

Curriculum Vitae

Lawrence M. Principe

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Education:

- 1996 Ph.D.; History of Science, Johns Hopkins University.
- 1988 Ph.D.; Organic Chemistry, Indiana University.
- 1983 B.S.; Chemistry, Magna Cum Laude; University of Delaware.
- 1983 Honors B.A.; Liberal Studies, Magna Cum Laude; University of Delaware.

Positions Held:

- 2006- Drew Professor of the Humanities, Department of the History of Science and Technology and Department of Chemistry, Johns Hopkins University.
- 2010 F. C. Donders Professor, Universiteit Utrecht
- 2002-06 Professor, HST and Chemistry, JHU
- 2005 Francis Bacon Visiting Professor of History, California Institute of Technology
- 1999-02 Associate Professor, HST and Chemistry, JHU
- 1997-99 Assistant Professor, HST and Chemistry, JHU
- 1996-97 Associate Research Scientist, Chemistry Department, JHU
- 1994-97 Senior Lecturer of Chemistry, Chemistry Department, JHU
- 1989-94 Lecturer of Chemistry and Laboratory Instructor, Chemistry Department, JHU.
- 1988-93 Instructor of Chemistry, School of Continuing Studies, JHU

Publications:

Books:

The Aspiring Adept: Robert Boyle and His Alchemical Quest. (Princeton: Princeton University Press, 1998).

The Correspondence of Robert Boyle. Eds. Michael Hunter, Lawrence M. Principe, and Antonio Clericuzio, 6 vols. (London: Pickering & Chatto, 2001).

Transmutations: Alchemy in Art. With Lloyd DeWitt. (Philadelphia: Chemical Heritage Foundation, 2002).

Alchemy Tried in the Fire: Starkey, Boyle, and the Fate of Helmontian Chymistry. With William R. Newman. (Chicago: University of Chicago Press, 2002).

The Alchemical Laboratory Notebooks and Correspondence of George Starkey. With William R. Newman. (Chicago: University of Chicago Press, 2004).

Chymists and Chymistry: Studies in the History of Alchemy and Early Modern Chemistry, ed. (Sagamore Beach, MA: Science History Publications, 2007).

New Narratives in Eighteenth-Century Chemistry, ed. (Dordrecht: Springer, 2007).

The Accademia del Cimento and Its European Context, ed. with Marco Beretta and Antonio Clericuzio (Sagamore Beach, MA: Science History Publications, 2009).

The Secrets of Alchemy (Chicago: University of Chicago Press, forthcoming 2011).

A Very Short Introduction to the Scientific Revolution (Oxford: Oxford University Press, forthcoming 2011) .

Media/Public Education:

History of Science: Antiquity to 1700, (a video course in thirty-six 30-minute lectures; produced by The Teaching Company, Chantilly, VA, 2003).

Science and Religion, (a video course in twelve 30-minute lectures; produced by The Teaching Company, Chantilly, VA 2006).

Articles:

“Liens et influences chimiques entre Robert Boyle et la France,” pp. 71-89 in *La philosophie naturelle de Robert Boyle*, eds. Miriam Dennehy and Charles Ramond, (Paris: Vrin, 2009).

“Transmuting Chymistry into Chemistry: Eighteenth-Century Chrysopoeia and its Repudiation,” pp. 21-34 in *Neighbours and Territories: The Evolving Identity of Chemistry*, eds. José Ramón Bertomeu-Sánchez, Duncan Thorburn Burns, Brigitte Van Tiggelen (Louvain-la-Neuve: Mémosciences, 2008).

“Wilhelm Homberg et la chimie de la lumière,” *Methodos: Savoirs et textes* 8, (2008); <http://methodos.revues.org/>

“Revealing Analogies: The Descriptive and Deceptive Roles of Sexuality and Gender in Latin Alchemy,” pp. 209-229 in *Hidden Intercourse: Eros and Sexuality in Western Esotericism*, eds. Wouter Hanegraaff and Jeffrey J. Kripal, (Leiden: Brill, 2008).

“Transmuting History,” *Isis* 98 (2007):779-787.

"A Revolution Nobody Noticed? Changes in Early Eighteenth Century Chymistry," pp. 1-22 in *New Narratives in Eighteenth-Century Chemistry*, ed. Lawrence M. Principe (Dordrecht: Springer, 2007)

"A New History of Chemistry Library at the Chemical Heritage Foundation," *Ambix* 53, (2006):77-82.

"Alchemy and Its Images in the Eddleman and Fisher Collections at the Chemical Heritage Foundation." With Lloyd DeWitt. Pp. 221-47, in *Art and Alchemy*, ed. Jacob Wamberg (Copenhagen: Museum Tusculum, 2005).

"Evidence for Transmutation in Seventeenth Century Alchemy." Pp. 151-64, in *Scientific Evidence: Philosophical Theories and Applications*, ed. Peter Achinstein (Baltimore: Johns Hopkins Press, 2005).

"Alchemy and the Changing Significance of Analysis." With William R. Newman. Pp. 73-89 in *Wrong for the Right Reasons*, eds. Jed. Z. Buchwald and Allan Franklin, (Dordrecht: Springer, 2005).

"Reflections on Newton's Alchemy in Light of the New Historiography of Alchemy." Pp. 205-19 in *Newton and Newtonianism: New Studies*, eds. James E. Force and Sarah Hutton, (Dordrecht: Kluwer, 2004).

"Lost Newton Manuscript Recovered at CHF," *Chemical Heritage* 22 (2004):6-8.

"Georges Pierre des Clozets, Robert Boyle, the Alchemical Patriarch of Antioch, and the Reunion of Christendom," *Early Science and Medicine* 9, (2004):307-20.

"The Lost Papers of Robert Boyle." With Michael Hunter. *Annals of Science* 60 (2003), 269-311.

"The Chymical Laboratory Notebooks of George Starkey." With William R. Newman. Pp. 25-41 in *Reworking the Bench: Research Notebooks in the History of Science*, eds. Fredrick L. Holmes, Jürgen Renn, and Hans-Jörg Rheinburger, (Dordrecht: Kluwer, 2003).

"Wilhelm Homberg: Chymical Corpuscularianism and Chrysopoeia in the Early Eighteenth Century." Pp. 535-56 in: *Late Medieval and Early Modern Corpuscular Matter Theories*, eds. C. Luthy, J. E. Murdoch, and W. R. Newman (Leiden: Brill, 2001).

"Some Problems in the Historiography of Alchemy." With William R. Newman. Pp. 385-434 in: *Secrets of Nature: Astrology and Alchemy in Early Modern Europe*, ed. William Newman and Anthony Grafton, (Cambridge, MA: MIT Press, 2001).

"D. G. Morhof's Analysis and Defence of Transmutational Alchemy." Pp. 138-153 in *Mapping the World of Learning: The Polyhistor of Daniel Georg Morhof*, Wolfenbüttler Forschungen 91, (Harrassowitz: Wiesbaden, 2000).

"Apparatus and Reproducibility in Alchemy." Pp. 55-74 in *Instruments and Experimentation in the History of Chemistry*, ed. Frederic L. Holmes and Trevor Levere, (Cambridge, MA: MIT Press, 2000).

"The Alchemies of Robert Boyle and Isaac Newton: Alternate Approaches and Divergent Deployments." Pp. 201-220 in *Rethinking the Scientific Revolution*, ed. Margaret J. Osler, (Cambridge: Cambridge U. Press, 2000).

"Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake." With William R. Newman. *Early Science and Medicine*, 1998, 3:32-65.

"Diversity in Alchemy: The Case of Gaston 'Claveus' DuClo, a Scholastic Mercurialist Chrysopoeian," pp. 181-200 in *Reading the Book of Nature: The Other Side of the Scientific Revolution*, ed. Allen G. Debus and Michael Walton (Kirksville, MO: Sixteenth Century Press, 1998).

"Virtuous Romance and Romantic Virtuoso: The Shaping of Robert Boyle's Literary Style." *Journal of the History of Ideas*, 1995, 56:377-397.

"Newly-Discovered Boyle Documents in the Royal Society Archive: Alchemical Tracts and his Student Notebook." *Notes and Records of the Royal Society*, 1995, 49:57-70.

"Style and Thought of the Early Boyle: Discovery of the 1648 Manuscript of Seraphic Love." *Isis*, 1994, 85:247-260.

"Robert Boyle's Alchemical Pursuits," pp. 91-105 in *Robert Boyle Reconsidered*, ed. Michael Hunter, (Cambridge: Cambridge U. Press, 1994).

"Robert Boyle's Alchemical Secrecy: Codes, Ciphers, and Concealments." *Ambix*, 1992, 39:63-74.

"The Gold Process: Directions in the Study of Robert Boyle's Alchemy." In *Alchemy Revisited*, ed. Z. R. W. M. van Martels, (Leiden: E. J. Brill, 1990), 200-5.

"Stereospecific Dicobalt Octacarbonyl Mediated Enyne Cyclization for the Synthesis of Methyl Deoxynormentalenolactone H." With Philip Magnus and Martin J. Slater, *Journal of Organic Chemistry*, 54, 5148, (1989).

"Jacob Boehme's Divine Substance Salitter--Its Nature, Origin, and Relationship to Seventeenth-Century Nitre Theories." With Charles Andrew Weeks. *British Journal of the History of Science*, 1989, 22:53-61.

"In Defense of Alchemy." *Beckman Center Newsletter*, Summer 1989, 6:5-7.

"Organometallic Chemistry can Simplify the Synthesis of Important Biologically Active Natural Products." With D. Becker, P. Carter, J. Elliott, R. Lewis, P. Magnus, and M. Slater. *Philosophical Transactions of the Royal Society*, A, 326, 641, (1988).

"Stereospecific Dicobaltoctacarbonyl Mediated Enyne Cyclization for the Synthesis of the Cytotoxic Sesquiterpene (+/-)-Quadron." With Philip Magnus and Martin J. Slater. *Journal of Organic Chemistry*, 52, 1483, (1987).

"Chemical Translation and the Role of Impurities in Alchemy: Examples from Basil Valentine's *Triumph-Wagen*." *Ambix*, 1987, 34:21-30.

"Origins of the 1,2- and 1,3-Stereoselectivity in Dicobaltoctacarbonyl Alkene-Alkyne Cyclizations for the Synthesis of Substituted Bicyclo[3.3.0]octenones." With Philip Magnus. *Tetrahedron Letters*, 4851, (1985).

"A Second Look at Alchemy." *Enquiry: Research Journal of the University of Delaware*, Fall 1982, 3:12-15.

Invited contributions to: *Alchemie: Lexikon einer hermetischen Wissenschaft*, ed. Claus Priesner and Karin Figala, (Munich: Beck Verlag, 1998) (21 articles), *New Dictionary of National Biography* (7 articles), *Encyclopedia of the Scientific Revolution*, ed. Wilbur Appelbaum (2 articles), *Dictionary of Gnosis and Western Esotericism*, ed. Wouter Hanegraaff, Antoine Faivre, and Roelof van den Broek (Leiden, Brill: 2005) (3 articles), *New Dictionary of Scientific Biography*, *Encyclopedia Britannica*, *Worldbook*, *Dictionary of Medical Biography*, *Dictionary of Seventeenth-Century French Philosophers*, and *Encyclopedia of Science and Religion*, ed. Gary Ferngren (New York: Garland, 1999).

Book reviews in: *Isis*, *Ambix*, *Bulletin of the History of Medicine*, *British Journal of the History of Science*, *Archives internationales d'histoire des sciences*, *Bulletin of the History of Chemistry*, *Early Science and Medicine*, *Annals of Science*, *The Scriblerian*, and *Journal of Interdisciplinary Studies*.

Presented Papers (Selected):

"Von Java nach Paris: Die abenteuerliche Karriere des Chemikers und Alchemisten Wilhelm Homberg (1653-1715)," Deutsche Akademie der Naturforscher Leopoldina, Halle, 11 May 2010.

"La chimie helmontienne à l'Académie Royale des Sciences," Université de Lille III, 27 April 2010.

"Do It Right or Do it Now: Philosophical vs. Pragmatic Agendas for Chymistry at the Académie Royale des Sciences," CHYMIA: Science and Nature in Early Modern Europe (1450-1750); El Escorial, Spain; 7-12 September 2008.

“The Paris Académie Royale des Sciences and Italian Scientific Societies,” The Accademia del Cimento in European Context (1657-2007), Florence, Italy, 14-15 December 2007.

“The Stages of Alchemy: Theatrical Drama in and out of the Laboratory,” Spuren der Avantgarde: Theatrum Alchemicum, Berlin, 1-3 November 2007.

“Transmuting Chymistry into Chemistry: Eighteenth-Century Chrysopoeia and its Repudiation,” Keynote Address, International Conference on the History of Chemistry, Leuven, Belgium, 28-31 August 2007

“Science, Art, and the Natural World: Visions of Alchemy in Seventeenth-Century Society,” Virginia Commonwealth University, Richmond, VA, 23 February 2007.

“A Revolution Nobody Noticed?: Chemistry in the Early Eighteenth Century,” Keynote Francis Bacon Address, CalTech, Pasadena, CA, 22 April 2005.

“The Role of Sexuality and Gender in Latin Alchemy,” Esoteric Renaissance Conference, San Francisco, CA, 3-7 April 2005.

“La France dans la chimie de Robert Boyle, et la chimie de Robert Boyle en France. ” Colloque international: “La philosophie naturelle de Robert Boyle,” Université Michel de Montaigne, Bordeaux, France, 10-12 March 2005.

“La chimie de la lumière,” Université de Lille III, Lille, France, 7 March 2005.

“Recreating Alchemical Experiments” Renaissance Workshop, Princeton University, Princeton, NJ, 10-11 February 2005.

“Wilhelm Homberg’s *Wanderjahre*: Intellectual Formation and Transnational Networks,” Science in Europe Conference, Maastricht, Netherlands, 4-6 November 2004.

“The Role and Place of Alchemy in Early Modern Culture” University of Amsterdam, Netherlands, 2 November 2004.

“Wilhelm Homberg and the Chymistry of Light,” CalTech, 22 February 2004.

“Révélations et recherches: L'autorité divine dans le laboratoire alchimique,” Université de Paris X, 16 December 2002.

“Taking Alchemy Seriously,” Scholes Lecture, Alfred University, 22 April 2002

“Alchemy and its Images in the Eddleman and Fisher Collections,” Art and Alchemy Conference, University of Aarhus, 6-9 December 2001.

“The Supernatural School of Alchemy,” Renaissance Society of America Conference, Chicago, IL, 29-31 March 2001.

"Reassessing Newton in the Light of the New Historiography of Alchemy," Newton 2000 Conference, William Andrews Clark Library, Los Angeles, CA, 20-21 October 2000.

"Grains and Chaff: Winnowing the Alchemical Papers for Newtonian Content," Newton Manuscripts Project Workshop, Cambridge, England, 9-10 September 2000.

"The Notebooks of George Starkey: Experiment in Chymistry" History of Science Society Annual Meeting, Pittsburgh, PA; 4-7 November 1999.

"Die Bedeutung der Alchemie für die Physik Isaac Newtons," 333 Jahre Gravitation, Weilder-Stadt, Germany, 12 August 1999.

"'Tried in the Fire': Experimental Practice in Early Modern Chymistry," Journée d'étude: La Philosophie Expérimentelle en France et en Angleterre, Nanterre (Paris X), France, 7 May 1999.

"Theological Correctives to Seventeenth-Century Chymistry," Pascal Centre Conference "Science in Theistic Contexts," Ancaster, Ontario, 21-25 July 1998.

"Chacun à son goût: Theory and Practice in Early Modern Chymistry," Chimie et chimistes en quête d'identité, Louvain-la-Neuve, Belgium, 22-23 November 1997.

"Daniel Georg Morhof and Seventeenth-Century Alchemy," XXth Congrès International d'Histoire des Sciences, July 1997, Liège, Belgium.

"The Diversity of Alchemical Schools: The Case of Gasto Claveus," Sixteenth Century Studies Conference, St. Louis, 24-27 October 1996

"Robert Boyle, Religion, and the Limits of Mechanism," British Studies Conference, Chicago, 18-20 October 1996

"The Persistence of Alchemical Theories and Goals at the Académie Royale des Sciences," Foundation for Intellectual History's Workshop on Corpuscularianism, St. Andrews, Scotland, 4-15 August 1996.

"Apparatus and Reproducibility in Alchemy," Dibner Institute Workshop, 11-13 April 1996, Cambridge, MA.

"Skeptical of the Sceptical Chymist: The Development of Boyle's Alchemical Views" 1994 History of Science Convention, New Orleans, LA. (Also Session Organizer)

"Boyle's Alchemical Writings: Anonymity, Uncertainty, and Oblivion," 1993 History of Science Convention, Santa Fe, NM.

"The Romantic Alchemist: Two Important Influences on the Boyle's Style and Language," Mark M. Horblit Colloquium in the History of Science, Harvard University, 12 October 1993.

"Alchemy in Defense of Religion," XIXth Congrès International d'Histoire des Sciences, August 1993, Zaragoza, Spain.

"Far-Flying Mercury: Alchemical Communication and Laboratory Practice in Boyle, Locke, and Newton," British-North American Joint Meeting, July 1992, Toronto, Canada.

"Robert Boyle's Dialogue on Transmutation," 1991 History of Science Convention, Madison, WI.

"Evaluating Research: An Historian's Perspective," 1991 National Council of University Research Administrators Meeting, Alexandria, VA.

Notices:

New York Times, 10 April 1990, "In Alchemist's Notes, Clues to Modern Chemistry."
Today's Chemist, 2, May/June 1993, pp. 57-8, "Profiles in Chemistry: Breaking the Alchemy Code."

News from the Burndy Library, 3, Fall 1996, pp. 8-10, "Understanding Alchemical Imagery."

Baltimore Sun, 9 October 1998, p. C-1.

Arts and Sciences Update, JHU, 1, January 1999, p. 11.

Chemical and Engineering News, 10 May 2004, pp. 49-50.

Baltimore Sun, 22 July 2006, p. 1.

New York Times, 1 August 2006, p. D1

France-Amérique, 5 August 2006, p. 9.

Boston Globe, 15 March 2009.

Honors, Awards, and Fellowships:

- 2007 George Owen Teaching Award, JHU
- 2005 Pfizer Prize, History of Science Society
- 2004 Francis Bacon Award for the History and Philosophy of Science
- 2001 Othmer Fellowship, Chemical Heritage Foundation
- 2001 Center for Theology and Natural Sciences Course Development Award
- 1999 Dibner Institute Senior Fellowship
- 1999 Templeton Foundation Award for Courses in Science and Religion
- 1998 Carnegie Foundation Maryland Professor of the Year
- 1998 George Owen Teaching Award, JHU
- 1996 Excellence in Teaching Award, JHU
- 1994 Distinguished Faculty Award, JHU
- 1988-89 George Owen Fellow of Humanities, JHU
- 1986-87 American Chemical Society Organic Division Graduate Fellow
- 1983-86 National Science Foundation Graduate Fellow

1983-81 American Institute of Chemists Award; American Microchemical Society Award; Eastman Kodak Chemistry Scholarship; Rodney H. Sharp Scholarship; First Prize, Phi Kappa Phi Research Essay Competition; Federal Republic of Germany Foreign Embassy Awards for German Language and Literature; Italo-American Foundation Award for Italian Studies; Italian Consulate General's Award.

Current/Recent Grants:

"The Formation of Chemists and Chemistry," National Science Foundation CAREER Grant, 2000-2006; \$273,348.

"International Conference on Early Chemistry," National Science Foundation, 2005-2006; \$10,000.

"The Supernova of 1604 as a Source of Scientific Debate," National Science Foundation, 2008-2010, \$84,000.

Conferences and Workshops Organized:

"L'Accademia del Cimento nel Contesto Europeo," 14-15 December 2007, Istituto e Museo di Storia della Scienza, Florence, Italy.

International Conference on Alchemy and Chymistry, 19-22 July 2006, Chemical Heritage Foundation, Philadelphia, PA; ca. 120 participants.

Francis Bacon Workshop on 18th Century Chemistry, 21-23 April 2005, CalTech, Pasadena, CA.

Editorships and Collaborative Projects:

Editorial Boards: *Archimedes* (currently), *Ambix* (currently), *Journal of Religion in Europe* (currently) *Isis* (1999-2002).

Co-Editor of a critical edition of John Locke's natural philosophical writings (currently)

Co-Editor of Alchemical Papers, Newton Manuscript Project. (currently)

Consulting Editor for the *Works of Robert Boyle* Project, Michael Hunter and Edward B. Davis, eds. (1995-2000)