

Chemical Intelligence Autumn 2026 issue

Society for the History
of Alchemy and Chemistry



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SHAC Meeting at the Deutsches Museum Munich, 5-6 November 2026

SHAC's autumn meeting, kindly hosted by the Deutsches Museum in Munich will take place on 5 and 6 November 2026. The provisional social programme will include an optional museum visit and conference dinner, with Christpher Halm kindly acting as the local organiser. Numbers are limited due to the capacity of the Museum's meeting room and the tickets are now sold out. Once registered, the participants will be sent information on local arrangements and the provisional social programme.



Thursday 5th November

10.00 to 12.00 Tours of the museum, both guided and self-guided

1.30 Registration and Coffee

2.00 Endre Ádám Hamvas: "Matter Bursting into Laughter and the Laughing Demiurge: The Creation of Souls as a Magical-Alchemical Process in the Hermetic Kore Kosmou"

2.30 Stefania Buosi-Moncunil: "Alchemy of Care: Medical Alchemy and Therapeutic Transformation in the Occitan-Catalan Mediterranean (13th-16th Centuries)"

3.00 Elisabeth Moreau: "Chymical Dietetics in the Late Renaissance: The Early Stages of Paracelsian Health Regimens"

3.30 Coffee

4.00 Filip Adolf A. Buyse: "From Chemical Process to Conceptual Tool: Redintegration in Boyle, Glauber, and Newton"

4.30 Annelies van Gijzen: "A Treatise of John Isack of Antimonie"

5.00 Alexander Kraft: "Pathways to the Universal Tincture: Dorothea Juliana Wallich (1657-1725) and her three alchemical books from 1705 und 1706!"

5.30 Josephine Musil-Gutsch: "Materials in the Making of the Historiography of Arabic Alchemy"

6.00 Short break

6.15 Partington Prize: Flavio Bevacqua: "Alchemy in Fifteenth-Century Byzantium: The Case for the Role of Georgios-Gennadios Scholarios' Circle"

6.45 Keynote lecture: Bruce Moran: "Codifying Theory and Practice: Libavius, the Singularium, and Metallic Transmutation"

7.30 Reception

Friday 6th November

9.30 Coffee

10.00 Nicholas Zumbulyadis: "From coloured glass to polychromy on porcelain; Recipes as bridges between the chemical arts"

10.30 Hartmut Kutzke: "In the colourful gallery of chemistry: the textbooks by Friedlieb Ferdinand Runge"

11.00 Michael Jewess: "Cannizzaro's Persuasive *Sunto di un corso di filosofia chimica* of 1858 and the Anomalies that has to be Overlooked"

11.30 Alan Rocke: "Lothar Meyer, Structure Theory, and the Role of Hypothesis in Science"

12.00 Lunch

1.30 Flora Papparou: "From Alchemy to Enlightenment Chemistry: A Teaching Intervention Using Historical Paintings and Laboratory Work"

2.00 Hasok Chang and Klaus Ruthenberg: "The Nature of the Glass Electrode - Learning from Errors"

2.30 Patrick Charbonneau, Elise Crull and Andrea Reichenberger: "Spectroscopy and the Making of Quantum Chemistry: A Preliminary Reconstruction (1920-1940)"

3.00 Coffee

3.30 Mathias Grote: "Gmelin and beyond - a History of Chemical Information in Germany from Handbook to Personal Computer"

4.00 Christian Schnurr: "'Unnaturalness' in the critique of chemistry"

4.30 Departure

SHAC Webinar with Dr Rob Johnstone

On Thursday 1 October Dr Rob Johnstone will give the next SHAC webinar based on his recent PhD on the History of Glass Making.

This will be live on Thursday 1 October 2026, beginning at 5.00pm (London time). The format will be a talk of 20-30 minutes, followed by a moderated discussion of half an hour.

To register please e-mail meetings@ambix.org with 'SHAC on-line seminar' in the subject line. You will then be sent a Zoom link on the morning of the seminar.

The webinar will also be live on YouTube: <https://youtube.com/live/6UHqInKomRI>



Boyle@400 – 25 January 2027, Royal Society of Chemistry, London

Robert Boyle was born at Lismore Castle on 25 January 1627. To mark the 400th anniversary of this event, a one-day conference celebrating Boyle and his achievements will be held at the Royal Society of Chemistry, Burlington House, London, on Monday, 25 January 2027. This event is organised by the Historical Group of the Royal Society of Chemistry and the Society for the History of Alchemy and Chemistry. Speakers will include Peter Anstey, Michael Bycroft, Michele DiMeo, Sachiko Kusakawa and Lawrence Principe. There is no charge for registration, but those wishing to reserve a place should send an e-mail, with 'Boyle meeting' in the subject line to the SHAC administrative co-ordinator at meetings@ambix.org





Remembering Bill Brock (1936-2025): chemistry and culture

**SHAC event arranged with
and at the Maison
Française, Oxford (MFO),
10 April 2026**

William Hodson Brock graduated in chemistry from UCL and undertook a masters degree in history and philosophy of science at the University of Leicester, where he remained until retirement (then as a Professor of History of Science and Head of History). He was one of the leading historians of chemistry of the last 50 years, and a former chairman of SHAC (1993 to 2007) and former editor of *Ambix* (1968 to 1983). A full obituary appeared in the May 2025 issue of *Ambix*.

The event on 10 April 2026 was a fitting tribute to Bill, hosted at the MFO by Stéphane Van Damme, the Director and himself an historian of science. The programme included two very special presentations: one by Bernadette Bensaude-Vincent, the first recipient of SHAC's Brock Award "for outstanding contributions in the fields of the history of alchemy and chemistry"; and another by Bill's three children (Susannah Ahluwalia, Gareth Brock, and Benjamin Brock).

Bernadette Bensaude-Vincent (Université Paris 1 – Panthéon-Sorbonne) spoke on "The history of chemistry through the lens of materials", a central theme of the history of chemistry in both of Bill's histories of chemistry from the earliest times to the present day: his long, yet highly readable *The Fontana History of Chemistry* of 1992 and his *History of Chemistry: A Very Short Introduction* of 2016. Aristotle had posed the question of how two homogeneous materials could interact to form a third, distinct homogeneous material. In the twentieth century, the existence of atoms of

of each of around 90 (naturally-occurring) elements and of interatomic chemical bonding became the accepted explanation, but *en route* there had been four-element and five-principle theories, and numerous explanatory concepts. So fundamental are materials that some scholars have written their "biographies", for instance treating carbon, chlorine, or gems as their biographical subjects.

The presentation from Bill's family was warm and enlightening, and to those who had known Bill a fascinating complement to their own experiences. His disciplined way of working with fixed hours and breaks, immune to distraction, allowed him to be a highly productive scholar while giving attention to family life, gardening, walking, singing, theatre, and opera. His children reminisced about his humour, his preferring slightly dated vocabulary, and his disliking the telephone while liking to have guests.

Other speakers were Eira H Betthell (University of Essex), Robert Bud (Science Museum/UCL), Julia Carr-Trebelhorn (University of Cincinnati), Matthew Eddy (University of Durham), Georgina D Hedesan (University of Oxford), Frank James (UCL and Chairman of SHAC), Michael Jewess (independent scholar), Annette Lykknes (Norwegian University of Science and Technology), Robin Mackie (Open University), Gerrylynn K Roberts (independent scholar), and Alan Rocke (Case Western Reserve University). Two of the presentations related to Liebig and Crookes, of whom Bill had written



full-length biographies. Other topics covered included SHAC itself; journals, professional societies, medical doctors practising chemistry, and education in the 19th and 20th centuries, which Bill had particularly studied; and the magnitude and quality of his corpus of published work generally. An intriguing novelty was presented which Bill would have appreciated: the apparently definitive identification of the lecturer in the famous Gilray cartoon of a demonstration of nitrous oxide administration at the Royal Institution at the turn of the 19th century, namely as



Dr Thomas Garnett (1766-1802). The impact of poison gas on the perception of chemistry after the Great War was also discussed.

Two speakers who had not known Bill personally emphasised the way in which his clear and approachable writing encouraged involvement in history of science. Another speaker, who had personally found Bill an inspiring and generous collaborator, had collected tributes from some of Bill's other collaborators, as follows:-

"Brock's collegiate approach and innate modesty made him the perfect collaborator; assisting others always took priority over personal advancement."

"Brock was always ready to share his research, ideas, and contacts, welcoming new arrivals to the profession."

"Working with the great man was a treat."

"It was a privilege and a pleasure to be able to work with Bill, particularly at this point in his life It is the most enjoyable paper I have ever worked on."

"Bill was a delight to collaborate with, and the world is poorer for his loss."

The meeting was followed by a reception sponsored by Taylor and Francis, the current publishers of *Ambix*.

-Michael Jewess



SHAC Postgraduate and Early Career Conference

"The Secrets of Nature"



Workshop organised by Amber Rizenrichter, SHAC's postgraduate representative.

SHAC's annual postgraduate and early career conference took place on Friday 20 March 2026 at the Allard Pierson Artis Library in Amsterdam's historic Plantage district and attracted over forty attendees. It explored the relation between (al)chemical work and "The Secrets of Nature" within and beyond the laboratory. By foregrounding this theme, this conference emphasized the central role of nature in Alchemy and Chemistry, disciplines that have been fundamental to the History of Science and to Intellectual History more broadly. The conference created an academic setting in which early career researchers could come together, share their work, and open new conversations about the place of the natural world in the history of alchemy and chemistry. SHAC Chair, Prof. Frank James gave a keynote on Davy, Coleridge and Alchemy and Prof. Timothy Grieve-Carlson delivered a keynote lectures on the Alchemical Sources of Modern Environmental Thought. Other papers included The Transmutation of "Elements" in Chemical Language and the Concept of 'Nature' in Chemistry in a Digital and Ecological Age. The event was organised by Amber Rozenrichter, SHAC's Postgraduate Representative, and the Society would like to convey its thanks to Amber for her hard-work in organising the event and to the Allard Pierson for hosting. For more information on the Allard Pierson please visit: [Allard Pierson | Home](#)



The Partington Prize 2026

The Society for the History of Alchemy and Chemistry is delighted to announce that the winner of the 2026 Partington Prize is **Dr Flavio Bevacqua** of University of Padua for the entry **"Alchemy in 15th-Century Byzantium: The Case for the Role of Georgios-Gennadios Scholarios' Circle"**.

Flavio's entry brings together for the first time two medieval texts in the history of alchemy, reconstructing the intellectual milieu surrounding the Byzantine scholar Georgios-Gennadios Scholarios. The author diligently and judiciously integrates manuscript evidence with philological analysis and cultural contextualization, illuminating a previously underexamined dimension of alchemical history in Byzantium. We congratulate Flavio Bevacqua for his groundbreaking work.

Flavio Bevacqua is a postdoctoral researcher at the University of Padua. He graduated from the same university with a bachelor's degree in Classics and a master's degree in Classics and Ancient History. He then obtained his doctorate in Classical Philology and Ancient Philosophy in 2025 in a joint agreement (cotutelle) between the University of

Padua and the Sorbonne Université in Paris, with a dissertation focused on the works of the so-called Anepigraphos Philosopher, a seventh- or eighth-century author transmitted within the Greek alchemical corpus. His main research interests lie in the study of history of science and natural philosophy in all their aspects, including alchemy, biology, botany, physics, and metaphysics; the transmission of scientific and philosophical knowledge from Antiquity to Byzantium and the Islamicate world, on to early modern Europe; and Greek manuscripts, palaeography, and codicology, with a focus on the history of texts and philology

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 be published in the Society's journal, *Ambix*, in due course.

2027 Morris Award: Call for Nominations

The Society for the History of Alchemy and Chemistry solicits nominations for the 2027 John and Martha Morris Award for achievement in the History of Modern Chemistry. This award honours the memory of John and Martha Morris, the late parents of Peter Morris, the former editor of *Ambix*, who has contributed the endowment for this award. The recipient chosen to receive the Morris Award will be expected to deliver a lecture at a meeting of SHAC, where the awardee will be presented with an appropriate framed photograph, picture or document and the sum of £300. The award is international in scope, and nominations are invited from anywhere in the world.

A complete nomination consists of

- a complete curriculum vitae for the nominee, including biographical data, educational background, awards, honours, list of publications, and other service to the profession;
- a letter of nomination summarising the nominee's scholarly achievement in the history of recent chemistry (post-c. 1960) and the unique contributions that merit this award; and
- names of two or three individuals for the panel to contact for further information if needed.

Only complete nominations will be considered for the award and the nomination documents must be submitted in electronic form. The Award will be judged by the selection panel on the basis of excellence in scholarly publication (papers and/or books), with nominations encouraged of scholars at all career stages and from chemist-historians and historians of chemistry. All nomination materials should be submitted by e-mail to Peter Morris at doctor@peterjtmorris.plus.com and a separate email which indicates that the material has been submitted should be sent to the same address (a precaution in case of incomplete transmission of documents) for arrival no later than 1 May 2027.

Meet the new SHAC officers

Membership Advisor –Julian Silverman

Julian would love to hear from you as he steps into this new role. Whether you have ideas for the society, questions about your membership, or simply want to say hello, you can reach him directly at shac.org@gmail.com. Please add this email to your safe list to make sure you receive SHAC member emails.

SHAC is delighted to announce the appointment of our new Membership Advisor, Julian Silverman. Julian will be leading our membership efforts, coordinating community outreach, and keeping you updated on society initiatives.

Julian brings a blend of scientific expertise and interest in the history of chemistry to the role. He is a chemist and educator at the Fashion Institute of Technology, having earned his PhD in Materials Science from the CUNY Graduate Center. Most recently, he has been a fellow at both the Science History Institute and the Linda Hall Library, where he has been exploring the history of public science demonstrations.

Looking ahead, Julian is eager to find new ways to help bring the community closer together. One of our key goals under his guidance will be developing new avenues for members to connect online.



Communications Editor – Chiaki Suda

SHAC is delighted to announce the appointment of our new Communications Editor, Chiaki Suda.



"I am delighted to be joining SHAC as the new Communications Editor. I am a PhD candidate in the history of science at the University of Tokyo, working on the chymical and medical practice of George Starkey (1628-1665). Earlier this year I spent a research stay at the Department of the History of Science and Technology at Johns Hopkins University. Based in Tokyo, I hope to help bring SHAC's activities to an even wider international audience."

Prizes and Awards Officer – Louise Palmer

SHAC is delighted to welcome Louise Palmer as our new Prizes and Awards Officer.

Louise received her doctorate in the history of medicine and science and her master's degree in chemistry from Yale University. Dr. Palmer currently teaches courses in the history of science and the history of American medicine at Fairfield University in Fairfield, Connecticut. Her current research projects examine early modern and Enlightenment conceptions of Nature in western thought. She serves on the Board of Directors for the Science History Institute in Philadelphia, PA.



Trustees of SHAC - Ellen Hausner



Ellen Hausner is a doctoral student in the Department of the History of Science, Medicine, and Technology at the University of Oxford. Her doctoral project explores the evolution of notations and signs, often known in the period as 'characters,' as a method for transmitting knowledge within European alchemical texts c. 1350-1700. Before starting her doctoral studies, she had a career in academic libraries, including almost six years in the Special Collections department of the Bodleian Library in Oxford. She gained her Master's degree in History from the University of Oxford's Department for Continuing Education.

Ellen was recently selected as one of the Royal Institution's Freer Fellows. Other awards include the Friends of the Allard Pierson Fellowship in Amsterdam; the Brill Fellowship from the University of Leiden; the Scatcherd European Scholarship from the University of Oxford; the Madan Scholarship from the Bibliographical Society in the UK; and the Maass Research Scholarship from the Manuscript Society in the USA. Ellen was also awarded the 2023 Jane Willis Kirkaldy Senior Prize, which recognises outstanding essays in the history of science, medicine, and technology.

Trustee of SHAC - Robert Bud

Robert Bud took his PhD at the University of Pennsylvania, conducting research on the history of chemistry, which led to *Science versus Practice*, coauthored with Gerrylynn Roberts, and *Chemistry in America* with Arnold Thackray, Jeffrey Sturchio, and P. Thomas Carroll. In 1978, he joined the Science Museum as curator of industrial chemistry. Over the next forty years, until retirement, he held a wide range of curatorial posts at the museum, including Keeper of Science and Medicine, and Head of Research (collections). His curatorial tenure coincided with the collapse of many traditional chemical industries in Britain, for which he served as undertaker, the rise of biotechnology and the 60th anniversary of ICI, which funded a gallery he curated. Amongst his books are a history of scientific instruments (with Deborah Warner), and accounts of biotechnology, penicillin, and applied science. He is currently engaged on a study of the twentieth century's conflicting accounts of life from science and religion.



Trustee of SHAC - Michael Bycroft

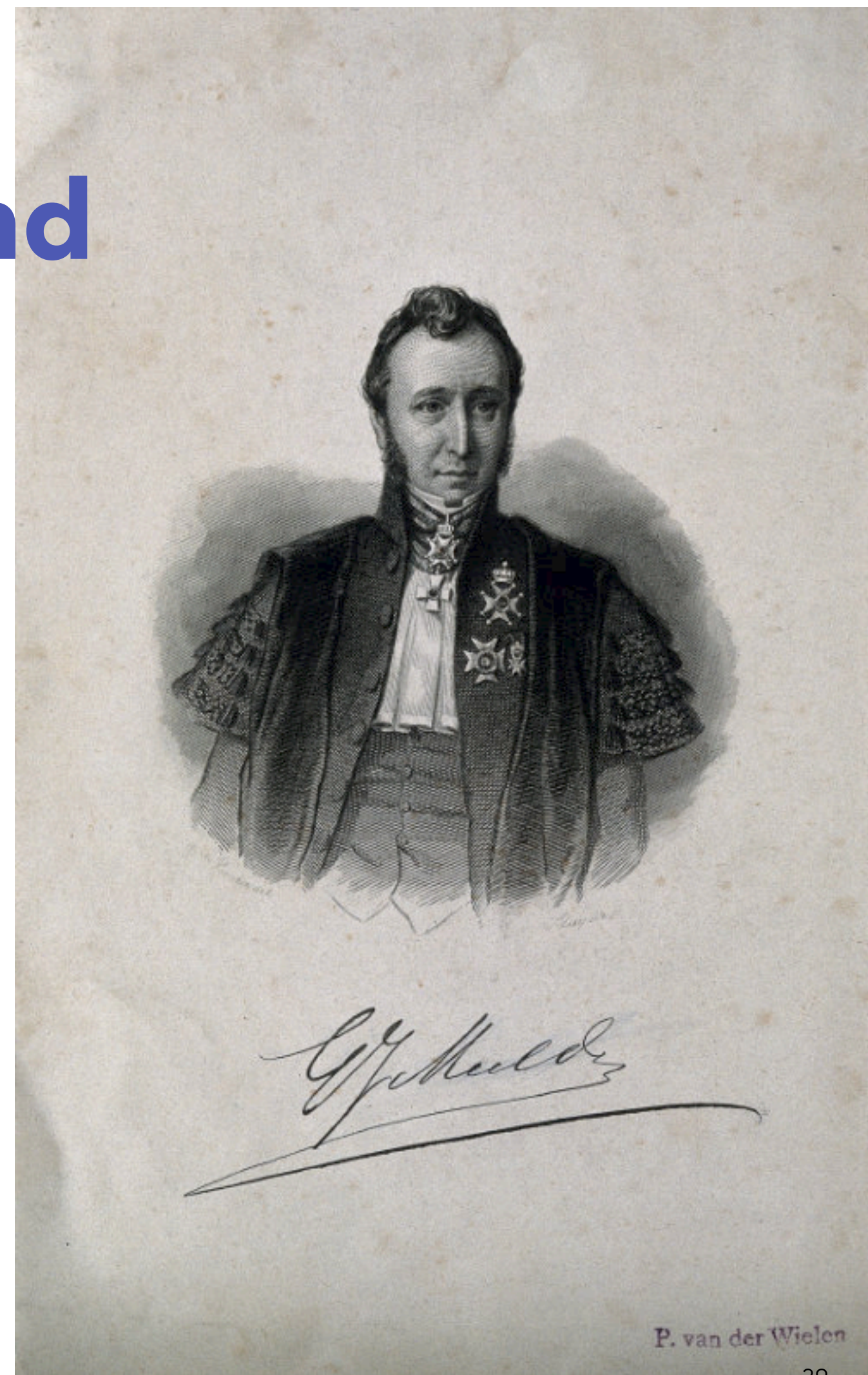


SHAC welcomes Michael Bycroft as one of SHAC's trustees. Here is a message from Michael:

"I'm a historian of science and technology at the University of Warwick. I came to the history of chemistry through a study of Charles Dufay, an eighteenth-century scientist who is usually remembered for his work on physics and natural history but whose overarching interest was roughly what we now call 'materials science.' Dufay was especially interested in gemstones, which led me to a broader study of gems in early modern chemistry and related sciences. My interest in gem science has now expanded to include the modern period, the South Pacific, and the earth sciences more generally."

Gerrit Jan Mulder and the Leeuwenbergh Laboratory

Next June 23, 2026, the former Leeuwenbergh laboratory of Utrecht University will be designated as a National Chemical Heritage Site. This laboratory, established by Gerrit Jan Mulder, played a crucial role in the education of Utrecht pharmacists, physicians and chemists from 1845 onwards. Mulder became the founder of modern chemistry education based on practical work in the laboratory, and of chemistry as a scientific discipline in the Netherlands.



P. van der Wielen

Upon his appointment as professor of chemistry at the University of Utrecht in July 1840 Mulder already made it crystal clear what he thought about chemistry: "Such a science must be taught practically; that is to say: one must not merely act oneself, but above all let others act." And it must be said, he had already put his words into action, for upon his departure from the Clinical School in Rotterdam, he left behind an excellently equipped laboratory.

During his own medical studies and his doctoral defense under Nicolaas de Fremery, also in Utrecht, he had experienced firsthand how things should *not* be done. According to one of his colleagues, De Fremery's work offered "not a single spark of genius, not a single indication that the speaker had ever practiced doing research himself. It hardly needs to be said that practical exercises were not part and parcel of this teaching." In the Hoogt laboratory that Mulder inherited from his former teacher—located in an old Franciscan monastery—only lectures were given. There were no basic chemicals and no instruments, neither for the students to use nor to do one's own research.

But Utrecht did not have to wait very long before Mulder took action. He was a man not to be ignored—whatever he involved himself with, within

or outside of science, he always came to be the center of attention. He was active in many fields and distinguished himself not only as a chemist and physician, but also as a public educator, politician, and government advisor. That being said, he was also rather difficult to get along with and made enemies all too easily.

Up until then, laboratories were more like chemical workshops than spaces where scientific research was conducted, or practical teaching was provided. In pharmaceutical or artisanal workshops natural products were converted into compounds with practical applications. This meant dissolving, burning, melting, mixing, distilling, and precipitating in various types of vessels, which were heated, first by means of stoves and later with burners. No wonder, the comparison with a kitchen has often been made. But the original 'kitchen' at the Hoogt did not fulfil its purpose. As Mulder commented later: "The lab was always jam-packed, and the atmosphere of acidic fumes was suffocating. That did not bother me, but there were complaints from outside that there was a harmful atmosphere and that the room was far too cramped."

That is why he repeatedly filed complaints with the trustees, supported by an ever-increasing number of chemistry students, for he was an excellent

teacher, adored by the students who made sure not to miss a single lecture. He therefore quickly got his way: in the summer of 1844, the university made the former Leeuwenbergh hospital available as a chemical laboratory. For a ten years' lease to be determined later, which, however, was never set and therefore never paid. The building had been established as a plague house in the late sixteenth century, then became a military hospital, and after burning down, was completely rebuilt as a hospital for the poor. It even for some time functioned as a military barracks.

In that state, it fell to Mulder to turn it into a chemical laboratory. Lab space had to be established, equipped with worktables with sinks, ovens, cabinets for chemicals, and—very modern for the time—fume hoods. Work proceeded at a brisk pace, so that the renovation was completed by July 1845. Two months later the laboratory was formally opened at the start of the academic year by a beaming Mulder in the presence of many dignitaries. In his opening address, he described the study of chemistry “as an impetus for knowledge that is true; as a means of intellectual development that does not fail; as a source of higher enjoyment of the mind; as a foundation for the creation of glorious works by the human intellect.”

In addition to chemists, Mulder also trained pharmacists who went on to serve in the Dutch East Indies. Medical students, however, formed his largest group; they were required to first obtain a Bachelor's degree in one of the natural sciences before they being able to continue with their medical studies. Initially, a university degree in chemistry did not allow a decent living. This only changed after the establishment of a new type of high school in 1863, which required chemistry teachers and offered a well-paid and attractive position.

With some renovations, the Leeuwenbergh remained the chemistry laboratory of the University of Utrecht until the end of the nineteenth century, even after Mulder's retirement in 1867. Following the appointment of separate professors for organic and for inorganic chemistry, it became the workplace of Mulder's son, Eduard. His colleague Hendrik Dibbitts—also a student of Mulder, just like almost all other chemistry professors in the Netherlands during those decades—was assigned his former laboratory at the Hoogt. It was here that the later Nobel laureate Henri van 't Hoff conducted his doctoral research. Only after the appointment of the physical and inorganic chemist Ernst Cohen in 1902, a brand-new 'Van 't Hoff laboratory' was established. The facade stone from this laboratory can still be admired on the seventh floor of the current chemistry building at the Utrecht Science Park.

- Rob van den Berg



Lab Leeuqenbergh 1845 (1890)

Project report Christian Schnurr

Thanks to the generous funding by SHAC, I was able to attend the 10th European Chemical Congress (ECC10), held from 12–16 July 2026 in Antwerp, Belgium. I attended the congress for two reasons. I wanted to present my work on ‘chemophobia’ to a crowd consisting mainly of chemists; and I wanted to get in touch with the ethics of chemistry networks, both on the German and the European level. The latter, the Working Party on Ethics in Chemistry of EuChemS, hosted a workshop on responsible use of AI in chemistry.

My talk, titled “The Death of Chemophobia: Revisiting the Public Image of Chemistry,” was part of the panel “Responsible Chemistry in Society,” hosted by Annette Lykknes of the EuChemS Division of History of Chemistry. The talk revisited the long-standing debate within the chemistry community regarding its supposedly negative public image. It argued that the concept of “chemophobia”—the assumption that the public is irrationally afraid of all things chemical—is empirically imprecise and counterproductive to chemistry’s social role. The presentation was well received, especially because it tied in well with Ernst Homburg’s preceding talk on the historical development of the concept of responsibility in chemistry. Generally, it was my first time to present this topic in front of a crowd consisting mainly of chemists. This was my main

goal, since this is the audience that might benefit most from a critical discussion on the chemophobia concept.

Beyond presenting my own work, I participated in a workshop organized by the EuChemS Working Party on Ethics in Chemistry, of which I am a part of, on the topic of “responsible use of artificial intelligence in chemistry”. While the overall workshop did not fully meet my expectations and some aspects of its organization and content could have been developed further, several individual presentations were of high quality and offered valuable perspectives on emerging ethical challenges surrounding AI applications in chemical research. Especially the keynote by José Caetano managed to build the bridge between AI applications in chemistry and ethical questions effortlessly.

Besides the WP on the European level, the German ethics of chemistry community was also present at ECC10. For me, this was the first time meeting this group in person; so far, the process of establishing an Ethikkommission within the German Chemistry Society has taken place mainly online. Conversations with Jan Mehlich, who has previously developed a course on the ethics of chemistry for chemistry students, were especially fruitful. On several occasions, this course was discussed by participants of the “responsible chemistry in society” panel. Since I plan to implement an ethics of chemistry course at TU Munich within the next years, these discussions were incredibly helpful for my current planning stage.

In total, ECC10 was a great opportunity to network with different communities, mainly the ethics and history ones. It showed me that humanities-based approaches to chemistry are well tied in with the general chemistry community, and I was glad that I could contribute to this presence with the help of the SHAC award.

Project report

Joaquín Pérez Pariente

From July 1-3, 2026, the University of La Rioja (Spain) hosted the XI Summer School on the History of Chemistry, entitled When Chemistry Becomes Art and promoted by the RSEQ's History of Science Group. The event brought together specialists in chemistry, history, art, cultural heritage, and science communication to examine the relationships between these disciplines and to highlight the role of chemistry in the understanding, creation, conservation, and restoration of artistic heritage.

The Summer School featured fifteen speakers from universities, museums, and educational institutions, and attracted to 54 participants from different regions of Spain. Through lectures, round-table discussions, debates, and cultural activities, the programme promoted interdisciplinary dialogue and promoted a broader appreciation of chemistry as a scientific, cultural, and historical discipline.

The first day focused on the historical connections between alchemy, chemistry, and art. Presentations explored topics such as the colours of alchemy, the presence of chemistry in historical portraiture, the cultural and mythological dimensions of the Periodic Table, and the aesthetic appeal of carbon nanostructures. These contributions stimulated lively discussions on the interplay between scientific knowledge and artistic expression throughout history.

The second day was devoted to painting and cultural heritage. Contributions from Óskar González Mendía (University of the Basque Country) and María Barra Ríos (Museo Nacional del Prado) provided valuable insight into the evolution of pigments and artistic materials, the chemical processes involved in their ageing and degradation, and the analytical techniques employed for their study and restoration. Their presentations highlighted the importance of combining expertise from chemistry, art history, and conservation science to ensure the preservation of cultural heritage. The programme was complemented by cultural visits in the small city of Arnedo, including the Cave Complex of Los Cien Pilares and Bodegas Olarra.



The final day addressed the application of modern analytical methods to the study and conservation of historical materials. Professor Josefina Pérez Arantegui demonstrated how advanced scientific techniques can reveal essential information about artworks and support more effective conservation strategies. The programme also featured Professor Javier García Martínez, former President of IUPAC, who discussed current challenges facing chemistry and society, with particular emphasis on sustainability, innovation, and the social impact of scientific research.

As in previous editions, the School devoted special attention to chemistry education. Sessions on virtual laboratories, innovative teaching methodologies, and educational resources for pre-university students generated fruitful discussions on the future of chemistry teaching and the need to adapt educational practices to emerging technological and societal challenges.

Overall, the XI Summer School successfully showcased the strong connections between Chemistry, History, and Art. The high quality of the presentations and discussions emphasized the value of interdisciplinary approaches to understanding and preserving cultural heritage, while also reinforcing the importance of science education and public engagement in chemistry.

We gratefully acknowledge the support of the University of La Rioja, the Royal Spanish Society of Chemistry (RSEQ), and all collaborating institutions (Arnedo Town Council) and sponsors (Society for the History of Alchemy and Chemistry and Bodegas Olarra) whose contributions made the XI Summer School on the History of Chemistry possible.

For more information, please visit the course website:

<https://www.unirioja.es/actividades/curso-de-verano-cuando-la-quimica-se-hace-arte-xi-escuela-de-verano-sobre-historia-de-la-quimica/>

Project report

Julian R. Silverman

To explore the communication of chemical hazards across time, we developed a series of iterative activities where students created, peer-reviewed, and revised seals and labels for specific chemical hazards. This project bridged the gap between historical "closed" knowledge and modern "open" or global communication standards. By working across both theoretical and practical frameworks, students took direct inspiration from the talismanic seals found in Paracelsus' *Archidoxis magicae Liber II* and cylinder seals housed in the Morgan Library & Museum archives in New York City. This foundation allowed students to compare and contrast historical symbols with more familiar modern Unicode characters, including those alchemical symbols still utilized in contemporary chemistry, to better understand the evolution of form, function, and semiotic meaning.

To begin the practical portion of the project, students explored the chemical concepts of digestion and precipitation alongside the alchemical principles of *solve et coagula*. This was achieved by dissolving and precipitating gold found in jewelry using aqua regia, a process that allowed students to visualize phase changes while considering how elemental symbols represent complex chemical reactions.

Next, students were tasked with designing labels for hazardous chemicals that could communicate risks across time. Drawing inspiration from the field of nuclear semiotics, they faced the challenge of encoding information for the "far future." Where alchemists often utilized two-dimensional designs to hide meaning from the uninitiated, our students worked to make meaning as explicit as possible within those same limitations. They grappled with the realization that modern hazard symbols might be ephemeral or even dangerously misinterpreted, potentially inviting future populations toward a hazard rather than warning them away.

Dr. Emily Goodman from Transylvania University came to the Fashion Institute of Technology to give a talk titled "Alchemy Across Time," which connected common artistic motifs to contemporary hazard warnings at nuclear waste sites. This collaboration extended to Transy University, where Goodman's students critiqued the FIT designs, providing an outside perspective on whether the intended meanings were successfully decoded. Finally, students revised their designs and patterned them onto cotton fabric using historic iron gall ink formulations inspired by chemist and chymist Isaac Newton.

This work demonstrates how alchemical practices and semiotic systems evolved to inform foundational principles of modern scientific communication. By connecting historical and chemical themes, such as creating permanent records from iron scraps and oak galls, students realized that while digital formats are fragile, specific material and symbolic elements

(including alchemical and Unicode symbols for salt or acid) possess remarkable longevity. This research will be presented at the 2026 Annual Green Chemistry and Engineering Conference under the theme "Chemistry for the Future: From Basic Science to Real-World Impact." The talk, "From Waste to Want: Connecting Green Chemistry Across the Arts and Sciences," will illustrate how the limitations that once spurred alchemical innovation remain deeply relevant to solving the communication and sustainability challenges of the modern era.

Society for the History of Alchemy and Chemistry Participation at the Medieval Academy of America (March 2026)

SHAC was represented at the 101st Medieval Academy of America Meeting, held from 19-21 March, 2026, on the University of Massachusetts - Amherst, and Amherst College Campuses. The sponsored panel, "Technologies of Transmutation: Alchemy in the Later Middle Ages" explored the various definitions of transmutation in Medieval alchemy. Beginning by asking the question "what is transmutation?" and exploring how ideas of transmutation were passed down through generations of thinkers and molded to suit individual needs, we asked what it means to "do" alchemy in the thirteenth and fourteenth centuries.

The first paper, given by William R. Newman (Indiana University) considered what the term *transmutatio* actually connoted to alchemists and their critics. Did it necessarily mean the replacement of one substantial form with another substantial form, or could one speak of just any radical

change in appearance or function as a transmutation? If a base metal could be made to look and act like gold, did that mean it had been transmuted into gold? The second paper, given by Lawrence Principe (Johns Hopkins University), examined the two alchemical works of the Franciscan alchemist and prophet of the antichrist John of Rupescissa (c. 1310-1366). John claims that “quintessences” can be produced from a variety of substances, and can cure illness and extend life by sharing their incorruptibility with the human body. This talk explored their identity and preparation, what they reveal about John’s broader alchemical and thinking, and their origins. The third paper, given by Jennifer M. Rampling (Princeton University) returns to the questions of efficacy. In both the Islamic and Latin alchemical traditions, the efficacy of non-mineral ingredients was hotly debated. Starting with the fourteenth-century *Rosarium parvum*, the talk traces the development of the agricultural analogy to compare metallic transmutation to plant growth, and what it tells us about alchemical practice. The final paper, given by Meagan S. Allen (Johns Hopkins University), highlighted a fundamental inconsistency between Roger Bacon’s alchemical and metaphysical writings. In his alchemical writings, Bacon refers to the reduction of material to prime matter. In the *Communia naturalium* and his

earlier *Quaestiones*, however, Bacon maintains that prime matter is inaccessible to humans, and is not the substrate of substantial change. This paper posed the aforementioned problem, then offered some initial thoughts on how these ideas might be reconciled.

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Book reviews for *Ambix*

Book reviews are an important part of *Ambix* and of our scholarly community. Please feel free to contact joint book reviews editors Sarah Hijmans and Hannah Elmer (bookreviews@ambix.org) 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.

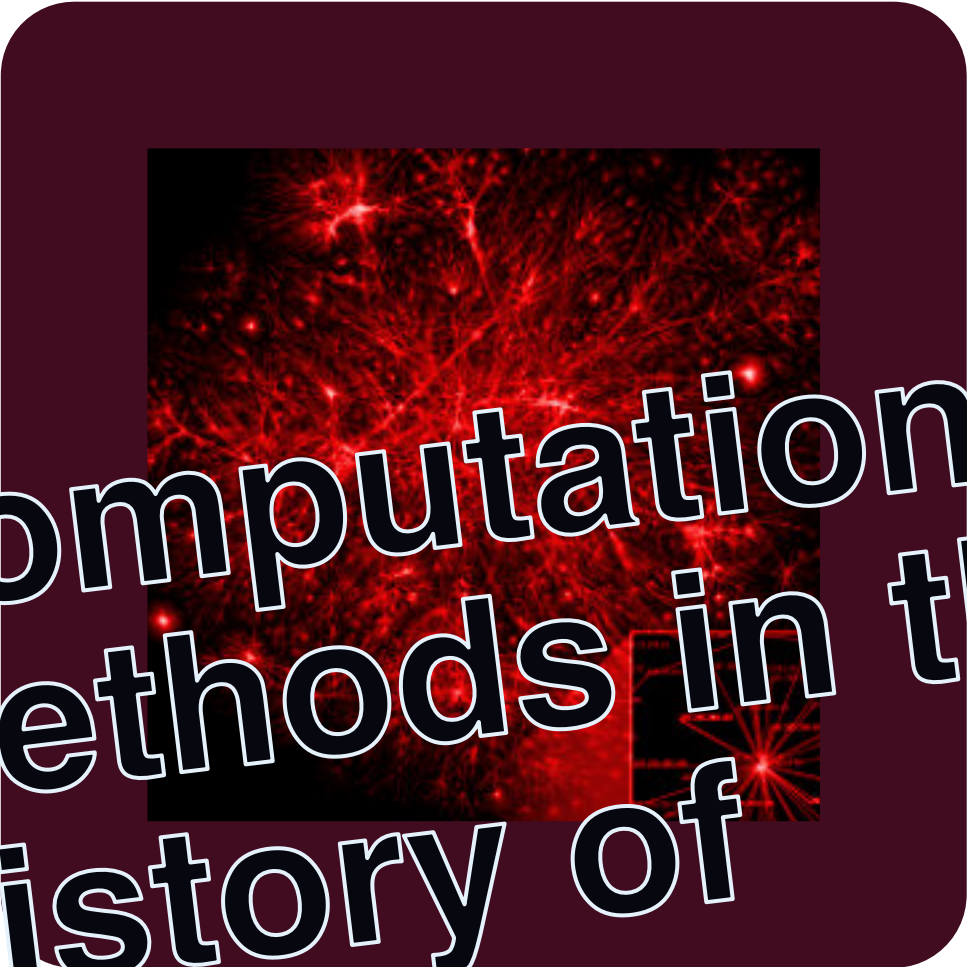
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New Books

John Blackie (2026) [*A Fallen Titan of Chemistry. Reflections On ICI: A Century of British Chemistry and Industry.*](#)

Chemical Intelligence is launching a new section on recent books that may be of interest to SHAC membership. Please contact the editor if you know of a title that would be good to include in the next edition of our newsletter.



Computational Methods in the History of Alchemy and Chemistry

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- Lang, S., Mahootian, F., & Restrepo, G. (2026). Editorial 115–116.
- Mahootian, F., Lang, S. A., & Restrepo, G. (2026). Introduction: Computational Approaches to the Histories of Alchemy and Chemistry. 117–144.
- Hedesan, G. D., Pavlas, P., & Kaše, V. (2026). An Alchemical *Prima Materia* for the Digital Age: Making the Early Modern Latin Alchemical Prints (EMLAP) Dataset.
- Lang, S., Mahootian, F., & Lashen, H. (2026). Mediating Alchemical Language across Terminologies and Cultures in Ruland's *Lexicon Alchemiae*: A Data-driven Study of Arabic Terms. 175–204.
- Kaše, V., & Lang, S. (2026). Contextual Word Embeddings for Paracelsian Lexicography: Tangled Terminologies and their Origins in Ruland's Alchemical Dictionary. 205–238.
- Johnson, J. A. (2026). Emergence of New Quantitative Approaches to the History of Chemistry after 1950. 239–271.
- Restrepo, G. (2026). Computational History of Chemistry – Part 1: Challenges and Opportunities. 272–300.
- Restrepo, G. (2026). Computational History of Chemistry – Part 2: Multiple Scales, from the Individual to the Global. 301–328.

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- Lykknes, A. (2026). Editorial 73.1. 1-2.
- Verardi, D. (2026). Aristotelianism and Hermeticism in Renaissance Naples: Francesco Storella and the Secrets of Alchemy. 3-24.
- Chu, L. (2026). "To Be Mindful of Their Sensitivities:" The Chinese American Chemical Society and the Scientific Diaspora. 25-43.
- Mackie, R., & Roberts, G. K. (2026). National Chemical Societies and the Formation of Early Global Networks, ca. 1890-1914. 44-65.
- Endo, M. (2026). Harpsichord Wires as Multifaceted Materials in Scientific Experiments from the Eighteenth to the Nineteenth Centuries. 66-80.

Edited Collection: Computing the History of Alchemy & Chemistry: Trends in Digital Humanities

The Digital Humanities have come to stay. This edited collection traces the use of digital humanities methods in *Ambix*, from their early adoption to their increasingly diverse applications in current research.

The publications included in this collection testify both to early uses of digital methods in *Ambix* and to proposals for their potential future applications, while more recent studies increasingly demonstrate these methods in action. Early efforts in digitisation contributed to the establishment of digital scholarly editing in the field, as exemplified by projects such as the Newton Project, *The Chymistry of Isaac Newton*, *Making and Knowing*, and *Furnace and Fugue*.

More recent projects build upon the growing availability of digitised materials, using them both to support more traditional forms of scholarship and to pioneer methods that differ considerably from established hermeneutic approaches.

Of course, not all publications arising from relevant projects have appeared in *Ambix*; many have instead been published on project websites or through other scholarly venues. This collection can therefore provide only a partial view of the uptake and development of digital humanities methods in the histories of alchemy and chemistry. Nevertheless, it offers a useful reference point from which to trace the history of digital humanities methods in the field and, at the same time, to highlight the new avenues for research that they invite us to explore.

Edited by

Dr. Sarah Lang(Head of Digital
Humanities, Max Planck Institute for the
History of Science (MPIWG))

Access all the titles [here](#).

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. Julian Silverman shac.org@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