CHEMICAL INTELLIGENCE

Summer 2021 issue

Society for the History of Alchemy and Chemistry

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webinars

SHAC has continued to run webinars via Zoom, which are also streamed live on its YouTube channel. Since the last issue of *Chemical Intelligence* these have included Robert Bud on Coal, Chemistry and Employment; Alan Rocke on Lothar Meyer and Dmitri Mendeleev; Simon Werrett on The Material Turn in the History of Chemistry; Megan Piorko on the Long Life of Fasciculus Chemicus: Early American Reception of 17th Century Alchemical Texts; and Jo Hedesan on Francis Anthony and Early English Potable Gold. Past webinars can be watched on SHAC's YouTube Channel.

Please subscribe and share the information with your colleagues.

There will be a break from the webinars over the summer but they will return in the autumn. The provisional dates for the seminar are September 23 and November 25 both at 17.00 London time.

Heritage and History of Chemistry: WPHC Online Event

20 May 2021

On May 20, the working party on the History of Chemistry (WPHC) organized an online event on the topic of "Heritage and History of Chemistry." It was organized in order to fill the gap between the past 12th ICHC, that was held in Maastricht, the Netherlands, in August 2019, and the forthcoming 13th ICHC, which was postponed from May 2021 to May 2023 in Vilnius, Lithuania, because of the pandemic.

The online event consisted of two panels. The first one, titled Chemical Landmark Projects and Heritage Initiatives, included an Opening Lecture devoted to the recently established European Chemical Society Historical Landmark by Brigitte Van Tiggelen, former chair of the WPHC. The subsequent papers discussed national projects in Japan, France, the US, and Germany. The second panel, titled Chemical Sites, collections and preservation, included different presentations on collections from France, Italy, Russia, Denmark, Latvia, and Portugal. The online event was organized and chaired by Ernst Homburg and Ignacio Suay-Matallana. The technical support provided by the EuChemS secretariat for setting up the webinar was crucial. It allowed the audience that amounted to a hundred participants to ask questions and discuss briefly the short talks.

The webinar proved to be an excellent way to showcase different projects on the heritage of chemistry, demonstrating at the same time connections beyond the different sites and projects. For instance, it showed the collaboration between the WPHC with other EuChemS groups, as well as the connections between the material culture of chemistry and the industrial heritage.

The variety of places and spaces that can be considered as historical landmarks was broad, ranging from laboratories, factories or mines, to schools and high schools, and even non-physical places for commemorating the publication of books, the elaboration of theories or the development of patents.

The event also showed the different possibilities of connecting the history of chemistry and its material culture with other social and historical topics. History of chemistry collections offer an excellent opportunity to analyse science education, as well as to develop didactic projects with students. They also showed the links between colours, dyes and artisanal practices, related to art, textile industries and other technical processes. Collections need to be periodically studied and inspected, because their preservation is a challenge for the institutions. All in all, the presented case-studies stressed the importance of preserving and studying collections jointly with other historical sources, such as archives, in order to articulate a broader perspective of both individual scientist's careers, the evolution of science, and the very identity of chemistry.

The online event was thus an excellent opportunity to put together recent work on the history of chemistry and on chemical heritage from different countries. It also fostered discussions among panellists and participants, who could spot similarities and think of synergies, and potential partnerships with different institutions and disciplinary contexts. Last but not least, it was an opportunity to be connected to new audiences world-wide, and to promote joint projects between EuChemS members, as well as with other scholars interested in scientific landmarks, heritage, sites and collections. Hopefully, this event will open new avenues of collaborative projects which can be discussed in future meetings such as the 13th ICHC (Vilnius 2023). The programme of the event as well as the full list of abstracts is presented below.

Ignacio Suay-Matallana (Interuniversity Institute López Piñero-UMH) and Ernst Homburg (Maastricht University)

Programme

13:00-14:30 (CET) Chemical Landmark Projects and Heritage Initiatives (chair: **Ernst Homburg**)

13:00-13:30 Opening & Plenary Lecture by **Brigitte Van Tiggelen**
Sharing European chemical heritage, experiences and projects

13:30-13:45 **Yoshiyuki Kikuchi & Kazutaka Arai**
CSJ's 'Chemical Heritage Japan' Programme and historical chemical sites in Central Japan

13:45-14:00 **Florence Hachez-Leroy**
Industrial heritage of chemical industry in France: work in progress

14:00-14:15 **Carmen Giunta**
The ACS National Historic Chemical Landmarks and the HIST Citation for Chemical Breakthrough programs

14:15-14:30 **Christine Nawa**
Making history visible: The Historic Sites of Chemistry programme in Germany

15:00-16:30 (CET) Chemical sites, collections and preservation (chair: **Ignacio Suay-Matallana**)

15:00-15:15 **Françoise Khantine-Langlois**
ASEISTE: an association that preserves chemical heritage in France

15:15-15:30 **Pierandrea Lo Nostro**
The Chemistry collection at the Museum of Natural History of Florence

15:30-14:45 **Alla Nudel**
Saving the heritage of the famous Russian chemist N. Zelinsky

15:45-16:00 **Asbjørn Petersen**
A Historic collection of compounds from the birth of the coordination chemistry

16:00-16:15 **Mara Jure & Alida Zigmunde**
Riga one of the historical chemistry centers of Eastern Europe

16:15-16:30 **Isabel Malaquias & João A.B.P. Oliveira**
The amazing historical collections of didactic instruments of Portuguese secondary schools

Abstracts & authors' information

Brigitte Van Tiggelen

Brigitte Van Tiggelen works with the Science History Institute as Director for European Operations, and chaired the Working Party on the History of Chemistry since 2013. She is the chair of the selection committee for the EuChemS Historical Landmark award which was launched in 2018 by the European Chemical Society.

Sharing European chemical heritage, experiences and projects

In 2017, the European Chemical Society (EuChemS) established the EuChemS Historical Landmarks Award (HLA). This new award is the first and only among EuChemS prizes dedicated to chemistry long past and wishes to identify places of historical significance in the development of the discipline. It was conceived at a time many were preparing for the European Year of Cultural Heritage in 2018 and founded on the realization that only a few sites or events were related to science and technology, let alone chemistry. Compared to existing programmes run by national chemical societies (such as the RSC "Blue Plaques" or the GDCh "Historische Stätte der Chemie"), the HLA aims to stress the European dimension for at least two audiences. It reinforces the sense of belonging of European chemists and reminds them that as far as the history of chemistry goes, people and ideas alike have circulated. It also brings to the general public some sense of how chemistry is part of the general cultural heritage and history of every European citizen. This presentation will briefly explain how that rationale has materialized so far, with the 2018 and 2019 awards, including the challenges and accomplishments, and how the WPHC may support the initiative and contribute to map the chemical heritage in Europe beyond the award scheme.

Yoshiyuki Kikuchi and Kazutaka Arai

Yoshiyuki Kikuchi is a historian of modern chemistry in Japan and Britain, focusing on the Anglo-Japanese relation in science and technology. He is an associate professor at the Department of British and American Studies, Aichi Prefectural University and Vice-President of the Japanese Society for the History of Chemistry.

CSJ's 'Chemical Heritage Japan' Programme and historical chemical sites in Central Japan

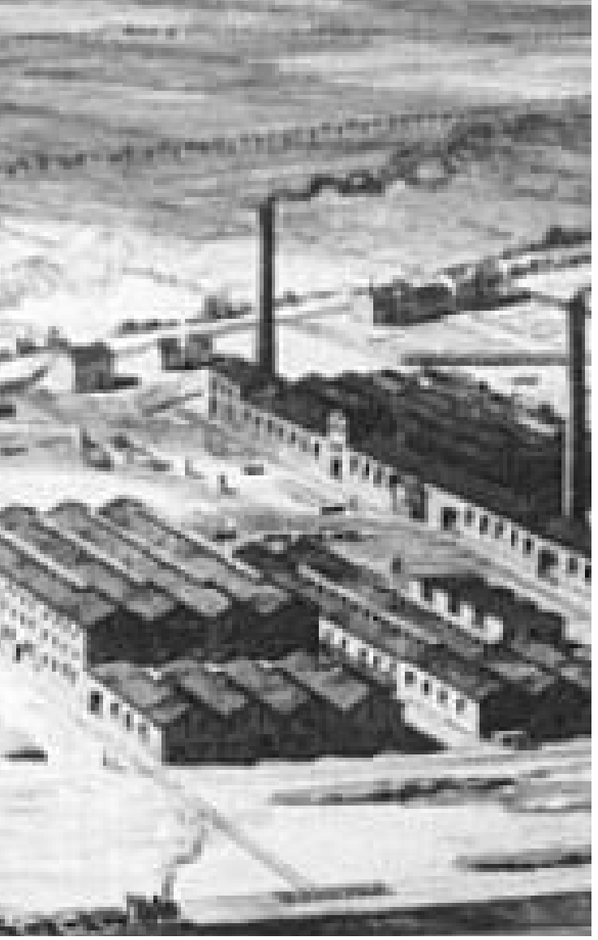
The Chemical Society of Japan (CSJ) established a Chemical Heritage Committee in 2008 and started its accreditation project in the following year, certifying more than 50 items to this date. The committee's aim is to raise the public awareness of the "concrete objects and documents attesting the history of sciences and industries relating to chemistry from the late Tokugawa period onwards," but certified items also include what one would call "chemical sites" such as laboratories and factories equipped with "concrete objects." This talk will give an outline of the CSJ's Chemical Heritage Programme and introduce some chemical sites in the Central Japan (Chubu) region, where one of the authors is based.

Florence Hachez-Leroy

Florence Hachez-Leroy is Associate Professor of modern history at Artois University and researcher at the Centre de Recherches Historiques. She is a historian of the enterprises and of the modern materials. Her work crosses the economic, technical, social, cultural and heritage aspects.

Industrial heritage of chemical industry in France: work in progress...

The heritage of the chemical industry is a difficult subject: it raises a great deal of reluctance, very little work is devoted to it, the sites are often dangerous and polluted, their reconversion poses problems.



In 2016, CILAC devoted a special issue of its journal to this theme. There was no claim to cover the topic: many parts of the chemical industry are not mentioned or are only touched on. This was viewed as the first stage of a larger project. The heritage of chemistry in France is rich, multiple, old and unavoidable: France counted among the three leading countries in the nineteenth century, from the points of view of both research and industry, alongside Germany and United Kingdom. Several French companies had then international stature even if many of them disappeared or sold their chemical activity in the late twentieth century in the great merger and acquisition game. The conclusion is unanimous: this heritage has little been considered and its buildings, objects and archives haves suffered great damages. Its intangible heritage is also largely absent. The reasons remain to be explored. The poor image of this industry in public opinion cannot be the only explanation. Companies have a share of responsibility, as well as public institutions working in the field of culture and heritage. Also, the rapid obsolescence of processes and infrastructures and the negative impacts on the environment have also contributed to the lack of interest in the topic.

Carmen Giunta

Carmen Giunta is Editor of *the Bulletin for the History of Chemistry* and Professor Emeritus of Chemistry at Le Moyne College.

The ACS National Historic Chemical Landmarks and the HIST Citation for Chemical Breakthrough programs

The American Chemical Society's National Historic Chemical Landmarks program (NHCL) has been recognizing (NHCL) achievements of the past since 1993. The ACS Division of the History of Chemistry has been operating the Citation for Chemical Breakthrough awards program (CCB) since 2006. Public outreach is the principal mission of the NHCL program, at least in recent years. Chemists and teachers and students of chemistry are the main audience for the CCB program. Similarities and differences in emphasis, procedure, scale, and scope between the programs will be described by the presenter, drawing on a decade of service on the committees that recommend the awards in both programs (but not speaking officially for either).

Christine Nawa

Christine Nawa is a historian of science, specializing in 19th century history of chemistry. Since 2015 she has been working at the Centre for Collection Development of the University of Göttingen, in Germany.

Making history visible: The Historic Sites of Chemistry programme in Germany

In 1999, the German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh), began to designate sites of major achievements by notable chemists as "Chemical Landmarks". While this first event was celebrated together with the American Chemical Society (ACS), the GDCh continued the program me from 2002 onwards on its own under the name "Historische Stätten der Chemie." By now, the programme is well established and 19 "Historic Sites of Chemistry" serve both as anchorage for identity building within the chemical sciences, and as a means to foster public appreciation for the contributions of chemistry. In my paper, I will point out, that it is joint efforts of committed local groups on the one hand and the steering and coordinating role of GDCh's main office on the other, that made this programme a success.

Françoise Khantine-Langlois

Francoise Langlois was professor in University technical department, and currently she is an associate researcher at the laboratory "Sciences and Society, Historicity, Education, Practices" of the Lyon 1 University. She manages the University's heritage of physical instruments and is president of ASEISTE, Association for Preserving and Studying the Scientific and Technical Instruments of Education.

ASEISTE: an association that preserves chemical heritage in France

The ASEISTE is a French association, founded in 2004, aiming at the preservation of the scientific and technical instruments of education (Association de Sauvegarde et d'Étude des Instruments Scientifiques et Techniques de l'Enseignement: Association for Preserving and Studying the Scientific and Technical Instruments of Education). The main objectives of ASEISTE are: to rescue and preserve instruments and collections in schools and universities and

develop pedagogical projects involving this scientific historical heritage in collaboration among members and professors. The ASEISTE website (http://www.aseiste.org) includes a complete catalog of more than 7692 ancient scientific objects, including 590 instruments specific to chemistry. It is always enriched by new contributions.

Pierandrea Lo Nostro

Pierandrea Lo Nostro is an associate professor at the Dept. Chemistry "Ugo Schiff" of the University of Florence where he teaches Physical Chemistry and History of Chemistry. He is the Scientific supervisor for the Chemistry Collection of the Museum of Natural History of the University. He is also Editor-in-Chief of *Substantia*, an International Journal of the History of Chemistry.

The Chemistry collection at the Museum of Natural History of Florence

This talk will offer a virtual tour to the collection of Chemistry of the Museum of Natural History. The collection is temporarily hosted by the Department of Chemistry of the University and comprises about 1,000 chemicals, instruments and documents, starting from the second half of the 19th century with the seminal work of Ugo Schiff that moved to Florence in 1863. This unique collection consists of four different sets of great-

historical and scientific value: the Schiff Collection, the Collection of Antique Instruments, the Collection of Historical Furniture with cabinets and chemical benches, and the Bigiavi Collection with historical chemicals.

Alla Nudel

Alla Nudel, is a senior researcher and a curator of the collections of the Moscow Polytechnic Museum. She is now very interested in the history of the chemical laboratory of the Polytechnical Museum of Moscow and how this space contributed to the development of science, education and museum affairs.

Saving the heritage of the famous Russian chemist N. Zelinsky.

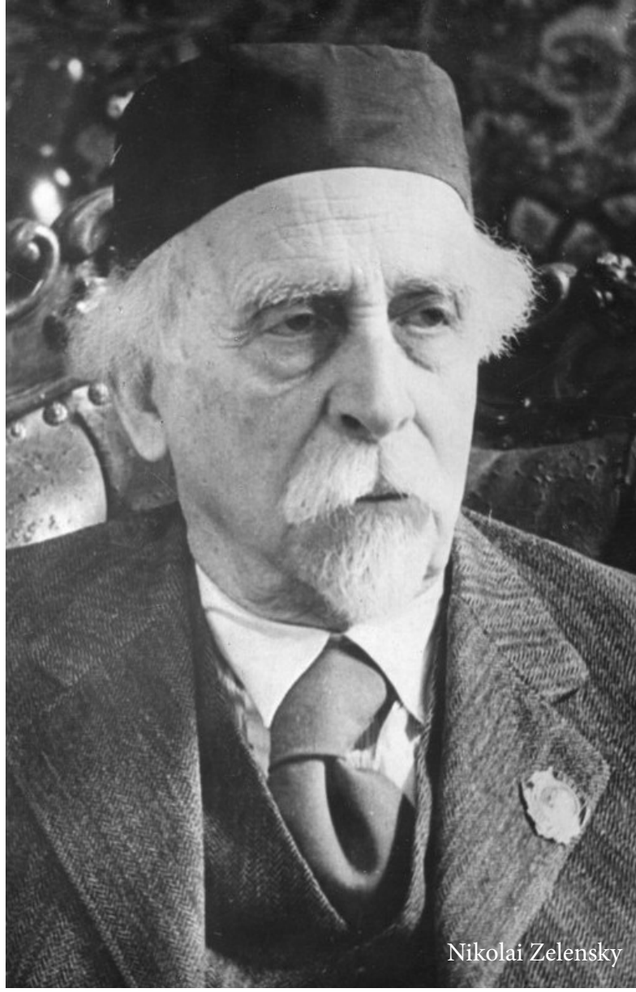
In 1995, the curators of the Moscow Polytechnical Museum became aware that the chemical laboratory, which was a part of the Memorial Museum of the well-known Russian scientist N. Zelinsky, the inventor of the coal gas mask, was being liquidated for economic reasons. The new owners took out the laboratory equipment, furniture, and etc. that had become unnecessary to the landfill. Thanks to the joint efforts of the employees of the Polytechnical Museum and the son of the scientist A. Zelinsky, who was the director of the Memorial Museum, the unique laboratory equipment was saved from destruction. Now the equipment from the N. Zelinsky's chemical laboratory is carefully kept in the collection of the Polytechnical Museum. Many items have been restored and are often used for exhibitions. These authentic subjects are important to us because they assist us to research the history of chemistry.

Asbjørn Petersen

Asbjørn Petersen is an Inorganic chemist from University of Copenhagen. His main chemical research is focused ons coordination compounds of transition metals. Now he is teaching chemistry in an upper secondary school and he is the Chair of The Danish Society for the History of Chemistry.

A Historic collection of compounds from the birth of the coordination chemistry

The Danish chemist S. M. Jørgensen (1837-1914) developed between 1878 and the turn of the century methods for preparation of the compounds we now call complexes of the transition metals with ligands like ammonia, water, halogenides etc. The Swiss chemist A. Werner showed the suitability of a model with a central metal atom surrounded by the ligands. The Werner model became increasingly accepted and Werner won the Nobel Prize in Chemistry 1913 for this work.



Nikolai Zelensky

Jørgensen never accepted the Werner model - at least not in public. But the compounds that was the basis for all this still exists. For decades rumours told about as much as 600 samples of Jørgensens complexes. Recently they were "rediscovered" in the stores of the Technical University of Denmark. Not surprisingly they were not labelled according to modern standards and therefore close to being regarded as dangerous waste. The Danish Society for the History of Chemistry has undertaken the task of making an acceptable registration. This work includes reading and decoding the old handwritten

labels followed by interpretation of the special Jørgensen lingo. Also, the substances are inspected visually and described. After this they are registered according to content of poisonous elements and are given modern names. For some samples the actual content has been checked by Raman spectroscopy and powder X-ray analyses. Actually, there were 803 compounds and our work is now almost halfway done.

Mara Jure and Alida Zigmunde

Mara Jure holds a PhD in chemistry, and she is, Professor at the Riga Technical University, Head of the Department of Chemical Technology of Biologically Active Compounds. She is an observer from Latvia at the WPHC (since 2019). She has edited two books about history of chemistry in Latvia.

Riga: one of the historical chemistry centers of Eastern Europe.

The former Faculty of Chemistry of the Riga Polytechnic Institute - the cradle of the Latvian school of chemistry - was built in 1901. The Latvian Museum of the History of Chemistry is housed in two rooms of this building. It stores more than 10000 items, including the unique laboratory equipment and devices created by Riga chemists.

Although the museum was officially opened only in 1975, the origins of the collection can be traced back to 1919. The museum houses the first X-ray diffractometer in Latvia used by M.E. Straumanis and A. Ievins for development of the method for accurate lattice parameter measurement (known as the "assymetric Debye-Scherrer method"), Carl Zeiss emission spectrometer, three generations of polarographs, viscosimeter created by Wilhelm Ostwald for the experimental work of Svante Arrhenius and exposition of chemical reagents manufactured in Germany in the 1920s and 1930s. Collection contains diploma works of graduates, chemistry text books, as well as historical materials about the development of chemical industry and science in Latvia.

Isabel Malaquias and João A.B.P. Oliveira

Isabel Malaquias holds a PhD in Physics – History and Philosophy of Physics with a graduation in Physics, Chemistry and Education. She is associate professor at University of Aveiro, Physics Department. She usually lectures courses in General Physics, Experimentation and History of Science. Her research interests are the history of science, namely of scientific instruments, personalities and networks, the history of scientific teaching. Among her publications, co-authored the book For the Love of Science – The correspondence of Jean Hyacinthe de Magellan. She is presenting a paper, jointly with João Oliveira, titled "The amazing historical collections of didactic instruments of Portuguese secondary schools."

João .B.P. Oliveira is an associate professor of chemistry at the University of Aveiro. He received a BS degree in chemical engineering from the Technical University of Lisbon in 1976, and a PhD in analytical chemistry from the University of Virgínia, Challottesville in 1985. His current interests are history of science chemometrics and chemical sensors.

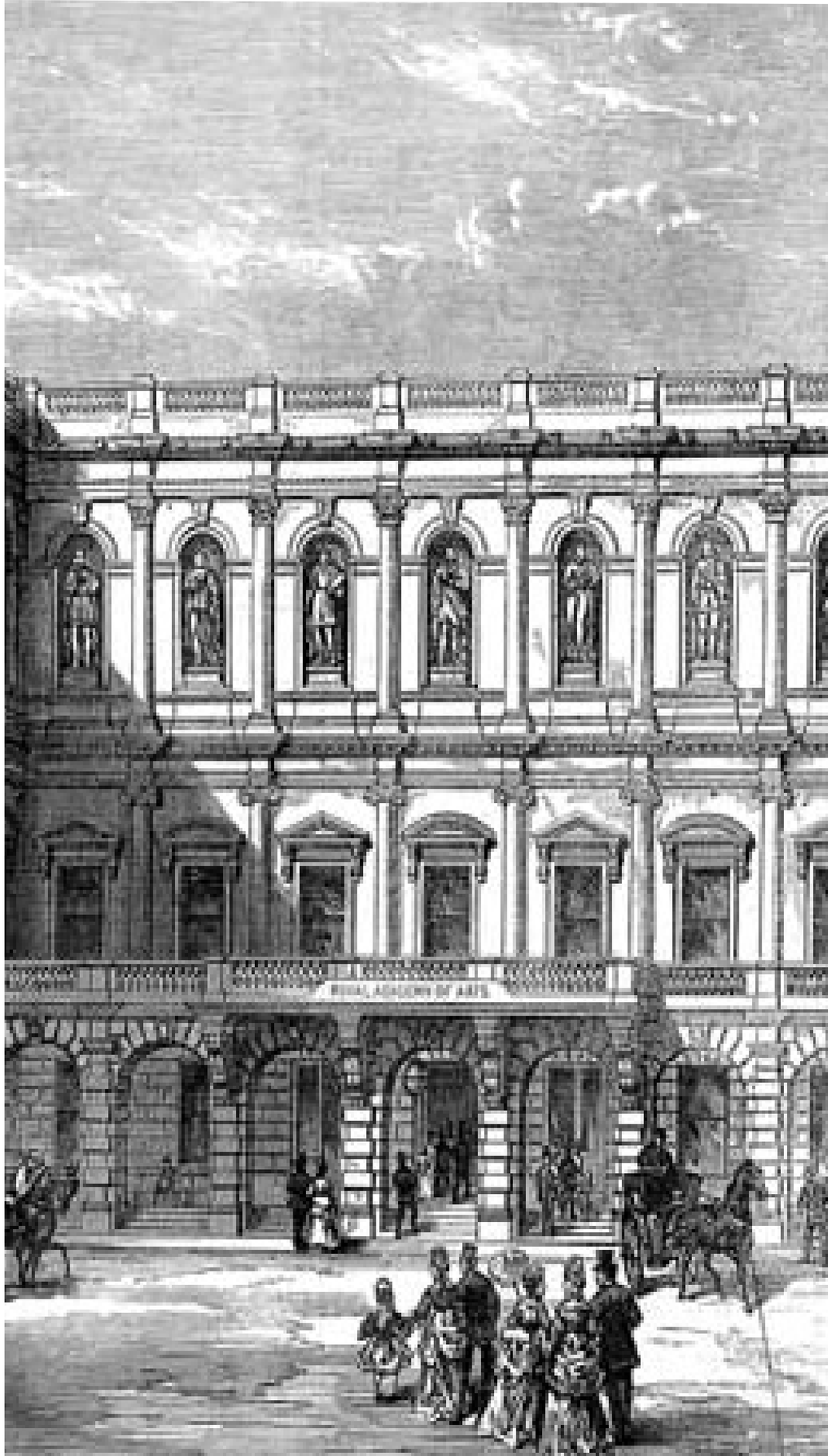
The amazing historical collections of didactic instruments of Portuguese secondary schools

Some years ago, we tried to rescue to daylight some of the historic didactic instruments and apparatuses belonging to the oldest high schools in Portugal and the result was some astonishing perspective of what is usually part of school culture. In some cases, they can be dated back to the last quarter of the nineteenth century. Frequently they can be found displayed in the hallways or some dedicated rooms in the schools. What role do they have at present? Maybe they just remain as pieces of sociability and conversation, records from a scientific educative practice apprenticeship, testimonials of travelling knowledge, normalization standards or examples of the simplicity to display the concepts they were intended to. We will detail on some of those objects more related with chemistry practice. The website then created is being updated, but still remains as a true possibility to visit some of those historical instruments.

Royal Society of Chemistry Historical Group
THE HANDED WORLD: 150 YEARS OF CHIRAL MOLECULES

Wednesday 13 October 2021, Royal Society of Chemistry, Burlington House, Piccadilly, London

The meeting will review optical activity and molecular chirality from a historical perspective – beginning in the nineteenth century and ending with techniques that are used today in the latest facilities such as the Diamond Light Source, with special reference to the biological and pharmaceutical importance of chirality.



Programme

10.15 Registration and tea or coffee

10.45 Welcome – Dr Peter Morris (Historical Group, Chair)

First session: Introduction; the Science to about 1890, with Postscripts
Chair: Dr Michael Jewess (Meeting Organising Committee)

10.49 Introduction to the Day
Dr Michael Jewess

10.55 Discovery of the Phenomenon of Polarisation of Light
Prof. John Steeds, FRS (University of Bristol)

11.35 Discovery of Optical Activity and Chirality in Molecules
Prof. Alan Dronsfield (University of Derby)

12.30 Lunch:
Second session: The Science from about 1890
Chair: Dr Jane Skelly (Lewis Carroll Society)

14.00 From d and l to R and S:
Discovery of Absolute Configuration
Prof. Henry Rzepa (Imperial College)

14.30 Polarised Light and Chemistry today
Dr Giuliano Siligardi (Diamond Light Source)

15.15 Tea interval

Third session: Chirality and Pharmaceuticals
in Recent Decades; Conclusion
Chair: Dr Viviane Quirke (Oxford Brookes University)

15.45 Does the Right Hand know what the Left Hand is Doing?
Chirality in Real Life
Dr Ian Blagbrough (University of Bath)

16:55 Concluding remarks by Dr Michael Jewess

Information on registration

There is no charge for this meeting, but prior registration is essential, which is now possible via the "BOOK NOW" button at http://www.rsc.org/events/detail/40046/the-handed-world-150-years-of-chiral-molecules. Fuller details, including likely covid precautions are available at this link. Alternatively, e-mail michaeljewess@researchinip.com or write to Dr Michael Jewess, The Long Barn, Townsend, Harwell, Oxon OX11 0DX, quoting your RSC membership number if you have one. As usual, this is expected to be a popular meeting, so if, having registered, you are unable to attend, please cancel through the link provided in the confirmation e-mail (if you have used the "BOOK NOW" button) or by notifying Dr Jewess.

News from

Science History Institute

Chemistry · Engineering · Life Sciences

Science History Institute Receives National Archives Grant to Digitize Oral Histories of Immigrant Scientists

The $130K+ award is part of the National Historical Publications and Records Commission's efforts to improve public access to historical records.

PHILADELPHIA—June 7, 2021—The Science History Institute is proud to announce that it is the recipient of a $132,875 grant from the National Archives' National Historical Publications and Records Commission (NHPRC) for the project "Science, War, and Exile: Oral Histories of Immigration and Innovation." The grant is part of the NHPRC's efforts to improve public access to historical records.

The project will make freely accessible and searchable the oral histories of 70 eminent scientists and scientist-entrepreneurs who immigrated to the United States in the 20th century. The oral histories provide moving testimony and insights into the nature of immigrant scientists' scientific work and enterprise, as well as their struggles and successes in weaving themselves into the cultural fabric of American life. Many of these stories recount in vivid detail the historical events and social conditions that led these men and women to immigrate to the United States, including the Nazi occupation of Europe, political repression in Cuba and Brazil, anti-Semitism in Turkey, South African apartheid, the ill-fated Hungarian Revolution of 1956, and the anti-intellectualism and deprecation of science during the Cultural Revolution in China.

"Oral history is about bringing people's stories to bear on our understanding and interpretation of history, to learn more about the who's, what's, where's, when's, why's, and how's of historical events. We can then take that knowledge and apply it to what is happening in our world today," said David Caruso, director of the Institute's Center for Oral History. "The NHPRC grant will allow the Center for Oral History not only to highlight the memories of emigrants and their experiences of war, exile, and immigration, but also allow others to both read and hear history simultaneously. We will be layering transcripts with our audio and/or video recordings using a web application known as the Oral History Metadata Synchronizer, giving users of our site greater accessibility to our collection of oral histories with emigrants and the ability to experience not just what our interviewees said, but also the gravity of their voices—their tones, inflections, and emotions—of the profound memories they shared with us."audio and/or video recordings using a web application known as the Oral History Metadata Synchronizer, giving users of our site greater accessibility to our collection of oral histories with emigrants and the ability to experience not just what our interviewees said, but also the gravity of their voices—their tones, inflections, and emotions—of the profound memories they shared with us."

About the National Historical Publications and Records Commission

The NHPRC is a statutory body affiliated with the National Archive and Records Administration and supports a wide range of activities to preserve, publish, and encourage the use of documentary sources created in every medium ranging from quill pen to computer, relating to the history of the United States. To learn more, visit archives.gov/nhprc.

About the Science History Institute

The Science History Institute collects and shares the stories of innovators and of discoveries that shape our lives, focusing on the history of chemistry, chemical engineering, and the life sciences. The Institute houses an archive and a library for historians and researchers; a fellowship program for visiting scholars from around the globe; a community of researchers who examine historical and contemporary issues; an award-winning digital content platform that includes videos, articles, and a podcast; an acclaimed museum that is free and open to the public; and a state-of-the-art conference center. For more information, visit sciencehistory.org or follow us on Facebook, Twitter, and Instagram.

Science History Institute Beckman Center Fellows 2021–22

The Science History Institute is pleased to welcome our 2021–2022 class of fellows at the Beckman Center for the History of Chemistry. Fellows come from institutions around the world and study a vast range of topics in the history and social studies of chemistry, chemical engineering, and the life sciences.

Fellows from the 2020-21 class who deferred their fellowships due to the Covid-19 pandemic are marked with an asterisk (*).

Two-Year Postdoctoral Fellows
Isabelle Held (Victoria & Albert Museum/Royal College of Art, London)
Price-Doan Postdoctoral Fellow
"Designing the Bombshell: Military-Industrial Materials R&D and the Shaping of Women's Bodies in the US, 1939–1976"

Megan Piorko (Consortium of History of Science, Technology, and Medicine)
Allington Postdoctoral Fellow
"Library as Laboratory: Seventeenth-century Alchemical Texts"

Meagan Allen (Indiana University)
Cain Postdoctoral Fellow
"Roger Bacon's Medical Alchemy: Occult Remedies and the Quest to Prolong Life"

Peter Thompson (University of Illinois at Urbana – Champaign)
Haas Postdoctoral Fellow
"Grasping for the Mask: German Visions of Chemical Modernity, 1915–1938"

Nine-Month Dissertation Fellow
Gustave Lester (Harvard University) | Haas Dissertation Fellow
"Mineral Lands, Mineral Empire: Mapping the Raw Materials of U.S. Industrial Capitalism, 1780-1880"

Artist-in-Residence
Anna Mlasowsky | Haas Short-Term Fellow and Artist-in-Residence

Distinguished & Senior Short-Term Fellows
Sarah Lowengard (The Cooper Union, NY)
Mistry Distinguished Fellow
"My Red Bandanas: The Waning Days and Afterlife of Turkey Red"

Michael Berkowitz (University College London, UK)
Cain Senior Fellow
"Polaroid, Kodak, Color, and the Off-Color"

Frank James* (University College London, UK) | Cain Senior Fellow
"Humphry Davy: Enlightenment Chemist, Poet, Social Climber"

David Munns (John Jay College of Criminal Justice, CUNY)
Haas Senior Fellow
"Not a Decree of Fate: A New History of Eugenics"

Benjamin Schmidt (University of Washington)
Doan Senior Fellow
"Alchemy at Meissen: On the Conversion of Matter, the Production of China, and Europe's Transmutation of the World"

Short-Term Fellows
Siobhan Angus (Yale University)
Haas Fellow
"Camera Geologica: Materiality, Resource Extraction, and Photography"

Martha Espinosa (Duke University)
Short-Term Fellow
"The Cold Contraceptive War: Mexico's "Demographic Explosion" and the Geopolitics of Reproduction"

James J. Esposito III (The Ohio State University) | Haas Fellow
"Between 'Oxygen Sense' and Sensors – The Embodied Experience of Anoxia at Earth's Extremes 1939-1955"

Jacob Older Green (University of California, Los Angeles) | Cain Fellow
"The Psychology of Mind-Altering Drugs: 1870-1938"

Charnell Chasten Long (University of Wisconsin – Madison) | Short-Term Fellow
"Fugitive Science Society: A Black Scientific Community's Vision for Science Education"

Fred Nadis (Independent Scholar)
Haas Fellow
"Children, Science Education, and Play, from Tom Swift to Girl Coders"

Stefania Moncunill (University of Barcelona, Spain) | Allington Fellow
"The Vernacularisation of Alchemy in the Occitan-Catalan Area: The Alchemical Working Manuscripts (Pseudo-Lull, Pseudo-Arnau, John of Rupescissa and Others)"

Kate Luce Mulry (California State University, Bakersfield) | Short-Term Fellow
"'It Nourisheth the Child in the Womb': Chocolate, Reproduction, and Colonization in Seventeenth-Century Jamaica"

Ying Jia Tan (Wesleyan University)
Short-Term Fellow
"Plastic and the Economic Transformation of Chinese East Asia"

Didi van Trijp (Leiden University, NL)
Allington Fellow
"Natural History Illuminated: Pigments, Paints and the Practice of Heightening (1680–1820)"

Jessica Varner (University of Southern California) | Haas Fellow
"Chemical Desires: Dyes, Additives, Foams, Making the Architectural Materials of Modernity"

Daniel Joseph Walls (Rensselaer Polytechnic Institute) | Haas Fellow
"Confined Success of Soil Lead Cleanup Initiatives"

George Borg* (University of Pittsburgh)
Price Fellow
"The Instrumental Revolution in Geochemistry"

Silvia Pérez Criado* (University of Valencia, Spain) | Haas Short-Term Fellow
"DDT During Franco's regime in Spain (1940–1975): Chemical Industry, Agricultural Engineering, Public Health, and Occupational Hazards"

Hiro Hirai* (Columbia University)
Short-Term Fellow
"Pseudo-Paracelsus: Forgery and Early Modern Science and Medicine"

Sarah Lang* (University of Graz, Austria)
Herdegen Short-Term Fellow
"Alchemical Encipherment and Practices of Secrecy: The Example of Michael Maier's Viatorium (1618)"

Raquel Reyes* (School of Oriental and African Studies, London, UK)
Doan Short-Term Fellow
"Chemical Magic Bullets: American Food Science in the Tropics, 1902–1945"

Paul Sampson* (University of Scranton)
Haas Short-Term Fellow
"Ventilating the Empire: Environmental Machines in the British Atlantic World, 1700–1850"

Antonella Sannino* (University of Naples, "L'Orientale," Italy) | Short-Term Fellow
"Forms of Artificial Life and Models of Transformation from the Middle Ages to the Early Modern Period"

Joel Tannenbaum* (Community College of Philadelphia) | Mistry Short-Term Fellow
"Science, Marketing and Myth: Taste and Color Perception Research in the 1970s"

Xiaona Wang* (University of Edinburgh, Scotland) | Ullyot Scholar
"Hidden Causes, Manifest Effects: Occult Traditions in the Forging of Newton's Natural Philosophy"

The Beckman Center's Applied Arts of Alchemy conference was held May 19–21.

You may access here the YouTube recording of Professor Bruce Moran's keynote lecture and the subsequent Distillations podcast event (featuring Allington Postdoctoral Fellow Megan Piorko and SHI Dissertation Fellow Meagan Allen)

Awards

The Society for the History of Alchemy Chemistry Announcement: Morris Award 2021 for Ernst Homburg

The SHAC Morris Award for 2021 has been given to Ernst Homburg for his outstanding work on the history of the chemical industry. His contributions include major studies on the history of the madder industry; his seminal paper on the early history of industrial R&D laboratories; his comprehensive history of twentieth-century modern chemistry and the chemical industry embedded within a broader history of the Netherlands in Techniek In Nederland in the Twintigste Eeuw. And, particularly (in the context of this award), his "The Era of Diversification and Globalization (1950-2012)" in Solvay: History of a Multinational Family Firm (CUP, 2013), a book he co-edited with Kenneth Bertrams and Nicolas Coupain.

Ernst Homburg has given great service to the history of chemistry community. He edited the *Ambix* book reviews for ten years; served as a member of SHAC Council for twenty years; chaired the Historical Group of the Dutch Chemical Society for twelve years; was president of the Dutch History of Science Society (GeWiNa) between 1995 and 1998; and chaired the Working Party on the History of Chemistry of the European Association for Chemical and Molecular Sciences for six years up to 2009. He was a Professor in the Faculty of Arts and Sciences at the University of Maastricht until his recent retirement.

The Morris Award honours the memory of John and Martha Morris, the late parents of Peter Morris, the former editor of *Ambix* and recognises scholarly achievement in the History of Modern Chemistry (post-1945) or the History of the Chemical Industry. The next award will take place in 2024. A call for nominations will be circulated in 2023.

Ernst Homburg

Bader Prize for the History of Science for Sarah Lang

LBI Fellow Sarah Lang received the Bader Prize for the History of Science from the Austrian Academy of Science and the Bader foundation for her work on the digital analysis of alchemical texts and more specifically, their characteristic stylistic device called Decknamen. The prize is meant to support early career scholars engaging in history of science involving advisors and cooperation partners covering both science and historical studies.

You may access a description of Sarah's project here.

Secrets of Matter, Matters of Secrecy

A Report on the 12th Annual Postgraduate Workshop

by Alison McManus

The SHAC postgraduate workshop went virtual on June 3-4, 2021. In a change of pace, its platform was not a single academic department or research institute - like the many who have generously hosted SHAC events in the past - but rather the now-familiar virtual spaces of Zoom and Youtube. Over two days, early career scholars tuned in to discuss secrecy in the history of chemistry, summed up by the workshop theme, "Secrets of Matter, Matters of Secrecy: Concealing (al)Chemical Knowledge from Ciphers to the Military-Industrial Complex." This decidedly successful workshop brought together specialists in alchemy and modern chemistry, that is, both halves of our society's acronym. These (al)chemical specialists were joined by welcome interlopers, such as scholars of architecture, law, and environmental history - a model that I hope future workshops will replicate.

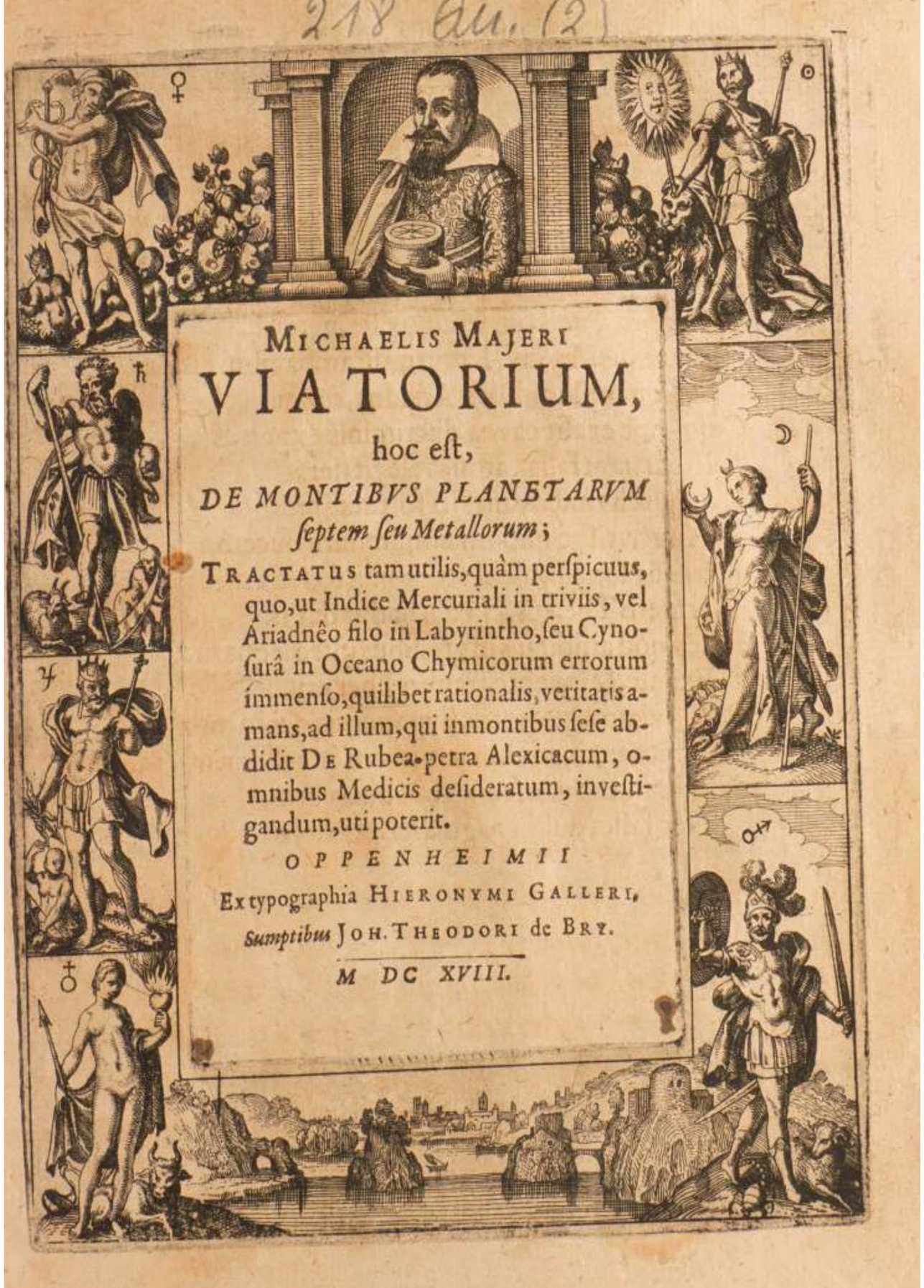
The workshop began with a fascinating panel on the concealment of gendered knowledge, with case studies from the 16th, 20th, and 21st centuries. Our first contributor, Natacha Klein Käfer, presented her research on the alchemical laboratories of August and Anna of Saxony. Her talk offered a spatial analysis of alchemical information controls, which restricted access to laboratory rooms based on the type of experiment and the gender of the practitioner. In the workshop's second talk, Lara Tessaro provided a legal-historical account of Canadian cosmetic labelling regulations, showing how labels have the power to hide as well as disclose chemical exposures. Grace Poudrier and Lauren Richter then closed out the session with their collaborative talk on the group of industrial pollutants known as PFAS. (For the nomenclature enthusiasts among us, that's per- and polyfluoroalkyl substances.) The ubiquity of these consumer products, Poudrier and Richter argued, is a direct result of corporate marketing campaigns that linked images of white feminine domestic bliss to the use of these chemical substances.

By highlighting chemical dangers, these latter two presentations dovetailed nicely with the workshop's first keynote address, given by Professor Nancy Langston of Michigan Technological University. Her keynote, "Toxic Inequities: Secrets, Silences, and Indigenous Communities," showed how the concealment of information on chemical exposures disproportionately impacted indigenous communities in the Pacific Northwest and the Great Lakes Region. There, chemical and mining companies used outright deception as well as trade secrecy to minimize their apparent knowledge of environmental pollution, and by extension, their responsibility for harm.

The workshop's second session drew us back into the early modern period, when alchemical practitioners relied on many tools for concealing knowledge. Sergei Zotov began the session with an analysis of the Coronatio naturae's elaborate alchemical iconography, studied extensively by Isaac Newton.

Then Marlis Hinckley presented her research on the use of letter codes in Pseudo-Lull. She attributed to letter codes a variety of simultaneous functions; they were devices of concealment and revelation as well as tools of shorthand and information management. Concluding our alchemy session was a collaborative paper by Sarah Lang and Megan Piorko. The two scholars reported on their efforts to solve a particularly thorny cipher from a Paracelsian medical-alchemical notebook with the aid of both historical and mathematical methods.

The second day of the workshop highlighted industrial chemistry, pairing discussion of intellectual property and trade secrecy with the legacies of chemical exposures. Andrew Meade McGee began the first session with a discussion of the Mellon Institute of Industrial Research, a world-famous institute whose scientists struggled to reconcile proprietary methods with their employer's reputation as a promoter of scientific exchange. The session then turned to Vyta Pivo's presentation on concrete,



the second most-consumed product in the world. With materiality in mind, she followed the life cycle of concrete from factories, to trucks, to concrete dust, challenging the coherence and stability of this foundational substance. To this lineup of speakers, I was happy to add my own presentation on herbicides research during the Second World War, which raised similar issues of secrecy versus open scientific exchange.

The workshop's final session focused on global chemical exposures and attempts at their regulation. To begin, Jayson Porter presented a literary-historical analysis of arsenic contamination in Mexico, and in a closely related talk, Jack Klempay examined chlordecone contamination on banana plantations in Martinique and Guadeloupe. In both of these talks, chemical exposures appear as the material legacies of mining, agriculture, and economic decisions by metropolitan chemical manufacturers. When France and the United States banned certain compounds for domestic use, manufacturers simply exported them to the Global South. In the workshop's final talk, Colleen Lanier-Christensen examined the international regulation of chemical substances in the 20th and 21st centuries. She demonstrated that certain evidentiary standards, which regulators devised to facilitate international trade, also constrained chemical knowledge by limiting the kinds of studies that regulators could reference.

These interlocking questions of evidence, expertise, and types of chemical knowledge coincided with the workshop's second keynote address, given by Professor Michelle Murphy of the University of Toronto. Their keynote, titled "What Is Chemical Pollution?," pointed to major limitations of predominant modes of understanding chemical harm. Treating chemicals as abstract, small molecules with their own individual identities is not necessarily wrong, but it does have an obscuring effect. Chemicals are also irrevocably linked to bodies, to environments, to indigenous land, and to the industrial networks that produce them.

The workshop drew significant interest, with sixty registered participants and perhaps closer to forty-five who in fact attended. No doubt the virtual format led to an increase in our RSVPs, and probably our rate of attrition as well. Additionally, I am happy to report that 80% of our registered participants and over half of our presenters had never attended a SHAC event before. This statistic more than likely shaped our topics of discussion. Committed historians of chemistry joined newcomers and scholars of adjacent disciplines, to the effect that our conversations touched on legal history and a noteworthy number of environmental topics. Whether this type of exchange outlasts the virtual era remains to be seen, but I remain optimistic.

Many thanks are due to SHAC's postgraduate student ambassadors, Sarah Hijmans and Sarah Lang, a scholarly dyad of Sarahs who helped to organize this unique conference and moderate its extensive discussion. Likewise, Georgiana ("Jo") Hedesan deserves special thanks for her invaluable technical support as we navigated the challenges of the online format.

As the academic world lurches slowly toward more and more in-person events, it is my hope that the SHAC postgrad workshop will continue to serve as a platform for early-career scholars, and that it will foster more robust collaboration between specialists in alchemy, modern chemistry, and the numerous adjacent disciplines that call out our name. Stay tuned for more.

PROJECT REPORT

Corinna Gannon

Only a few months after I had submitted my interim report (November 2019), the world as we knew it ceased to exist. International travel was complicated by the outbreak of Covid-19 and thus, my research project was naturally slowed down. I am grateful to SHAC for granting me an extension to continue my research.

In February 2020, shortly before the international shut down, I was able to present my findings from previous trips to archives, libraries and collections in Basie, Vienna and Leipzig at the conference "Alchemical Laboratories" in Vienna. My paper ("Electrum in the Kunstkammer of Rudolf II. - Objects made from Seven Metals") is going to be published in the upcoming proceedings. A part of my award was used for covering the expenses for the reproduction of images for this essay.

My research on the seven-fold alloy called Electrum continues. Since January 2020, I am conducting a series of hands-on experiments together with a goldsmith from Switzerland. We are reproducing historical recipes for alloying the seven planetary metals. For this reason, I made several trips to Basle to work with my colleague in his well-equipped laboratory. This project is still on going and first results will be presented at the upcoming conference "The Applied Arts of Alchemy" organized by the Science History Institute (May 19th-25t, 2021). Once completed, the results will enter my dissertation as well as a separate publication.

Despite the travel restrictions, two visits to museums were possible, after all, to continue my art historic research on objects from the Rudolfine collections. In August 2020, I spent two days in Vienna, to examine an amulet in the restoration workshop of the Kunsthistorisches Museum (www .khm .at / de/object/ 4cad 4cef90/) with the curator and the conservator. My findings are going to be published in the upcoming issue of Studia Rudolphina ("The Amulet of Rudolf 11- Kabbalistic Talisman and Pansophic Collectible.") In April 2021, I dedicated one day to a painting on alabaster by the court artist Hans van Aachen, located in the Germanisches Nationalmuseum in Nuremberg. These findings will become part of a chapter on paintings on stone - a technique I am initially trying to relate to alchemical discourses. As indicated in my purpose statement when applying for the award, such object-based research is vital for the material-iconological approach I am pursuing and greatly enriches my dissertation in which a great amount of original research on under-explored objects is going to be presented.

Once again, I would like to express my deepest gratitude to SHAC for supporting my research and facilitating some exceptional trips and unique experiences.

BJHM

Ambix May-August 2021, volume 68, issue 2-3, is now available for members in print and on Taylor & Francis Online.

ALCHEMY AND THE EARLY MODERN UNIVERSITY

Ambix, Volume 68, Issue 2-3, May - August 2021

Note on the delivery of *Ambix*

The print copy of the double May/August issue of *Ambix* was dispatched from Taylor and Francis' mailing agent Air Business in July. However Air Business is advising of delays to the standard mailing turnaround time as a result of the ongoing disruption to distribution and freight during the pandemic. Over the past year, we have found that certain locations have experienced longer delays than others and we appreciate your patience in these circumstances. If you have any concerns regarding delivery or need to request a replacement copy please email info[at]ambix.org .

BJX

AM

Remember Ambix February 2021 is also in print and online

Alan J. Rocke, "A Woman's Life Alongside Chemistry: The Memoirs of Theresa Kopp Baumann." Pages: 1-27

Mike A. Zuber, "Alchemical Promise, the Fraud Narrative, and the History of Science from Below: A German Adept's Encounter with Robert Boyle and Ambrose Godfrey." Pages: 28-48

Mark I. Grossman, "John Dalton's "Aha" Moment: the Origin of the Chemical Atomic Theory." Pages: 49-71

José Ramón Bertomeu Sánchez, "Lead Poisoning in France around 1840: Managing Proofs and Uncertainties in Laboratories, Courtrooms, and Workplaces." Pages: 72-96

Theresa Levitt, "Morphine Dreams: Auguste Laurent and the Active Principles of Organised Matter." Pages: 97-115

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.

Humphry Davy notebooks project

A public-facing project set to uncover previously unpublished material from the early nineteenth century's 'foremost man of science' has launched online.

Sir Humphry Davy (1778-1829) discovered more chemical elements than any individual has before or since. His achievements saw him rise up through society's ranks from relatively modest origins to become, just over 200 years ago, the President of the Royal Society of London.

In 1815, he invented a miners' safety lamp that came to be known as the Davy Lamp, saving countless lives in Britain and Europe, and vastly improving the nation's industrial capability.

The £1 million project, funded by the Arts and Humanities Research Council (AHRC) and led by Lancaster University with the University of Manchester and UCL, will use the people-powered research platform Zooniverse to bring to light Davy's notebooks – the documents he used to work out scientific ideas alongside lines of poetry, philosophical musings, geological drawings, and accounts of his life.

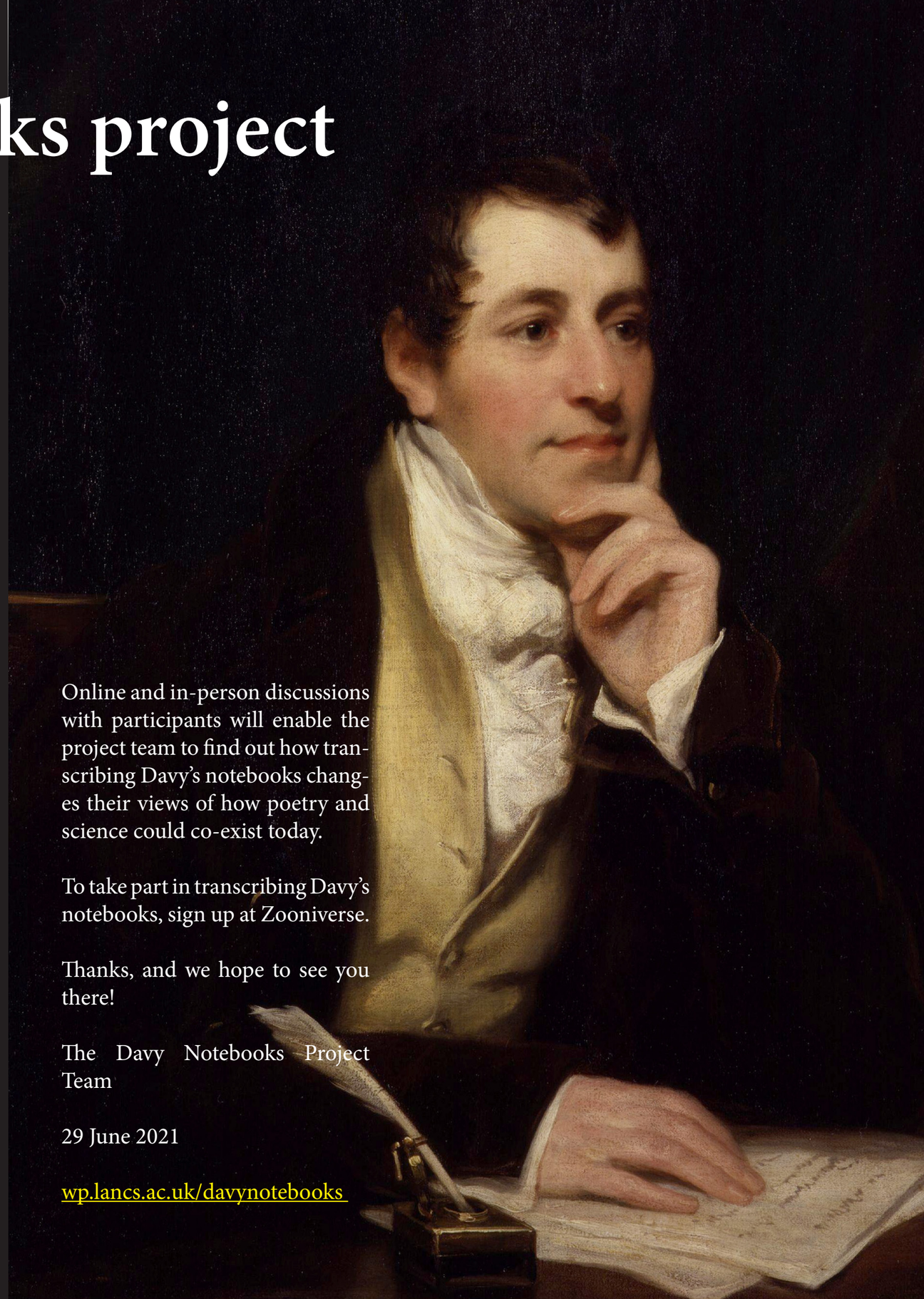
Davy kept notebooks throughout his life, but most of the pages of these notebooks have never been transcribed before. Most entries have yet to be dated or considered in the light of what they tell us about Davy, his scientific discoveries, and the relationship between poetry and science.

In 2019, AHRC funding enabled Professor Sharon Ruston and Dr Andrew Lacey, both of the Department of English Literature and Creative Writing at Lancaster University, to crowdsource transcriptions of five of Davy's notebooks, dating from between 1795 and 1805, using Zooniverse.

Following on from this successful pilot project, during which more than 500 participants from around the world transcribed 626 notebook pages in under 20 days, the project team will now crowdsource transcriptions of Davy's entire 75-strong notebook collection.

Some 70 notebooks are held at the Royal Institution of Great Britain in London and 5 are held in Kresen Kernow in Redruth, Cornwall.

Crowdsourcing is now underway. It's free to take part, and you can transcribe as much or as little as you like. The edited transcriptions will later be published online, alongside images of the notebooks, on a free-to-access website, as part of Lancaster Digital Collections.



Online and in-person discussions with participants will enable the project team to find out how transcribing Davy's notebooks changes their views of how poetry and science could co-exist today.

To take part in transcribing Davy's notebooks, sign up at Zooniverse.

Thanks, and we hope to see you there!

The Davy Notebooks Project Team

29 June 2021

wp.lancs.ac.uk/davynotebooks

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: kjpu@kth.se