

Transmutations

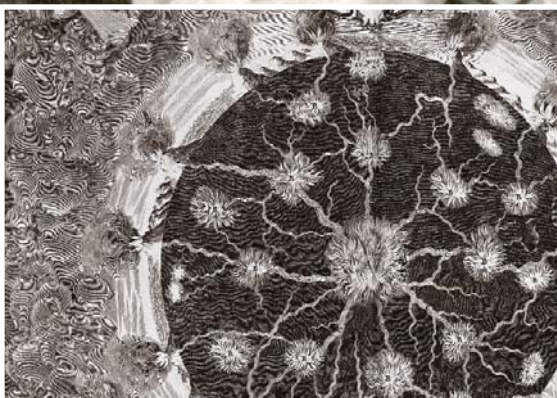
No. 5 | Fall 2009

transmutations \tran(t)s-myü-'tā-shenz
n. Acts of change or alteration to appearance
or nature, especially to a higher form.




Women have long been underrepresented in the scientific community. In response, CHF recently launched the Women in Chemistry Oral History project.

CHF



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Stand
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Chemist
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Thank you!
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Transmutations

No. 5 | Fall 2009

Transmutations is a newsletter published three times per year for supporters of CHF.

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Chemical Heritage Foundation

LIBRARY • MUSEUM • CENTER FOR SCHOLARS

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HOURS

The Museum at CHF

Monday–Friday, 10:00 a.m.–4:00 p.m.
First Fridays, 10:00 a.m.–8:00 p.m.

The Donald F. and Mildred Topp Othmer Library of Chemical History

Monday–Friday, 10:00 a.m.–4:00 p.m.
(by appointment; schedule at
reference@chemheritage.org)

Go to www.chemheritage.org for

- *Chemical Heritage*, CHF's newsmagazine
- *Distillations*, our award-winning podcast
- Blogs, including Ship of Fellows, The Center, and Periodic Tabloid
- Classroom Resources
- Event Registration
- *And much more*

Also check out CHF on

YouTube, Facebook, Flickr, LinkedIn, MySpace, and Twitter

DESIGN: Willie•Fetchko Graphic Design



It is a pleasure to introduce myself to the CHF community.

I have been blessed in my professional career to have worked with passionate people. For more than ten years I served as assistant director of a small but distinguished community arts center, where I was energized by exciting visual and performing artists. More recently I worked with television- and radio-content producers and some of our nation's finest on-air hosts and commentators as director of development for a PBS/NPR affiliate that serves the fourth-largest media market in the United States. Their collective devotion to public broadcasting can border on religion, and I enjoyed both harnessing that passion and being swept up by it.

Now, to my delight, I find myself again among an equally engaged group of colleagues. While different in their focus, their passion for their subject takes a back seat to no one.

At CHF I am surrounded by scientists, historians, curators, educators, archivists, and other professionals who are advocates of a world unimaginable without the marvels of chemistry. Each seeks not to vindicate what regrettably at times is a maligned science, but to celebrate thoroughly its vast achievements while bringing balanced perspectives and honest information to the global debate. I am eager to learn from them.

Last year CHF successfully completed its 25th Anniversary Initiative. Extraordinary accomplishments were realized from your generous leadership gifts and pledges. Our endowment was strengthened to ensure the expansion of our education and fellowship programs, the completion of our marvelous museum, and continued collections stewardship, including the acquisition of rare books and even rarer artifacts that document chemistry's innovations.

My role as CHF's new vice president for institutional advancement is to design and implement plans that will broaden our donor base, deepen relationships with current and past contributors, and increase the total dollars raised in support of immediate, short-term, and long-term needs. To paraphrase Winston Churchill, we shouldn't fear that the contributions of chemistry will not be well treated by history, for CHF will write it.

Thank you.

A handwritten signature in black ink that reads "Denise Creedon". The script is elegant and cursive.

Denise Creedon
Vice President for Institutional Advancement

Women in Chemistry

ORAL HISTORY PROJECT



It is sad proof of the failure to acknowledge women in the history of science that the names of the lab assistants surrounding biochemist Michael Somogyi, standing, at center, are unknown. The WICOH project intends to improve these circumstances. Gift of Harvey Walker, Jr., CHF Collections.

Women have long been underrepresented in the scientific community. In response, CHF recently launched the Women in Chemistry Oral History (WICOH) project. The successes, trials, and tribulations of women who have contributed to society through their research are now being documented by Hilary Domush, an associate in CHF's oral history program.

"All of the WICOH interviews focus on four key areas: influences and inspirations; mentors; women's networks; and the balance between life and work," Domush explains. "These areas are of particular importance to WICOH because they reach to the heart of how the interviewee has succeeded in her chosen career."

CHF hopes the stories shared through WICOH will inspire young women to pursue careers in chemistry and highlight the benefits of mentoring and promoting women in scientific fields. Other goals of the project include emphasizing the importance of encouraging women to enter the sciences and changing the traditional conception of "a scientist."

To connect with a broad audience, the WICOH interviews will be available as professionally edited and bound transcripts and as audio and video recordings, segments of which will be posted online either at chemheritage.org or on YouTube. These materials can inform biographical studies, analyses of scientific disciplines, or investigations of what motivates individuals to choose chemistry.

CHF has received the generous support of the Sigma Aldrich Foundation and the National Institutes of Health to underwrite WICOH's programming costs. CHF's oral history program is additionally funded by the Pew Charitable Trusts and the Rollin M. Gerstacker Foundation.

The WICOH project is one that could easily grow to achieve even more. If you are interested in supporting this initiative, contact Kara Mitzel, director of development, at 215.873.8239 or kmitzel@chemheritage.org.

Reaching Out About Risk



Christian Beaudrie.

This summer the Environmental History and Policy program within CHF's Center for Contemporary History and Policy had in residence its first group of research fellows. These scholars allow CHF to "broaden the scope of our programming by building strengths in areas where our work doesn't otherwise reach," says Jody Roberts, manager of the program. "Fellows also bring new energy into our community, which enlivens our research and stimulates us to think more creatively."

One such fellow is Christian Beaudrie, a Ph.D. student from the Institute for Resources, Environment, and Sustainability at the University of British Columbia, Canada. Trained as a biomedical and chemical engineer with work experience in air-pollution regulation, Beaudrie is exploring risk assessment and governance of emerging nanotechnologies. While nanotechnologies promise tremendous improvements in everything from medical treatment to clean energy, there is growing concern about their impact on public health and the environment. Beaudrie's fellowship will result in a published white paper that investigates the suitability of U.S. environmental regulations for managing the risks of nanotechnologies across their life cycle, from production to disposal.

Beaudrie says that working with the center's staff has allowed him "to undertake research with the guidance of several experts in the field. With the financial and intellectual support of CHF," he continues, "I can focus my efforts on a project that addresses calls for better assessment and proactive management of nanotechnology risks."

To find out more, or if you are interested in supporting this fellowship program, please contact Jody Roberts at 215.873.8281 or jroberts@chemheritage.org.

Oral History Spotlight

Saving the (Wedding) Day

Vincent Gregory is retired from a near 40-year career at Rohm and Haas, which culminated with his selection as the company's first non-Haas chief executive officer, a position he held from 1970 to 1988. In 1995 Gregory participated in the SCI Oral History Project at CHF, and he shared this remarkable story about his time in the U.S. Air Force during World War II:

"I was stationed at a fighter base just outside of Cambridge, England, when I met my wife, Marjorie, at an afternoon tea dance. Marjorie and her mother couldn't make up their minds whether she should marry me or not, so when the war ended in Europe and my outfit was on its way to the Pacific, I stayed until they could decide. I went over to the Continent and did some work flying artillery pilots around.

My wife did decide she would marry me, and I had her wedding dress made out of my parachute. She couldn't get nylon or silk in England because of war restrictions. I asked her if she would like a nylon wedding dress made out of my parachute, and she said yes. I took my parachute and a paper pattern from my

wife to a dressmaker in Munich, who was just enthralled by the beautiful nylon.

I couldn't get a new parachute unless I turned in an old one, so I had to fly without one. I didn't think it mattered because I didn't expect my little plane to be shot down. But one day my crew chief got a message that his father was dying in Chicago. I knew there was a plane every night from Frankfurt to New York, and if I could get the sergeant on that plane he could get back home to see his father.

I told the officers in the control tower at the Munich base that I wanted to take my crew chief to Frankfurt. They said, 'No, you can't. There's a front and the weather's going to be very bad there.' I said, 'Oh, I'll be through before it gets there.' So I flew into the storm, and then our only radio went out. We couldn't see anything, and we weren't exactly sure where we were going. I told the sergeant to bail out, but he wouldn't when he found out I didn't have a parachute. He rode it down with me, and we were lucky. I landed by the grace of God in a field

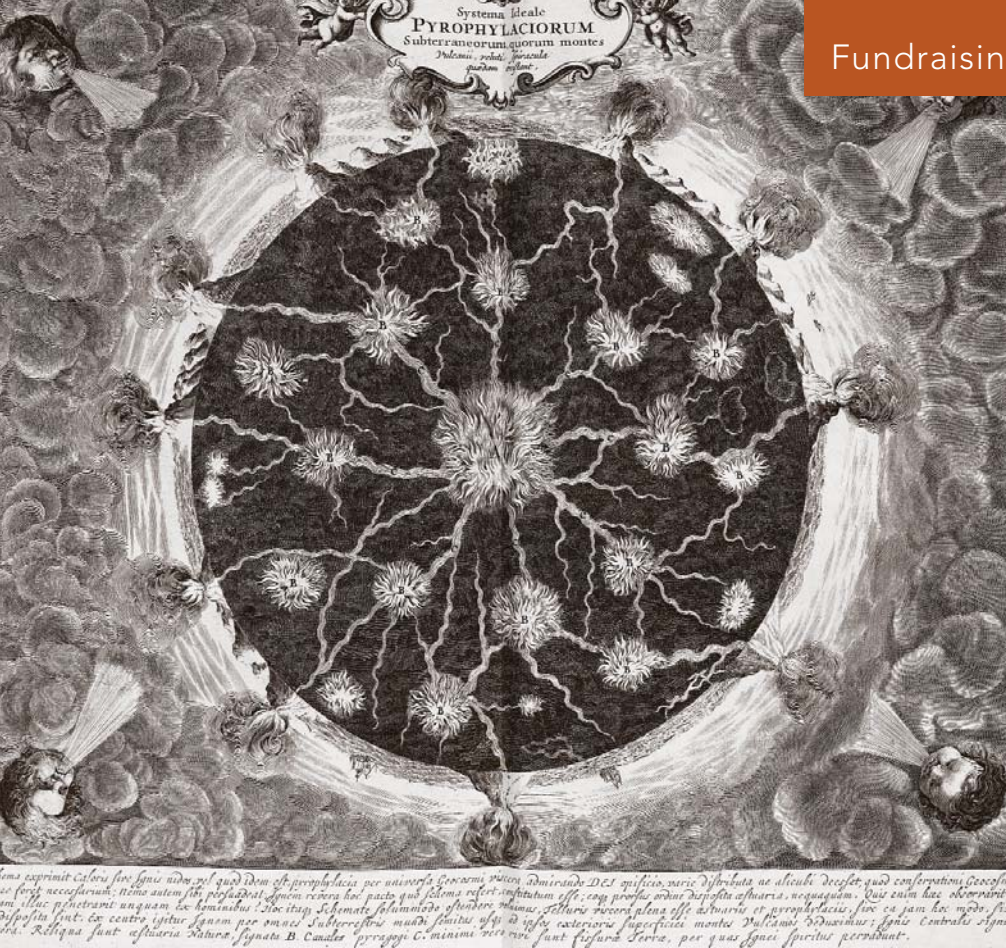


The nylon wedding dress shown here was also made from a WWII parachute and is currently on display in the Museum at CHF. Look for its story in the next issue of *Chemical Heritage*.

with the wing against a tree, but there wasn't a single scratch on the airplane!

It was worth it. The sergeant got home in time to see his father before he died, and Marjorie and I got married with her in the wedding dress made from my parachute."

To support CHF's oral history program, or to learn more about it, please contact David Caruso at 215.873.8236 or dcaruso@chemheritage.org.



Ron Brashear is the director of the Othmer Library. We asked him to describe an image from the library's collections.

"This is one of my favorite images produced by the great polymath of the 17th century, Athanasius Kircher. Kircher was a Jesuit scholar and a key player in the transition from ancient knowledge to more modern conceptions of how the world works. No subject was left untouched by him, and in 1665 he published *Mundus subterraneus* [*The Subterranean World*] to explain the ways he believed various forces shaped the world below its surface, including the explanation of volcanoes and hot springs. The ancient philosophers had thought that volcanoes were the product of friction produced by winds passing through volcanoes' openings.

With this engraving, called *Systema Ideale Pyrophylaciorum* [*Ideal System of the Chambers of Fire*], Kircher proposes a central fire at earth's core that feeds through a system of channels to volcanoes and hot springs on the surface. Kircher became fascinated with volcanoes after witnessing the eruptions of Etna and Stromboli in 1637–38, and he had himself lowered by a rope into the crater of Vesuvius in 1638. In case you're wondering why this book is at CHF, much of it deals with alchemy: Kircher dismisses the work of fraudulent alchemists, though he did think that transmutation of metals was worth examining by the 'true chemist.'"

The Transition of Knowledge: Honoring the Work of Arnold Thackray

CHF's Donald F. and Mildred Topp Othmer Library of Chemical History is a crowning achievement of Arnold Thackray, who founded CHF and served as its president for more than 25 years. What started as a small group of individuals dedicated to preserving the heritage of chemistry developed, under Thackray's guidance, into the vibrant, globally recognized organization that CHF is today.

One key to Thackray's success in establishing CHF is the Othmer Library, which houses major collections of rare and modern books, papers of prominent scientists and organizations, his-

torical photographs, fine art, and scientific instruments. Thackray's title was once executive director and librarian, and he was directly involved in the acquisition of the famed Roy G. Neville Chemical Library, roughly 6,000 titles dating from as early as the 15th century.

So it is fitting to celebrate his many and continuing efforts on behalf of the chemical community by establishing the Arnold Thackray Director of the Othmer Library. Funding this position in Thackray's name is an opportunity to honor, in perpetuity, his vision and entrepreneurial spirit.

The institutional advancement team at CHF is working to raise a \$2 million endowment fund for the Arnold Thackray Director of the Othmer Library. An early challenge gift of \$1 million was generously made by John C. Haas, and at this writing we have raised an additional \$345,850 from others wishing to recognize Thackray's service to chemistry.

To help CHF acknowledge Thackray and reach its goal for an endowed fund, please contact Denise Creedon, vice president for institutional advancement, at 215.873.8266 or dcreedon@chemheritage.org.

donor profile Arnold Beckman

Seventy-five years ago, in the fall of 1934, a young assistant professor named Arnold Beckman was hard at work at Caltech. He was busy perfecting and patenting a device that would transform laboratory practice and signal the arrival of modern electronics. As if that were not sufficient, he would go on to become an icon of science-based entrepreneurship, catalyze the creation of Silicon Valley, and launch a legendary philanthropic career.

Beckman's device was his "apparatus for testing acidity," the pH meter. In a way then deemed outrageous, Beckman abandoned his academic career for the untested pathway of commercial innovation. Within a decade the National Technical Laboratories had become Beckman Instruments, and the pH meter was followed by an ever-widening flow of electronic devices and a commitment to "automatic control ... the promise of the future."

In 1955, when Beckman made the seminal decision to become the sole funder of William Shockley's plan to produce the newly invented electronic transistor, he indulged Shockley's desire to work in Palo Alto, in Northern California. Thus Beckman single-handedly underwrote the arrival of silicon in what became Silicon Valley and prompted a cascade of technology start-ups.



Jackie Dorrance, executive director of the Beckman Foundation, admires Beckman's Model E, the first successful commercial ultracentrifuge, in the Museum at CHF.

Vividly aware that "the pleasure is in the getting and the giving," not the holding, of wealth, Beckman became steadily more active in philanthropy. Here, too, he sought to encourage scientific innovation, latterly through the Arnold and Mabel Beckman Foundation. In the mid-1980s a fledgling CHF would be deeply in his debt, not simply for his \$2 million gift to a new institution, but even more for his creative en-

gagement—challenging us to embrace all the heritage of all the molecular sciences and industries. Today CHF's Arnold and Mabel Beckman Center for the History of Chemistry holds pride of place as the earliest of our special programs honoring creative achievements and stimulating fresh generations to build a better future for the world.

Arnold Thackray, Chancellor

T R A N S M U T E Y O U R I N T E R E S T

transmutations

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n. Acts of change or alteration to appearance or nature, especially to a higher form.

Transmuting this newsletter from its old style into what you now hold was an exhilarating process, and we hope you find the result attractive and informative. CHF transmutes your generosity in much the same way: we turn your charitable contributions into dynamic conferences, panel discussions, and lectures; the means to acquire and preserve world-class collections; fellowships and travel grants that encourage academic research; ambitious programs of outreach, education, and interpretation; and much more.

Help us continue to convert ideas into events and initiatives that tell the story of chemistry. Support CHF with a tax-deductible gift today! You may use the enclosed envelope, donate online at www.chemheritage.org, or contact Rick Sherman at 215.873.8254 or rsherman@chemheritage.org.

Thank you.

JOIN US

2009 Ulyot Public Affairs Lecture

"Bridging Fields and Harnessing Diversity for the Sake of Innovation: Tackling Unmet Needs in the Life Sciences by Exploiting Developments in Materials"

Joseph M. DeSimone

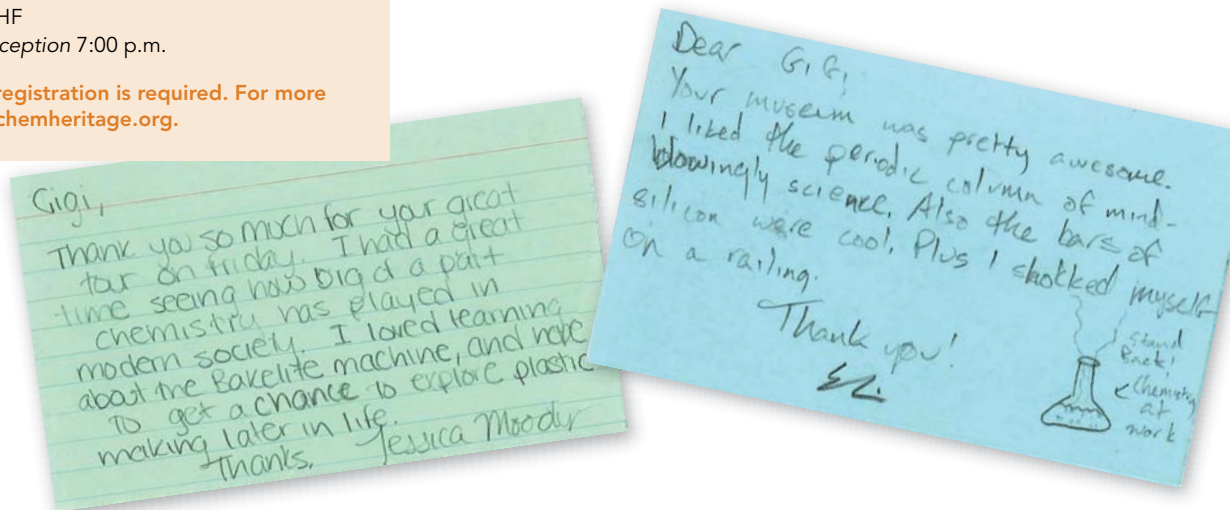
CHANCELLOR'S EMINENT PROFESSOR OF CHEMISTRY
AT THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Thursday, 19 November

Ulyot Lecture Hall, CHF
Lecture 6:00 p.m.; Reception 7:00 p.m.

Admission is free, but registration is required. For more information visit www.chemheritage.org.

A group of 11th-grade students from the Germantown Friends School in Philadelphia visited the Museum at CHF earlier this year. The class chose the tour option called "Chemistry in the Public Eye," which explores the relationship between chemistry and society throughout history and includes pre-visit activities and an in-museum scavenger hunt. The students' instructor, Brian Riggs, serves on CHF's Teacher Advisory Board, and he made sure the kids sent proper thank-you notes to Gigi Naglak, CHF's outreach coordinator. Two of our favorites are shown here:



Dynamic Engagement

recent event

CHF recently held an open house featuring tours of the museum and behind-the-scenes peeks at our collections. A crowd of more than 100 longtime donors and new friends enjoyed wine and hors d'oeuvres generously provided by Stephen Starr Events. Clockwise from top left: CHF president Tom Tritton, at right, catches up with Peter Lederman, a member of CHF's board of directors. Archivist Andrew Mangravite, at right, points out a letter from Louis Pasteur to French vintners who resisted the pasteurization process. A group takes in *Making Modernity*, the museum's permanent exhibit. Madeleine Joullié, who is also on CHF's board, and Rick Sherman, CHF's director of advancement, mingle during the reception. Board member Sharon Haynie, at left, brought her grandnephew to the event while Cora Turpin of the American Association of University Women, at right, brought her daughter, Felicia Coleman.





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We tell the story of chemistry.



The Chemical Heritage Foundation (CHF) fosters an understanding of chemistry's impact on society. An independent nonprofit organization, we strive to

- Inspire a passion for chemistry;
- Highlight chemistry's role in meeting current social challenges; and
- Preserve the story of chemistry across centuries.

CHF maintains major collections of instruments, fine art, photographs, papers, and books. We host conferences and lectures, support research, offer fellowships, and produce educational materials. Our museum and public programs explore subjects ranging from alchemy to nanotechnology.

Events

Brown Bag Lectures

Tuesdays, mid-September through mid-June

Innovation Day

14–15 September

Joseph Priestley Society Meeting

Speaker: Maria Maccecchini

17 September

First Friday: First Anniversary of the Museum at CHF

2 October

Joseph Priestley Society Meeting

Speaker: Joseph Acker

8 October

Fall Governance Meetings

14–16 October

Joseph Priestley Society Meeting

Speaker: Gregg Zank

5 November

T. T. Chao Symposium

Houston

12 November

Ullyot Public Affairs Lecture

Speaker: Joseph M. DeSimone

19 November

CHF Open House

Moderator: Arnold Thackray

2 December

Joseph Priestley Society Meeting

Speaker: Ellen Kullman

14 January

Exhibits

sLowlife

Ongoing through December

Making Modernity

Ongoing

Transmutations: Alchemy in Art

Ongoing

The Whole of Nature and the Mirror of Art: Images of Alchemy

Ongoing

Visit www.chemheritage.org for further information and registration details.

Follow CHF on

