

# Evan Hepler-Smith

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## **I. Academic Positions**

<i>Duke University</i> , Assistant Professor of History	2019-present
Andrew W. Mellon Assistant Professor of History	2020-2021
<i>Boston College</i> , Visiting Assistant Professor of History & STS	2018-2019
<i>Harvard University Center for the Environment</i> , Ziff Environmental Fellow	2016-2018

## **II. Education**

*Princeton University*, 2010-2016

Ph.D. in History (Program in History of Science), July 2016

*Dissertation*: “Nominally Rational: Systematic Nomenclature and the Structure of Organic Chemistry, 1889-1940” (Committee: Michael Gordin, Angela Creager, Philip Nord, Carsten Reinhardt)

*Fields*: Modern Science (Michael Gordin), Modern Europe (Philip Nord), Medicine (Keith Wailoo)

*Harvard College*, 2002-2006

A.B., *magna cum laude*, in Literature. *Thesis*: “Virginia Woolf’s Symposia: Ideas of the Party in *Mrs. Dalloway*, *To The Lighthouse*, and *The Waves*”

## **III. Honors, Grants, and Fellowships**

### **A. General & Research**

*Reckoning with Race, Racism, and the History of the American South*, “Reckoning with Race: Chemical Histories” (Duke University; 2021-2023), awarded April 2021.

*Mellon Just Futures Initiative*, “Histories of Race and Racism in Chemistry,” within “Humanities Education for Anti-racism Literacy in the Sciences and Medicine” (PI: Elizabeth Hennessy, University of Wisconsin-Madison; 2021-2024), awarded Dec 2020.

*Andrew W. Mellon Assistant Professor of History* (Andrew W. Mellon Foundation & Duke University), 2020-2021

*Institute for Liberal Arts Seed Grant* for “Remapping Environmental Toxicity, Promoting Planetary Health” (Boston College), 2019

*Subject Development Grant* for “The Chemical History of Environmental Health” (Society for the History of Alchemy and Chemistry), 2018-19

*Norberg Travel Grant* (Charles Babbage Institute, University of Minnesota), 2017

*Visiting Predoctoral Fellowship* (“Sciences of the Archives” project, Department II, Max Planck Institute for the History of Science, Berlin), February-April 2016

*Porter Ogden Jacobus Fellowship* (Princeton University), 2014-15

*Herdegen Fellowship in History of Scientific Information* (Chemical Heritage Foundation), 2013-14

*Rumford Scholarship* (Society for the History of Alchemy and Chemistry & Chemical Heritage Foundation), 2012-13

*Phi Beta Kappa Society*, 2006

*Whitehill Prize* (Lowell House, Harvard College), 2005

### **B. Publications**

*Faculty Book Manuscript Workshop Award* for “Compound Words: Chemists, Information, and the Synthetic World” (Duke University Franklin Humanities Institute), March 2020

*Nathan Reingold Prize* (History of Science Society), 2015

*Partington Prize* (Society for the History of Alchemy and Chemistry), 2014

*Lawrence Lader Prize in Expository Writing* (Harvard College), 2003

### **C. Teaching & Service**

*History of Science Society Recognition of Outstanding Service* (2016-2020), 2021

*David L. Paletz Innovative Teaching Fund Grant* for “Drugs, Chemicals, and Health” (Duke), 2020

*Certificate of Excellence in Teaching* for “Environments in Crisis” (Harvard), 2017

*Certificate of Distinction in Teaching* for Math Xa: Intro to Functions and Calculus (Harvard), 2004

## **IV. Publications (\* = peer-reviewed)**

### **A. Book**

*Compound Words: Chemical Information and the Molecular World*  
(Under contract with University of Chicago Press)

### **B. Articles under review and in preparation**

“Substitution: A Halogenated History of ‘Essential’ Chemistries.” (in preparation)

“To be chemical is to be named.” In *To Be—Named: How we colonize or decolonize through the process of naming*, ed. Gwyneira Isaac, Stanisław Kordasiewicz, Sylvia Ngo, Marta Ostajewska, and Kyunney Takasaeva. (in preparation)

### **C. Scholarly articles and essays (History/STS)**

\* “Alfred Walter Stewart,” epilogue to J.J. Connington, *Nordenholt’s Million* (Cambridge, MA: MIT Press, forthcoming 2022). [\[link\]](#)

\* “Molecular Bureaucracy: Toxicological Information and Environmental Protection.” *Environmental History* 24:3 (July 2019): 534-560. [\[link\]](#)

\* “‘A Way of Thinking Backwards’: Computing and Method in Synthetic Organic Chemistry.” *Historical Studies in the Natural Sciences* 48:3 (June 2018): 300-337. [\[link\]](#)

\* “Paper Chemistry: François Dagognet and the Chemical Graph.” In “Paper Tools from the 1780s to 1960s: Special issue in honor of Ursula Klein,” *Ambix* 65:1 (Feb 2018): 76-98. [\[link\]](#)

- \* "François Dagognet et la chimie informatique." In *François Dagognet épistémologue*, ed. Bernadette Bensaude-Vincent, Jean-François Braunstein, and Jean Gayon (Paris: Éditions Matériologiques, 2019).  
(abridged and translated version of Hepler-Smith, "Paper Chemistry" (2018))
- \* "'Just as the Structural Formula Does': Names, Diagrams, and the Structure of Organic Chemistry at the 1892 Geneva Nomenclature Congress." *Ambix* 62:1 (Feb 2015): 1-28. [\[link\]](#) (Reprinted as "Crafting names and making kinds: Lessons from the 1892 Geneva Nomenclature Congress." In *Perspectives on Classification in Synthetic Sciences: Unnatural Kinds*, ed. Julia R. S. Bursten (New York: Routledge, 2019).
- "Review: Grasping the Technical Image," *Historical Studies in the Natural Sciences* 47:1 (Feb 2017): 117-125. [\[link\]](#)
- "Changing Names and Naming Change: Transformations in the 'International Machinery' of Chemical Information." *Proceedings of the International Workshop on the History of Chemistry, March 2-4 2015* (2016): 68-76. [\[link\]](#)
- "Remaking the X-Ray as an Instrument of Authentication." *Proceedings of the Authentication in Art Congress 2014* (July 2015). [\[link\]](#)
- "Think Piece: Simple Problems." *IEEE Annals of Computing* 36:1 (March 2014): 85-88. [\[link\]](#)

#### **D. Scholarly articles and essays (Chemical and information sciences)**

- \* Kim, Sunghwan, Ehren Bucholtz, Kristin Briney, Andrew Cornell, Jordi Cuadros, Kristen Fulfer, Tanya Gupta, Evan Hepler-Smith, Dean Johnston, Andrew Lang, Delmar Larsen, Ye Li, Leah McEwen, Layne Morsch, Jennifer Muzyka, and Robert Belford. "Teaching Cheminformatics through a Collaborative Intercollegiate Online Chemistry Course (OLCC)." *Journal of Chemical Education* (Dec 21, 2020). [\[link\]](#)

#### **E. Scholarly reviews**

- "The Chemical Age: How Chemists Fought Famine and Disease, Killed Millions, and Changed Our Relationship with the Earth, Frank A. von Hippel." *H-Environment, H-Net Reviews* (August 2021), <http://www.h-net.org/reviews/showrev.php?id=56218>.
- "Perspectives on Chemical Biography in the 21<sup>st</sup> Century, ed. Isabel Malaquias and Peter J. T. Morris." *Isis* 112:3 (Sept 2021): 639-640. [\[link\]](#)
- "Making Climate Change History: Documents from Global Warming's Past, ed. Joshua P. Howe." *Isis* 111:4 (Dec 2020): 904-906. [\[link\]](#)
- "The Etymology of Chemical Names, Alexander Senning." *Ambix* 67:2 (May 2020). [\[link\]](#)
- "The Matter of History: How Things Create the Past, Timothy J. LeCain." *Environmental History* 24:3 (July 2019): 616-618. [\[link\]](#)
- "Runaway: Gregory Bateson, the Double Bind, and the Rise of Ecological Consciousness, Anthony Chaney." *Isis* 110:1 (March 2019): 211-212. [\[link\]](#)
- "About Method: Experimenters, Snake Venom, and the History of Writing Scientifically, Jutta Schickore." *Journal of the History of Biology* 51:3 (Sept 2018): 601-603. [\[link\]](#)
- "The Pedagogical Construction of Chemistry. Review of *Inventing Chemistry: Herman Boerhaave and the Reform of the Chemical Arts*, John C. Powers." *Endeavour* 37:4 (2013): 193-94. [\[link\]](#)

**F. Articles for broader audiences**

"A Century of Nomenclature for Chemists and Machines," *Chemistry International* 41:3 (July 2019): 46-49. (w/ Leah McEwen) [[preprint](#)]

"A Leak in the Chemical Archive," in Virtual Roundtable on Compression. *Public Books*, 13 Oct 2017. [[link](#)]

"How to Save Your Sperm: We don't just need safer chemicals, we need safer chemistry." *The New York Times*, 31 Jul 2017. [[link](#)]

"Review: 'American Eclipse' by David Baron." *The Wall Street Journal*, 21 Aug 2017. [[link](#)]

"Environmental Data, Public Trust, and Guerrilla Archiving." *First 100 Days: Narratives of Normalization and Disruption*, (Program on Science, Technology, and Society, Harvard Kennedy School), 8 Feb 2017. [[link](#)]

"The Canary in Donald Trump's Literal Coal Mine." *TIME.com*, 14 Dec 2016. [[link](#)]

"Review: 'Database of Dreams' by Rebecca Lemov." *The Wall Street Journal*, 14 Dec 2015. [[link](#)]

"Review: 'Making Marie Curie' by Eva Hemmungs Wörten." *The Wall Street Journal*, 21 Mar 2015. [[link](#)]

"Letter: General Education." *Harvard Magazine*, November 2015. [[link](#)]

"Systematic Flexibility and the History of the IUPAC Nomenclature of Organic Chemistry." *Chemistry International* 37:2 (Mar 2015): 10-14. [[link](#)]

[American Science](#) blog (Co-administrator and regular contributor, 2014-15)

"Quest for Permanence." *Chemical Heritage* 31:1 (2013): 20-26 (w/ Augustin Cerveaux). [[link](#)].

**G. Experimental and mixed-media work**

"[Visualizing the Chemistry of Regret](#)," in *Visualizing Toxic Subjects*, University of California Irvine Center for Ethnography, 2019-20.

**V. Teaching****A. Courses designed and taught as instructor of record**

Duke University, Assistant Professor

History 89S/Chemistry 89S: Making and Knowing the Material World: Exploring the History of Chemistry (First-year seminar), Spring 2022

History 106: Science and the Modern World, Spring 2020, Spring 2022

History 235: Drugs, Chemicals, and Health: Histories of Substances in Economies, Environments, and Bodies, Fall 2020, Fall 2021

History 549S: Histories of Science and Technology, Fall 2019

History 577S: Historical and Philosophical Perspectives on Science, Spring 2021

History 790S-12: Environmental Sciences and Ecological Histories, Fall 2021

Boston College, Visiting Assistant Professor

History 1713: Environmental Crisis: How Past Disasters Shape the Present, Fall 2018

[Renewed Core](#) course, paired and integrated with the Natural Sciences course "Environmental Crisis: Sustainability and the Future" (Prof. Jonathan Kronos)

History 1714: Can Machines Think? A.I. in Historical Perspective, Spring 2019

[\*Renewed Core\*](#) course, paired and integrated with the Sociology course “What Can Machines Do? Automation in Society” (Prof. William Attwood-Charles)

History 2880: Drugs, Chemicals, and Health in Global History, Fall 2018

History 2881: History of Biotechnology, Spring 2019

*Harvard University, Lecturer*

History of Science 131V: Environments in Crisis, Fall 2017

## **B. Advising**

### *Dissertation Committees*

Ashton Merck (Duke University, History), “The Fox Guarding the Henhouse: Coregulation and Consumer Protection in Meat and Poultry, 1957-1996” (March 2020)

Shahrazad Shareef (Duke University, Program in Literature), “Science at the Svimez” (July 2021)

Martha Espinosa (Duke University, History), “‘One Country, Two Destinies’: Family Planning, Social Sciences, and Medical Interventions in Cold War Mexico (in progress)

Mohammed Ali, (Duke University, History) (in progress)

### *Graduate qualifying examinations*

Yooseong Heo (Duke University, History), History of Information Technology minor field, Spring 2022

### *Certificates*

MD Murtagh, Duke University, Graduate Certificate in History and Philosophy of Science (capstone advisor), Fall 2019

### *Undergraduate theses*

Caroline Petronis, Spring 2021 (Honors Evaluating Committee member)

Cydney Livingston, “The Human Betterment League: Sterilization, Contraception, and Family Planning in Postwar North Carolina,” Spring 2022 (advisor)

### *Undergraduate independent studies*

“Between Eugenics and Genetics,” Fall 2021

“The mathematical subject and the quantified body,” Spring 2020

“Synthetic histories,” Summer 2020, Fall 2020

## **C. Discussion sections, writing and problem-solving instruction, grading**

### *Princeton University, Preceptor*

History 211: Europe from Antiquity to 1600 (Anthony Grafton), Fall 2015

History 292: Science in the Modern World (Michael Gordin), Fall 2012

*Completed Princeton Teaching Transcript, McGraw Center for Teaching & Learning*

### *NSF / American Chemical Society Online Chemistry Course, Lecturer*

[\*Cheminformatics Online Chemistry Course\*](#), Summer-Fall 2015, Winter-Spring 2017

*Created modules on chemical structure representation; provided instructional support*

*Harvard University, Course Assistant*

Math Xa and Math S-Xab: Introduction to Functions and Calculus, Fall 2003,  
Summer 2004, Fall 2004

## **VI. Workshops and Symposia Organized**

"Injection Wells: What We Pump Underground, and What Happens Next," Radcliffe Exploratory Seminar, June 2020, co-organized with Conevery Valencius, Anna Kuchment, and Jonathan Krones (*cancelled due to COVID-19*).

"Remapping Chemicals, Environments, and Toxicity," Interdisciplinary workshop at Boston College, June 2019, supported by grants from the Boston College Institute for Liberal Arts and the Society for the History of Chemistry and Alchemy.

"Grappling with the Futures: Insights from Philosophy, History, and Science, Technology and Society," Harvard University & Boston University, April 2018, <https://grapplingwiththefutures.com/>. (Member of symposium committee.)

"Internationality: Modes of International Cooperation in Science," co-organized with Geert Somsen, International Congress of History of Science & Technology, Rio de Janeiro, July 2017.

"The Science of Information, 1870-1945: The Universalization of Knowledge in a Utopian Age," co-organized with Lynn Ransom and Robert Fox, Univ. of Pennsylvania, February 2017, [http://www.library.upenn.edu/exhibits/lectures/science\\_of\\_information.html](http://www.library.upenn.edu/exhibits/lectures/science_of_information.html).

"Aesthetics and the Life Sciences," public symposium co-organized with Helen M. Berman, Stephen K. Burley, Kathryn Maxson Jones, and Christine Zardecki, Rutgers University, October 2016, <http://artlifesci.rcsb.org/>.

"Unnatural Kinds: Contemporary Perspectives on Scientific Classification," interdisciplinary workshop co-organized with Julia Bursten, San Francisco State University, May 2016, <http://unnaturalkinds.wordpress.com/>.

## **VII. Invited Lectures and Presentations**

Participant, "Mattering Elements," residency organized by Suzana Sawyer, University of California Humanities Research Institute, July 2022.

Participant, "Au & Hg," workshop organized by Donna Bilak, Lorentz Center, July 2022.

Discussant, Sarton Medal symposium honoring Bernadette Bensaude-Vincent, organized by Mary Jo Nye and Alan Rocke, History of Science Society Annual Meeting, November 2021.

"Race, Racism, Anti-racism, & The History of Chemical Sciences," presentation to Center for Sustainable Nanotechnology, March 2021.

"Humanities Education for Anti-Racism Literacy (HEAL) Project," presentation sponsored by History Department Faculty-Student Task Force on the Study and Teaching of Race, March 2021.

"Querying Computational History from the History of Chemical Information," workshop on Computational Approaches to the History of Chemistry, Max Planck Institute for Mathematics in the Sciences, March 2021.

"Compound Words, Synthetic World: Chemists, Computing, and the Environment," University of Oxford Seminar in the History of Science, Medicine, and Technology, January 2021.

"Substitution: A halogenated history of 'essential' chemistries," invited presentation, UCLA Institute for Society and Genetics Fellows' Seminar, May 2020.



"Synthetic histories," invited presentation in "Experimental Environments," University of Illinois Environmental Humanities Symposium, Champaign-Urbana, March 2020.

"Molecular bureaucracy: A chemical history of data," invited lecture for "Data Then and Now," University of Washington lecture series in STS and data science, February 2020.

Invited discussant, "Intellectual Property for the Un-Discipline(d)," joint workshop of European Research Council-founded project "Patents as Scientific Information, 1895-2020" and the International Society for the History and Theory of Intellectual Property, Norrköping, Sweden, September 2019.

"From compound words to digital codes, how IUPAC's past and present enable chemistry's future," 47<sup>th</sup> World Chemistry Congress, Centenary of the International Union of Pure and Applied Chemistry, Paris, July 2019, in symposium "IUPAC and Chemistry: A Century of Intertwined History, a Common Heritage for the Future."

"Compound Words, Synthetic World: Chemists, Computing, and the Environment," University of California Irvine History Department, April 2019.

"Compound Words, Synthetic World: How the history of chemical information matters for grappling with the materials of the future," NIH Nanotechnology Working Group, April 2019.

"Compound Words, Synthetic World: Chemists, Computing, and the Environment," University of Wisconsin-Madison History Department, April 2019.

"Molecular Bureaucracy," PFAS Project Lab, Northeastern University Social Science Environmental Health Research Institute Lab, March 2019.

"Do Molecules Have Politics?," Tufts University STS Seminar, March 2019.

"Solar Panels on 'The Roof of the World,'" Boston College History Department, "Free-Range Historians" seminar series, March 2019.

"Compound Words, Synthetic World: A Chemical History of Computing & Information," University of Minnesota Program in History of Science, Technology, and Medicine, February 2019.

"Compound Words, Synthetic World: Chemists, Computing, and the Environment," Duke University History Department, February 2019.

"Substitution," presentation in the workshop "Technologies in Use," organized by Lissa Roberts and Lee Vinsel, Max Planck Institute for the History of Science, Berlin, April 2018.

"Chemistries of Regret," Harvard University Program in Folklore and Mythology, "Toxic Tales" symposium, March 2018.

"Molecular Government, Toxicological Information, and Environmental Protection," Harvard STS Circle, September 2017.

"Transition States: Compressing Molecules across Time and Media," Size Matters: Knowledge, Storage, and the History of Compression, Harvard University, April 2017.

"Paper Tools, Paper Things and a 'Third-Order Science of Organization,'" American Chemical Society National Meeting, Philadelphia, August 2016, HIST Award symposium honoring Ursula Klein, organized by Mary Jo Nye and Gary Patterson.

"Naming Matters: Nomenclature and the Structure of Modern Chemistry," Harvard University Department of History of Science, February 2016.

"Thinking backwards: Artificial intelligence and the making of a human scientific method," Princeton University Center for Information Technology Policy, November 2015.

[https://www.youtube.com/watch?v=4l6O5K1\\_XeA](https://www.youtube.com/watch?v=4l6O5K1_XeA)

"The Chemical History of Graph Theory," History of Data / Data in History, Columbia University, April 2015.

"The Structure of Compounds, the Function of Nomenclature, and the History of Chemical Information," invited presentation to Chemical Heritage Foundation Heritage Council, May 2014.

"Remaking the X-Ray as an Instrument of Authentication," Authentication in Art, The Hague, May 2014, in session "Historical Developments in Painting Authentication," organized by Martin Kemp.

"What's in a Nomenclature? Structures of Crisis and Reform at the Geneva Nomenclature Congress," Chemical Heritage Foundation, December 2013.

"The Deception Expert: Maximilian Toch's Science of Authentication," Chemical Heritage Foundation, October 2011.

### **VIII. Conference Presentations**

"Making it Explicit: Formalization and Creativity in Chemistry," in session "Practicing and Formalizing: Engineering Creativity in the Twentieth Century," organized by Ekaterina Babintseva, History of Science Society/Society for the History of Technology Joint Meeting, New Orleans, November 2021.

"Toxaphene relations: Renewable energy and sustainable chemistry," Society for Social Studies of Science, October 2021.

"Chemical Information and the History of Modern Chemistry," in symposium of Commission for the History of Chemistry and Molecular Sciences, 26<sup>th</sup> International Congress of History of Science and Technology, July 2021.

Chair and commentator for "Animal Materialities," organized by Lisa Onaga and Laurence Douny, HSS/SHOT Virtual Forum, October 2020.

"Toxaphene, Toxicity, and the Nature of Chemical Histories," in session "New Histories of Toxicity: Bridging Capitalocene Slow Violence and 'Natural' Toxic Disaster," American Historical Association, Seattle, January 2021, organized by Carina Johnson. *\*\*CANCELLED due to Covid-19\*\**

"Toxaphene: A Chemical History," in "Waste, Resource, Residue: Chemical Histories," joint session of History of Science Society and Society for History of Technology, New Orleans, October 2020, organized by Evan Hepler-Smith and Laura Martin. *\*\*CANCELLED due to Covid-19\*\**

"Molecular Bureaucracy," Society for Social Studies of Science, New Orleans, September 2019, in session "Residues: Rethinking Chemical Environments," organized by Jody Roberts and Emmanuel Henry.

"Chemical representation: A toolbox for human and machine collaboration," American Chemical Society National Meeting, San Diego, August 2019 (with Leah McEwen).

"The machine and the molecule: Chemistry in the history of AI," Towards a History of Artificial Intelligence, Columbia University, May 2019.

"Roundtable: Quantification, Models, and Metrics in Environmental Knowledge and Policy," organized by William San Martin, American Society for Environmental History, Columbus, OH, April 2019.

"Stewarding chemical research through standards development: A chemistry librarian's feast," American Chemical Society National Meeting, Boston, August 2018 (with Leah McEwen).



"Molecularizing Hazard: Toxicological Information and Environmental Protection," American Society for Environmental History, Riverside, March 2018, in session "Organizing Pollution: Knowledge and Power in Postwar Environmental Regulation," organized by Colleen Lanier-Christensen and Lucas Mueller.

"Joint disagreements: Chemical information, chemical naming, and internationalism as process, 1919-1930," History of Science Society, Toronto, November 2017, in session "Scientific and Engineering Internationalism: Processes, Practices, Conflicts," organized by Evan Hepler-Smith and Heidi Voskuhl.

"SMILES to go: Chemical Harm, Regulatory Weakness, and a Computational Tool," Society for the History of Technology, Philadelphia, October 2017, in session "Technology, Law, & Injury," organized by Mary X. Mitchell.

"Maintaining Chemical Information for Research and Regulation," The Maintainers II, Stevens Institute of Technology, April 2017.

"Chemical Nomenclature, International Chemistry, and the Particulars of Universalism, 1910-1930," The Science of Information, 1870-1945: The Universalization of Knowledge in a Utopian Age, University of Pennsylvania, February 2017.

"Pronounced Variation: Chemical English in America," History of Science Society, Atlanta, November 2016, in session "The language of science and the science of language: Exchanges, transformations, negotiations 1790-1950" organized by Jan Surman.

"ChemDraw," Society for the Social Studies of Science, Barcelona, August 2016, in session "Soft Focus: How Personal Software Reshaped Technical Vision and Practice" organized by William Deringer and Evan Hepler-Smith.

"Pouring new materials into old bottles: Nanomaterials classification in historical perspective," Unnatural Kinds: Contemporary Perspectives on Scientific Classification, San Francisco State University, May 2016.

"The sins of our forefathers': Chemists, information systems, and the elusive ideal of unique chemical names," Society for the History of Technology, Albuquerque, October 2015, in session "Computer Users, Experts, and Citizens," organized by Andrew L. Russell, sponsored by SIGCIS.

"Chemical literacy for the ages: Essential skills in 2D chemical representation," American Chemical Society National Meeting, Boston, August 2015 (with Leah McEwen).

"Rules, Formulas, Names: The Lexical Legacy of the 1892 Geneva Nomenclature Congress," American Chemical Society National Meeting, Denver, March 2015.

"Changing Names and Naming Change: Transformations in the 'International Machinery' of Chemical Information," International Workshop on the History of Chemistry, Tokyo Institute of Technology, March 2015.

"Between Regulation and Information: Tracing Chemical Novelty," History of Science Society, Chicago, November 2014, in session "Historical Tracers and the Historiography of Science," organized by Evan Hepler-Smith.

"Leveraging history to develop community sourced best practices in chemical information systems development: An interactive online teaching module," American Chemical Society National Meeting, San Francisco, August 2014 (with Leah McEwen).

"Structured Names, Structures of Knowledge: Systematic Nomenclature, Translation, and the Global Order of Organic Chemistry," Chemical Reactions: Chemistry and Global History (Cain Conference 2014), Chemical Heritage Foundation, April 2014.

“The Colorful Language of Paul Ehrlich,” History of Science Society, Boston, November 2013, in session “The Materiality of Words in Chemistry and Pharmacy,” organized by Alisha Rankin.

“How Chemists Learned to Think Like Computers,” Society for the History of Technology, Copenhagen, October 2012, in session “Made in Automation,” organized by Stephanie Dick.

“Standards Bound to Disappoint: A Rational Chemical Nomenclature Defeated,” History of Science Society, Cleveland, November 2011, in session “Defending Science Against Standardization,” organized by Evan Hepler-Smith.

“‘An Ensemble as Euphonic as Possible’: Thinking Through Organic Nomenclature, 1889-1898,” 8th International Conference on History of Chemistry, Rostock, September 2011.

## **IX. Related Experience**

History Beyond the Classroom, Harvard University, Ladakh, India (Summer 2018)

*Field-based course in STS/history of technology, engaging as participant-observers in an off-grid solar electrification project in the Himalayan region of Ladakh in north India*

Research Assistant for Angela Creager, *Life Atomic: A History of Radioisotopes in Science and Medicine* (Chicago, 2013) (Winter 2012-2013)

Content Manager, Knewton Inc., New York, NY (2008-2009)

*Built GMAT and LSAT test-prep curricula for online education startup; developed taxonomies of mathematical and verbal-reasoning concepts; supervised a team of ten content developers; worked with software engineers and psychometricians to develop computer-adaptive testing software package*

## **X. Professional Service**

### ***A. Advisory boards and working groups***

Advisory board member, “Data Science for Social Justice: An approach to broaden the STEM pipeline through socially relevant data exploration in middle school social studies and mathematics classes” (PI: Ravanasamudram N. Uma, North Carolina Central University). Proposal submitted to National Science Foundation in October 2021.

Member, Duke University Plastic Pollution Working Group (2020-present)

### ***B. Public interest***

Chemical and toxicological open data and right-to-know activities: Collaborated in preparation of public comment on EPA chemical data regulations (March 2018); collaborated on a proposal to provide public access to proprietary chemical registry data (2018-2019)

Signatory, “Brief of Amici Curiae, Environmental History Professors in Support of Plaintiffs-Appellees,” *Juliana v. US*, submitted to 9<sup>th</sup> Circuit Court of Appeals on March 1, 2019.

### ***C. Refereeing***

Article manuscripts: *Ambix*; *Annals of the History of Computing*; *BJHS Themes* (*British Journal of the History of Science*); *Centaurus*; *Central European History*; *Current Opinion in Insect Science*; *Environmental History*; *Historical Studies in the Natural Sciences*; *History and Technology*; *Science, Technology, & Human Values*; *Sociological Perspectives*; *Substantia*

Book manuscripts: *University of California Press*

Book proposals: *Cambridge University Press*

Funding proposals: *National Science Foundation Science and Technology Studies (STS) Program*

Fellowship proposals: *Science History Institute (formerly Chemical Heritage Foundation); Consortium for History of Science, Technology and Medicine; Duke University Global Asia Initiative/Franklin Humanities Institute*

#### ***D. Departmental/university***

Duke University Department of History: *Undergraduate Honors Committee* (2019-21); *Colloquium Committee* (2020-22; chair: 2020-21); *Executive Committee* (2021-)

Harvard University: [\*Environmental History Working Group\*](#) (Co-organizer with Joyce Chaplin and Dan Zizzamia, 2017-18)

Princeton University Department of History: *Graduate History Association* (President, 2012-13)

#### ***E. Professional societies***

History of Science Society: *Committee on Advocacy* (2016-2020; drafted HSS statement in support of the April 2017 March for Science; Recognition of Outstanding Service from HSS, 2020); *Forum for the History of Chemical Sciences* (Executive Committee, 2013-15, 2020-; Program Committee, 2017-20; Forum Chair, 2020-)

Member: *History of Science Society, Society for the History of Technology, SIGCIS, American Society for Environmental History, American Historical Association, Society for the History of Alchemy and Chemistry, American Chemical Society, Society for Social Studies of Science, Research Data Alliance Chemistry Interest Group*

#### **XI. Languages**

Research-level proficiency in French, German, and Latin

*Last Updated: October 10, 2021*