the safety of drinking water. In her reflection on (anti)realism about genes, Francesca Bellazzi highlighted the importance of various philosophical views of these entities at different stages of scientific inquiry. Sofiya Kamalova also shared her work on the Ardistyl case of occupational poisoning, describing the different settings in which interactions with toxic chemicals occurred and how knowledge circulated between these different contexts. Lastly, our own Vanessa Seifert published a call to promote a feminist philosophy of chemistry. In addition to our regular blog posts, we recently launched a series called "Jargonium Asks", in which established scholars answer a series of questions regarding the nature of their work and the ways in which they see the field progressing.

All of these recent additions to the website, as well as our earlier publications, are free to access online at www.jargonium.com. We are very grateful to SHAC for the award, which will help us continue this project going for at least two years. We have many more exciting publications coming up in the future, and are always looking for additional work to share. If you are interested in writing something for us, please feel free to contact us at jargoniumblog@gmail.com.

Editors Karoliina Pulkkinen,
Vanessa Seifert and
Sarah Hijmans.



The Oxford Seminar in the History of Alchemy and Chemistry has been organised since 2012 at Maison Française d'Oxford (MFO), being supported by the Society for the History of Alchemy and Chemistry. The initial seminars were set up by John Christie (Oxford) and John Perkins (Oxford Brookes) with MFO support and in due course they became one of the fixtures in the seminar series of the Oxford's Trinity (late spring) term. After two years' hiatus due to Covid, it was finally hosted again in person at the Maison. The seminars took place between 3 May and 14 June, and comprised five sessions organised thematically and chronologically. The organisers were Jo Hedesan (Oxford) and John Christie (Oxford).

The first session of the Seminar (3 May) was entitled 'Medieval Islamic Alchemy and its Influence' and was chaired by Jennifer Rampling (Princeton University and Corpus Christi College, Oxford). Salam Rassi (University of Edinburgh) presented 'Alchemy and Religious Authority in the Islamic World: The Case of Ibn Umayl (fl. c. 912)'. Rassi's talk examined the debate among medieval Arabic alchemists regarding the use of animal products in the making of the philosophers' stone. In particular, he discussed the ways in which alchemists invoked religious authority in order to justify their particular method of crafting the elixir. Rassi focused on two camps in the debate: the author(s) of the Jābirian corpus (ca. 8th - 9th ce.), who posited that the Stone is composed of organic matter, and Ibn Umayl (fl. 10th ce.), who stipulated substances from the mineral realm.

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Tom Fischer (EPHE Paris, fellow of Maison Française d'Oxford) presented "New Perspectives on the Transmission and Influence of Senior Zadith's *Tabula chemica*". The aim of this paper was to take stock of the corpus of texts associated with the *Tabula chem-*

chemica, a Latin translation of a work originally written by Ibn Umayl, usually known in Latin alchemy as Senior Zadith. Particular attention was paid to the anonymous and unpublished commentary entitled *Liber Joseph* (14th century), which bears witness to the early medieval, English and Christian reception of this corpus.

The second session of the Seminar (17 May) was entitled 'Vintage Analogies in Medieval and Early Modern Medical Alchemy' and comprised Mark Thakkar (St Andrews) and Carmen Schmechel (FU Berlin). The session was chaired by Rob Iliffe (Oxford). In premodern times, winemaking held great significance for medical theories. Thakkar and Schmechel's panel explored some aspects of the maturation of wine, their terminology, and their analogies with digestion, as well as the presumed role of tartar (a bi-product of wine fermentation) in engendering disease. Thakkar's paper, 'Scraping the Bottom of the Barrel? Medieval Sermons as a Source for the History of Fermentation' used an enquiry into the French word 'râpe' and the Latin word 'raspatum' to illustrate the potential fruitfulness of medieval sermons as a source for the history of wine production practices.

Schmechel's paper, 'The "Wine Stone": Tartar as a Cause of Disease in Paracelsus and Joseph Duchesne', delved into Paracelsus' theory of tartar and its role in disease, as well as its later fortunes in the Paracelsian medical thought of Joseph du Chesne, highlighting the analogies between wine fermentation and physiological and pathological processes in the human body.

The third session of the Seminar (24 May) was 'Religion and Medicine in Early Modern Alchemy' and was chaired by Jo Hedesan. Before the session, the organisers learned of the sad passing of John Perkins; it seemed suitable that this session be dedicated to his memory. Short eulogies were offered by John Christie and Jennifer Rampling. An obituary is planned to be published in SHAC's journal *Ambix* in the next period.

The first presentation was '"This Parallisme Shews": Comparing Alchemy and Religion in a Sixteenth-Century Alchemical Treatise' by Zoe Screti (Oxford). The paper focussed on medieval and early modern understandings of why alchemical knowledge and successes were granted to select alchemists by God, exploring the ways in which these understandings shifted in response to the influx of Reformed, and particularly Calvinist, thought in the late-sixteenth century England. Having established these changing views, the paper then turned to one particular sixteenth-century manuscript treatise found in British Library Sloane MS 2203, using its theology and alchemical theory to complicate claims that the author of the text was William Blomefield, and to highlight how important it is to recognise the theological undercurrents of alchemical treatises.

Elisabeth Moreau (Cambridge) presented 'Galenic and Paracelsian Methods of Healing in Daniel Sennert's *Chymical Medicine* (1619)'. She examined Sennert's views on drugs and method of treatment in his B*ook on the Chymists' Agreement and Disagreement with Aristotelians and Galenists* (1619), where he addressed important issues in Paracelsian therapy, such as the notion of universal medicine, the doctrine of "signatures," and the use of metallic ingredients for making drugs.

From early modern times, the seminar moved to modern chemistry, with sessions devoted to 'Chemical Careers in New Contexts, 1760-1860' and to 'What's in a Substance? Identity and Purity in Modern Chemistry'.

The session 'New Contexts' took place on 31 May and was chaired by John Christie. Robert Fox (Oxford), spoke on 'Thomas Garnett: Science, medicine, mobility in eighteenth-century England', while Frank James and Anna Simmons (UCL) presented 'The Disappearing Act of William Thomas Brande: How History of Science Marginalises Some but not Others'. Fox explored the advancement of a late eighteenth-century physician and man of science from the yeoman world of rural Westmorland to prominence as the founding professor of chemistry and natural philosophy, first at the Andersonian Institution in Glasgow (1796) and then at the Royal Institution in London (1799). Despite his final, short-lived appointment in the metropolis, Garnett's was essentially a provincial story and a reminder of channels of social mobility, never plentiful and always difficult of access, that allowed boys of exceptional ability in the sciences to fashion improbable careers. The parallels with Humphry Davy, Garnett's successor at the RI, are unmissable. Robert Fox's book on the career of Thomas Garnett is now in press with Bloomsbury Publishing.

Frank and Anna's paper also offered new ways to consider the complex and wide-ranging activities of William Brande, throughout his long career as a London-based chemist and physician. In his own time he was regarded as an important figure, as a chemist publishing in the *Philosophical Transactions* and authoring popular and influential textbooks including his *Manual of Chemistry*. He was as an occupant of numerous and diverse institutional positions of considerable responsibility and influence: Secretary for the Royal Society, succeeding Davy as Professor at the Royal Institution, Professor and Superintending Chemical Operator at the Society of Apothecaries, and advisor on metals for dyes at the

Royal Mint. His marginalization by historians is partly due to being overshadowed by the great scientists with whom he worked, Davy and Faraday. Nor do Brande's career and achievements fit easily within the models of understanding and writing conventionally used for such figures. His various medico-chemical competencies (electro-chemistry, metals, alcohol, pharmacy, chemical practice), and the institutional diversity of his career, require different focuses of analysis, and understanding of a different historical significance. The likes of Dalton, Davy and Faraday were exceptional; Brande was not, but rightly understood, can be rendered as a substantial and significant historical figure within the contexts he inhabited.

The last seminar session (14 June), 'What's in a Substance?' opened with Catherine M. Jackson's (Oxford) 'Solving the Synthesis Paradox: Making Purity and Identity'. She concentrated on the epochal moment of nineteenth century chemistry, namely the development of organic synthesis, and advanced a central interpretive claim, that organic synthesis is not best understood as being theory-driven, a not uncommon assumption which requires critical re-examination. Through a series of telling illustrative examples, Catherine made the case that it was rather practice-driven, practice here considered not simply as new sets of routinized laboratory procedures, but as particularly including acutely focused forms of what she called

'laboratory reasoning'. As chemist and historian, Catherine's paper was further motivated and enlivened by a programmatic opening and conclusion, concerning the place of chemistry in the modern and contemporary world, the processes of blame and othering to which it is subject, and how to overcome these by deeper and more realistic apprehension of the life of chemistry, and our chemical lives. Catherine M. Jackson' book, *Molecular World: Making Modern Chemistry*, is now published by M.I.T. Press.

Marabel Riesmeier (Cambridge), already experienced in archaeo-historical chemical identification studies, and now currently working on a philosophical thesis concerning the ontology of chemical substance, marked a partial change of disciplinary orientation and disciplinary perspective.

In her paper 'Individuating Chemicals: Substantial Shifts in the 20th-Century', she moved away from the epoch of organic synthesis in the nineteenth century, into the twentieth century, with spectroscopic chemistry, and the issues of chemical identity involved in this practice. The particular case chosen for this was infra-red spectroscopy, a topic with a longer and more complex history than is usually perceived. The paper's detailed re-examination of this history brought out the technical and conceptual difficulties of the substance identity problems involved, across a period of evolving method, undoing the certainties available in the scanty histories we have, and as such was exemplary of the sort of work which careful, detailed analytical historical work can do to reset our historical understanding of periods of technical and conceptual flux.

Report by Jo Hedesan and John Christie with the speakers' contributions. Thanks are due to Sergei Zotov (Warwick) who took the photos at the first three sessions. The organisers regret that pictures of the last two sessions did not emerge due to technical problems.

Gold & Mercury | Metals in Transit

(7–10 June, 2022), Lorentz Center workshop @Snellius

Thank you for awarding the SHAC Subject Development Award in support of the Gold & Mercury: Metals in Transit workshop held June 7-10, 2022 at the Lorentz Center for Scientific Workshops, Universiteit Leiden. The interdisciplinary workshop convened 21 scholars from Europe and North America, i.e. contributors and discussants involved in the production of the *Ambix* Special Issue, "Gold & Mercury: Amalgamated Histories in Chemistry, Culture, and Environment" scheduled for publication in February 2023. The SHAC Subject Development Award was used to cover travel expenses for two Special Issue contributors: Sebastián Rubiano-Galvis (doctoral candidate, Department of Environmental Science, Policy, and Management, UC Berkeley) & Jimena Díaz (early career scholar, and recent graduate from UC Berkeley now appointed as Science Director at the Center for Environmental Health in Oakland California). Rubiano-Galvis & Díaz are coauthors with Ruth Goldstein (University Wisconsin-Madison) for the article, "Amalgamated Histories: Tracing Quicksilver's Alchemical Legacy through Environmental and Political Bodies." The Lorentz Center administered the reimbursement.

Below, please find the Gold & Mercury workshop description, aims, and outcomes.

Sincerely,

Donna Bilak
Ambix Guest Editor, "Gold & Mercury: Amalgamated Histories in Chemistry, Culture, and Environment."

Descriptions & Aims

The main objective of this interdisciplinary workshop was to convene scholars working at the intersections of science, artisanal practice, and humanities in articulating a connection between humanities research and artisanal practice—and through this, to industry—through exploring the interrelationship between gold and mercury and its profound impact on culture and environment.

The workshop was designed to achieve two goals: (1) support for the production of "Gold & Mercury: Amalgamated Histories in Chemistry, Culture, and Environment," a Special Issue in *Ambix*: The Journal of the Society for the History of Alchemy and Chemistry scheduled for publication in February 2023; (2) to spark the development of a new, socially impactful historiography in the cultural history of chemistry, technology, resources, and sustainability in which knowledge gained from linking artisanal creation with humanities research can be applied to addressing current issues and controversies affecting industry, environment, and society. In mobilizing international networks for the workshop, we probed the meanings and contexts behind the products and controversies that the chemical connection between gold and mercury sets up, and we challenged the vaunted status of gold and its association with such human constructs as wealth, beauty, spirituality, and purity in addressing the uncomfortable ethical questions that have always attended its commerce.

Organization & Format

Workshop attendance primarily in-person; however, its hybrid design allowed for remote participation by invited Descartes Center students as well as additional participants interested in joining the roundtable discussions. This flexibility worked well for our group.

Gold & Mercury was a four-day workshop to account for the Monday holiday: we dedicated Tuesday & Wednesday to working group sessions that took a deep dive into pre-circulated drafts by Special Issue contributors; on Thursday we held breakout sessions where participants explored themes and questions in smaller groups. We also held three roundtables Tuesday through Thursday evenings dedicated to themes of broader interest (such as Retro Technology Transfer, the past-present-future of mining, medical histories of gold & mercury); roundtables included informal presentations by contributors and participants, and allowed for the group to bring their own areas of expertise into the discussion. Friday was devoted to a workshop debrief followed by metallurgical demonstrations led by Tonny Beentjes at the Ateliergebouw, UvA.

Because of the holiday, we held a fifth optional hands-on session that enabled students and interested workshop participants to get together in the UU Art Lab to interpret three early modern gold gilding recipes selected from artisanal texts, hosted by the PI of the ERC Durare project, Marjolijn Bol, and designed-led by her dissertation fellow Jan van Daal.

Student participation throughout the workshop & gilding session included two Descartes Center students; two students from UvA, Conservation & Restoration; three students from Utrecht University (including one from University College Utrecht); Sanne Frequin, UU, Art History department also joined the Saturday gold gilding session.

Tangible outcomes

The workshop discussions around the pre-circulated drafts generated excellent and useful feedback for the contributors as they prepared final drafts for peer review. We profited from the opportunity to share works-in-progress to elicit valuable, cross-disciplinary feedback from the group. The workshop was thus seminal to producing the Ambix Special Issue on gold & mercury. The workshop also created opportunities for new kinds of collaborations between European and North American scholars, chemists, and artisans; several workshop participants left the experience inspired to design workshop projects to propose to the Lorentz Center. Informal conversations throughout the week (at the Lorentz-organized wine & cheese event, the workshop dinner, informal gatherings) opened up important, socially impactful conversations about the past, present, and future of gold and mercury in society and the environment. Overall, the workshop was a really rich, positive, generative experience.

"Aha" moments

The workshop's breakout session and roundtables indeed sparked new discussions and insights about the interrelationship and impact of these two metals; our conversations across the week revealed assumptions within the group that we did not even realize we held about gold & mercury, this was extremely illuminating and generative in terms of coming away with new perspectives. We also discovered that we all really liked each other! The Tuesday evening wine & cheese get-together and the workshop dinner on Wednesday organized by the Lorentz Center both wonderfully helped cultivate the spirit of camaraderie that came to characterize the workshop.

What's Next

The *Ambix* Special Issue is the first research project to present a comparative examination of gold and mercury, how their entwined chemical histories have reshaped cultures, bodies, and environments across the millennia to our present time. We wish to cultivate the insights and conversations generated by the workshop around this theme in such post-workshop outputs as the production of a podcast series and an art exhibition that (for example) combines jewellery and photography to explore the bodily, environmental, and socio-cultural issues that get pulled into the wake of mercury-gold amalgamation mining—among other possibilities.

Organizers

Donna Bilak,
New York University
Marieke Hendriksen,
KNAW
Marjolijn Bol,
Utrecht University
Tina Asmussen,
German Mining Museum Bochum
Matteo Martelli,
University of Bologna
Thijs Hagendijk,
Utrecht University

THE PARTING-TON PRIZE 2023

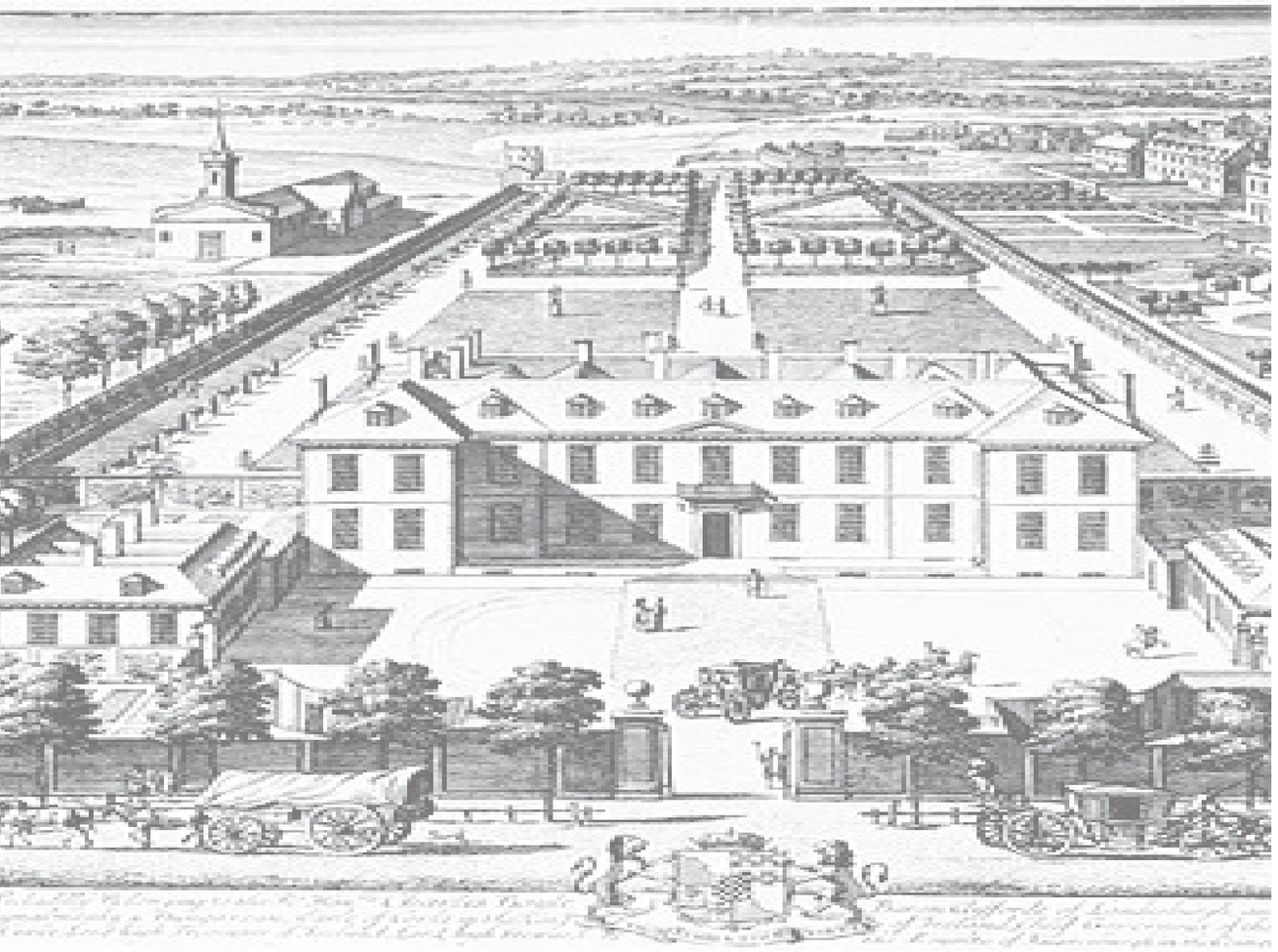
The Society for the History of Alchemy and Chemistry is delighted to announce that the winner of the 2023 Partington Prize is Dr Armel Cornu of the Science History Institute for her entry “Senses and utility in the New Chemistry.”

Armel Cornu is a postdoctoral researcher at the Science History Institute in Philadelphia. She majored in chemistry and history before graduating with a masters degree in the history of science at Université Panthéon-Sorbonne in Paris. She obtained her doctorate at the University of Uppsala in 2022 with a dissertation centring on the market, regulation, and science of mineral waters in eighteenth-century France. Her research is characterised by a social and economic approach to the development of chemistry throughout the Enlightenment. She currently works on the uses of sensorial impressions in the practice and perception of eighteenth-century chemistry.

The Society for the History of Alchemy and Chemistry established the Partington Prize in memory of Professor James Riddick Partington, the Society’s first Chairman. It is awarded every three years for an original and unpublished essay on any aspect of the history of alchemy or chemistry. The prize-winning article will appear in the Society’s journal, *Ambix,* in due course.

OXFORD PART II PRIZE 2022

The Society for the History of Alchemy and Chemistry is delighted to announce that the winner of the 2022 Oxford History of Chemistry Part II Prize is Eleanor Smith of Brasenose College for her thesis: " 'It was as if I was imagining them': Women's Experience of the Side-Effects of Combined Oral Contraception in the UK and Spain (1960-1980)." The prize consists of the sum of £150 and a certificate to be presented at a future SHAC event.



ROYAL SOCIETY OF CHEMISTRY HISTORICAL GROUP MEETINGS

X-Ray Crystallography

Wednesday 18 October 2023, Royal Society of Chemistry, Burlington House, Piccadilly, London W1J 0BA

On 18 October 2023, the Historical Group will hold its autumn meeting on the topic of British X-ray Crystallographers at Burlington House, between 10 am and 5 pm. The meeting is free and open to everyone who is interested. Coffee and tea will be available, but lunch is not included, although there are plenty of cafes nearby in Piccadilly and adjoining streets. The subjects of the talks include Desmond Bernal, Dorothy Crowfoot Hodgkin, Kathleen Lonsdale and Rosalind Franklin, among others. The speakers include Judith Howard, Tom Blundell, Georgina Ferry, Mike Glazer and Elspeth Garmen. Registration is now open and places can be booked via:
https://www.rsc.org/events/detail/76719/british-x-ray-crystallographers

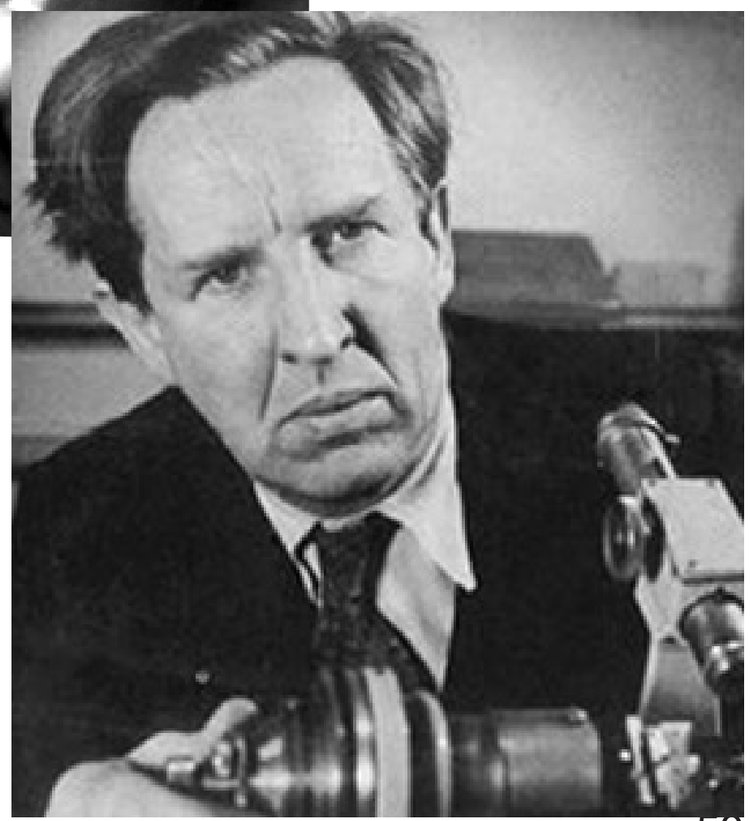
Programme
10.00: Registration and coffee

10.30: Welcome by Peter Morris (organizer)
10.35: Opening remarks by Mike Glazer (chair of first session)
10.40: John Finney on Desmond Bernal
11.10: Jenny Wilson on Kathleen Lonsdale
11.40: Judith Howard on Dorothy Crowfoot Hodgkin
12.10: Lunch interval

Second Session - Chaired by Judith Howard
1.30: Elspeth Garmen on John Kendrew
2.00: Georgina Ferry on Max Perutz
2.30: Tom Blundell on David Phillips
3.00: Tea

Third Session – Chaired by Peter Morris
3.20: Stephen Neidle, Rosalind Franklin
3.50: Mike Glazer, Helen Megaw
4.20: Ian Wood, Judith Milledge
4.50: Peter Morris, Closing remarks
5.00: Meeting ends

Dorothy Crowfoot Hodgkin



J. D. Bernal

Book reviews for *Ambix*

Book reviews are an important part of *Ambix* and of our scholarly community. Please feel free to contact book reviews editor Tillmann Taape (tillmann.taape@cantab.net) with any books that you would like to see reviewed, that you would like to review yourself, or simply to register your interest in reviewing books for *Ambix*, with a note of your preferred topic areas.

The August 2023 issue of *Ambix*

Reichsgraf von Rumford's letters to Viscountess Palmerston

The August 2023 issue of *Ambix* will be devoted entirely to publishing the sixty-nine surviving very personal letters that Reichsgraf von Rumford wrote to Viscountess Palmerston after they met in Milan in 1793. The paper, entitled 'When Ben met Mary,' is edited and introduced by Frank James. The letters draw attention to the private domestic spaces of science and the critical importance of the aristocracy in scientific developments, topics that have both received some discussion recently. They were, however, not written with the purpose of providing historical evidence, but as part of a decade-long friendship which the letters trace, revealing, among other things, Rumford's other amours. They also describe in some detail his thoughts about his activities as a member of the governing elite in Bavaria, his scientific and engineering researches (especially the writing and publication of his Essays), as well as what he would have termed his philanthropic efforts in Bavaria, Northern Italy, Britain and Ireland. All this is framed within the context of the Revolutionary and Napoleonic wars that in so many ways, directly and indirectly, affected Palmerston's and Rumford's lives and work.

Ambix Article Collection: Centres and Peripheries of Chymical Knowledge: Tracing Traditions of Alchemy and Chemistry in Eastern Europe

This collection of free access papers from Ambix celebrates the 13th International Conference on the History of Chemistry held in Vilnius, Lithuania. From the patronage networks of Rudolph II to the military campaigns of World Wars I and II, chymical knowledge was highly sought after in Eastern Europe, especially as a means to exert political power. The articles featured in this collection trace historical evidence of Eastern European chymical traditions, from a fourteenth-century Bohemian alchemical manuscript to twentieth-century global approaches to chemistry, to illustrate the mutual influence of Western and Eastern European chymical knowledge exchange. The insularity of Eastern European science before the establishment of the port of Archangel was not intentional but forced by feuding neighbouring lands. Ivan the Terrible attempted to create a Moscow medical school, but the Western European instructors he tried to bring in were blocked by the Danes and Swedes. The establishment of the port of Archangel in 1553 expedited cross-cultural chymical exchange between Eastern and Western Europe.

As a result, the Russo-English trading organization Muscovy Company formed in 1555. By the 1620s, Tsar Mikhail Romanov had succeeded in forming the Apothecary Chancery at his court in Moscow. While there has been a history of Eastern European monarchs importing courtly alchemists from the West, including both John Dee (1527-1608) and his son Arthur Dee (1579-1651), many influential chymical practitioners were born and worked in Eastern Europe—such as Polish alchemist Michael Sendivogius (1566-1636), Hungarian Janos Banfihunyadi (1576-1646), Mikhail Vasil'evich Lomonosov (1711-1765) of St. Petersburg, Russian born chemists Nikolai Nikolaevich Zinin (1812-1880) and Dmitrii Ivanovich Mendeleev (1834-1907), as well as many notable Soviet chemists of the twentieth century.

Papers are free access until at the end of July 2023. After this date selected papers will remain available for free. Please visit: https://www.tandfonline.com/journals/yamb20/collections/Centres-and-Peripheries-of-Chymical-Knowledge

Ivan IV of Russia Shows His Treasury to Jerome Horsey (Alexander Litovchenko, 1875)

Ambix: The Journal of the Society for the History of Alchemy and Chemistry February 2023, volume 70, issue 1

Special Issue: Gold and Mercury: Amalgamated Histories in Chemistry, Culture and Environment

Barry Sturman and David Garrioch, "Amateur Science and Innovation in Fireworks in Nineteenth Century Europe".

Peter Reed, "George E. Davis: Editing the Chemical Trade Journal, 1887–1906".

Megan Piorko, Sarah Lang and Richard Bean, "Deciphering the Hermeticae Philosophaie Medulla: Textual Cultures of Alchemical Secrecy".

Reviews: Special Focus: A Cultural History of Chemistry, Peter J.T. Morris and Alan Rocke (eds.).

Ambix, May 2023, volume 70, issue 2

Sources of Alchemy and Chemistry

Matteo Martelli's The Four Books of Pseudo-Democritus, previously only available in hard copy, is now available digitally: https://doi.org/10.1080/00026980.2013.12288743

The four alchemical books ascribed to the Greek atomist Democritus rank among the most ancient examples of Western alchemical writing. They cover a range of technical questions and recipes, similar to those handled in the earliest surviving chemical manuscripts. The Books also played a central role in the development of alchemy as a discipline. Members can access The Four Books of Pseudo-Democritus, by logging in to the member area to access *Ambix*, where it is listed as a supplement to vol. 60, 2013.

Membership

The Society for the History of Alchemy and Chemistry has a longstanding tradition in the field, organising colloquia, publications and promoting the interdisciplinary study of the history of alchemy and chemistry from its early beginnings to the present. The Society offers support to its members, including an award scheme, regular meetings and events, graduate network, and the triennial Partington prize for original academic writing on any aspect of the history of alchemy and chemistry. It offers a forum for advertising forthcoming events, both within the United Kingdom and internationally, and its website provides a portal to resources relating to the history of alchemy and chemistry. Members receive the Society's journal *Ambix*, the leading scholarly journal in the field of history of alchemy and chemistry. *Ambix* is published by Taylor & Francis and appears quarterly. Members also receive the Society's newsletter, *Chemical Intelligence*, twice yearly, and any new editions from the Sources of Alchemy and Chemistry volume.

Application forms and membership information may be found on the Society's website, http:// www.ambix.org/, under 'Membership'. For all membership questions, please contact the Membership Secretary, Dr. Carolyn Cobbold: cacobbold@gmail.com.

Contribute to *Chemical Intelligence*

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

- Publications
- Upcoming Conferences or Meetings
- 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, Dr. Karoliina Pulkkinen: karoliina.pulkkinen@helsinki.fi