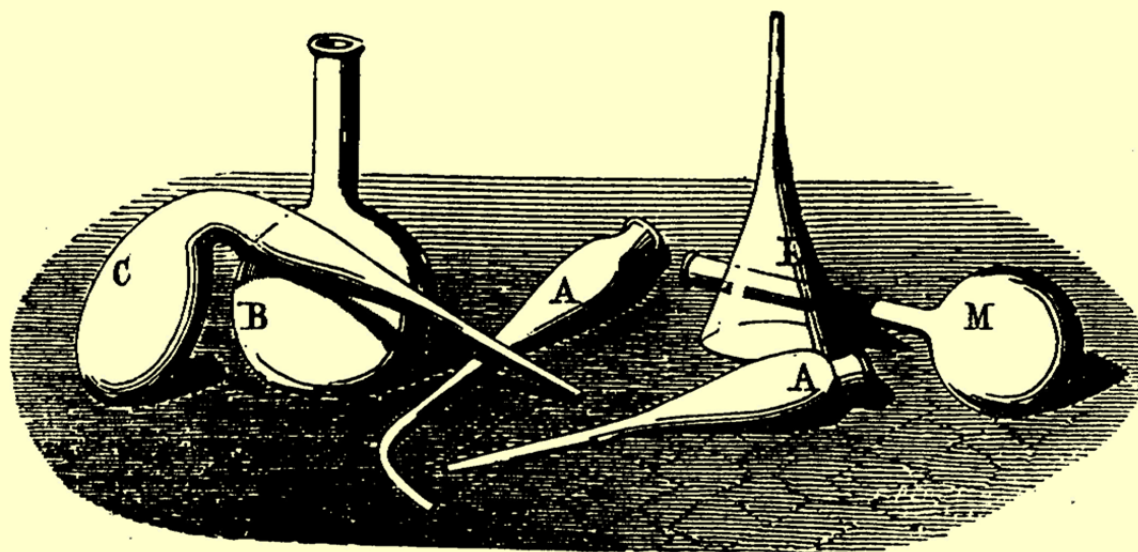




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American Chemical Society
DIVISION OF THE
HISTORY OF CHEMISTRY



NEWSLETTER, PROGRAM & ABSTRACTS

252nd ACS National Meeting
Philadelphia, PA
August 21-25, 2016

S. C. Rasmussen, Program Chair

Final Program

HIST

DIVISION OF THE HISTORY OF CHEMISTRY

S. C. Rasmussen, *Program Chair*

SUNDAY MORNING

Section A

Philadelphia Marriott - Franklin 4

HIST Tutorial & General Papers

S. C. Rasmussen, *Organizer*

J. S. Jeffers, *Presiding*

8:00 HIST 1: HIST Tutorial: History of chemistry of chemists, by chemists, and for chemists. **C. J. Giunta**

8:40 HIST 2: Why isn't noble gas chemistry 30 years older? The failed (?) 1933 experiment of Yost and Kaye. **J. A. Labinger**

9:10 HIST 3: Cuprene: A historical curiosity along the path to polyacetylene. **S. C. Rasmussen**

9:40 HIST 4: History of copper mining at the Mansfelder Land. **C. Hahn**

Citation for Chemical Breakthrough Award Symposium

Sponsored by PRES, Cosponsored by HIST

SUNDAY AFTERNOON

Section A

Philadelphia Marriott - Franklin 4

1:00 - 1:30 HIST Business Meeting (Open to all HIST members)

A Salute to Ted Benfey at 90: Science, History, Culture & a Commitment to Humanism

J. Seeman, *Organizer, Presiding*

1:30 Introductory Remarks

1:40 HIST 5. Beckman Center for the History of Chemistry: the second generation. **M. Bowden**

2:00 HIST 6. Some thoughts about a typology of experiments in early modern chymistry. **W. Newman**

2:20 HIST 7. Another look at the Kekulé-Couper question. **A. J. Rocke**

2:40 HIST 8. Sharing treasures and honoring Ted Benfey. **J. Seeman**

3:00 Intermission

3:15 HIST 9. O. Theodore Benfey: A vital spirit and intellect. **P. J. Ogren**

3:35 HIST 10. Ted Benfey and three Quaker Colleges: teacher, mentor and colleague. **D. Macinnes**

4:55 HIST 11. Back to the roots. **H. J. Peiper**

4:15 HIST 12. Biting snakes and other tales: Growing up with Ted Benfey. **P. Benfey**

4:35 HIST 13. Reflections on nine stimulating and fascinating decades. **O. T. Benfey**

HIST 5 - Beckman Center for the History of Chemistry: the second generation

Mary Ellen Bowden, mebowden@chemheritage.org. Chemical Heritage Foundation, Haverford, Pennsylvania, United States

A recollection of people joining the history of chemistry center five years after its founding at the University of Pennsylvania--how we got there intellectually and professionally and what we did.

HIST 6 - Some thoughts about a typology of experiments in early modern chymistry

William Newman, wnewman@indiana.edu. Indiana University, Bloomington, Indiana, United States

The history of early modern chymistry, and for that matter the alchemy of the Middle Ages, has been hampered by the inability of scholars to distinguish among actual experiments that were performed, "conjectural experiments" that were planned out for later testing, fantastic experiments describing results that were outright impossible, and recipes. My paper will attempt briefly to categorize these and other types of "experiments" that one encounters in pre-modern sources in the attempt to throw some new light on this topic.

HIST 7 - Another look at the Kekulé-Couper question

Alan J. Roche, ajr@case.edu. History, Case Western Reserve University, Cleveland, Ohio, United States

It is well known that August Kekulé and Archibald Couper independently and essentially simultaneously arrived at the idea of the self-linking of carbon atoms, the crucial idea that led to the theory of chemical structure. As with every instance of independent discovery, the historical context is both important and complex, and it is also vital to understand each protagonist's personal route to the discovery. In this case, a satisfactory historical understanding is made challenging by the near total absence of first-hand materials concerning Couper, and by internally inconsistent evidence concerning Kekulé. In past writing, I have made arguments that are sympathetic with Kekulé's own priority claims. In this presentation I explore some puzzles regarding Kekulé's route to structural ideas, doubts that may implicitly offer more sympathy to Couper.

HIST 8 - Sharing treasures and honoring Ted Benfey

Jeffrey Seeman, jiseeman@yahoo.com. University of Richmond, Richmond, Virginia, United States

To celebrate and honor my friend and colleague -- our friend and colleague -- Ted Benfey, I shall bring my most special words, stories, and photographs to both entertain and hopefully uplift and enrich the audience.

HIST 9 - O. Theodore Benfey: A vital spirit and intellect

Paul J. Ogren, pcogren@gmail.com. Chemistry, Earlham College, Richmond, Indiana, United States

Ted Benfey is a teacher in a profound sense – a man who has always been interested in exploring the development of ideas, connections between those ideas, and ways of inspiring others to study new concepts over a wide range of science, philosophy and art. In science, chemistry in particular, he has come back again and again to exploring how we have come from observations of matter and its transformation to models and concepts about the underlying structure of things. Nowadays we may think of such endeavors in terms of high-energy experiments at CERN or searching for gravitational waves, or the possibility of parallel universes. Ted, from the 1950s on, became interested in the question of how chemists, "organic chemists" in particular, moved away from the idea that matter in living systems required some "vital force" in the last part of the 19th century. This movement depended on the development of and confidence in many molecular structure ideas – bonding, geometry, isomers, etc. – structures that could not be directly observed at the time. In this talk I will present Ted's work with these ideas, as well my own exposure to them as one of his undergraduate students in the 1960s. I also hope to speak about Ted's writing and thought about a much broader range from the areas of art, culture and spirituality. Ted's early experiences in Europe and the US, his later life in Japan, his experiences as a Quaker, and his life-long interests in serious study of the human condition have all have given us a gifted view of the universe we live in.

HIST 10 - Ted Benfey and three Quaker colleges: teacher, mentor and colleague

David Macinnes, dmacinne@guilford.edu. Chemistry, Guilford College, Greensboro, North Carolina, United States

Ted Benfey was my teacher and mentor and colleague for 27 years at two different Quaker colleges and he also taught for 8 years before that at another Quaker college. I will speak mostly about the times he was at Earlham and Guilford Colleges and of my debt to him. While at Earlham he helped develop the Chemical Bond Approach with Larry Strong which had strong influence on the teaching of chemistry world-wide as well as on my teaching. He also helped create new more effective courses at Earlham including a capstone senior seminar still found at Guilford College. His views influenced my teaching at Westtown School and, after I joined him in 1973 as a colleague, at Guilford College. He was active in the area of the history of science; training students who went on in the field and in helping the local ACS section find effective ways of connecting industrial and academic chemists.

HIST 11 - Back to the roots

Hans J. Peiper, peiper123@web.de. Sugical Departement, Georg-August-Universitaet, Goettingen, Germany

This paper tells of the unlikely reunion of two authors, who had lost touch with one another as ten-year-olds in Berlin. They rediscovered each other and resumed their friendship in Goettingen while they were both approaching ninety. It was discovered that Goettingen had been the home of many generations of the Benfeys. Three (alle Theodor?) Benfeys shall be discribed, beginning with the famous sanscrid explorer. The youngest of all, Ted, visited the department of chemistry in Goettingen at the Georg-August University, where he viewed an exhibition of important historical background, i.e. Friedrich Woehler, who elucidated urea, the bond between organic and inorganic chemistry.

HIST 12 - Biting snakes and other tales: Growing up with Ted Benfey

Philip Benfey, philip.benfey@duke.edu. Biology, Duke University, Durham, North Carolina, United States

Growing up with a chemist and historian of science had a deep impact on me. I decided I wanted to do anything except science. And yet, fight as I might, I ended up a molecular biologist. I will present some anecdotes from the battle and a brief overview of my current work.

HIST 13 - Reflections on nine stimulating and fascinating decades

Otto T. Benfey, benfeyo@gmail.com. Department of Chemistry, Guilford College, Greensboro, North Carolina, United States

This paper will point to some order and meaning in the experiences I've encountered and the various fields of exploration I have chosen in the last eighty years. My first decade was spent in blissful ignorance of what was going on in Berlin around me. The second decade began with the 1936 Berlin Olympics and my friendship with a ten-year old classmate whom I met again 77 years later. I moved to England, finished high school and entered University College, London (evacuated to Aberystwyth, Wales). There I was steeped in physical organic chemistry which I continued in New York's Columbia. In subsequent years I became increasingly interested in the history of science in 19th century Germany and in the Orient, trying to keep up with a fascinating family, teaching at Quaker colleges, being an editor with the ACS and then with the Chemical Heritage Foundation, and on the side redesigning the periodic table. Most recently I'm learning to write poetry.