Feeding the World Through Chemistry: Advances in Agricultural and Food Chemistry in the Past 150
Joint Programming AGRO, AGFD, HIST - Fall National ACS Meeting 2026

"Harvey Washington Wiley: Father of the Pure Food and Drug Act of 1906"

Roger A. Egolf, rae4@psu.edu. Penn State Lehigh Valley, Center Valley, Pennsylvania, United States.

Harvey Washington Wiley is best known today as the driving force behind the Pure Food and Drug Act of 1906. His first college degree was in the humanities and his first professional position was as a professor of Greek and Latin at Butler College in Indianapolis, but after receiving his MD from Indiana Medical College in 1871 he became interested in chemistry and taught the first laboratory chemistry course at the medical school. In 1873 he received a BS in chemistry from Harvard after a few months of intensive study, then became the first chemistry professor at Purdue University upon its founding in 1874. He was appointed the chief chemist of the US Department of Agriculture in. 1882. In 1902 Wiley was appropriated $5000 by Congress to study the health effects of food preservatives, work that eventually led to the Pure Food and Drug Act of 1906. From 1907 to 1912 he was the first Comissioner of the Food and Drugs while leading the Bureau of Chemistry in the Department of Agriculture. After leaving government in 1912, Wiley worked at Good Housekeeping Magazine as its Director of Foods, Sanitation, and Health, where he created the Good Housekeeping Seal of Approval. He also served as the President of the American Chemical Society in 1893 and 1894 and was largely responsible for turning the ACS into a national society. This talk will primarily focus on Wiley's work on food safety.

HIST Award Symposium in Honor of Annette Lykknes
Fall National ACS Meeting 2026

"Gustav Tschermak von Seysenegg's 1859 tables: An (almost) unrecognized contribution to the invention of the periodic table"

Gregory Girolami, ggirolam@illinois.edu. University of Illinois Urbana-Champaign, IL, United States.

My talk will examine the little-known table of the elements published in 1859 by Gustav Tschermak von Seysenegg (1836–1927), and the broader question of its place in the early history of the periodic system. Tschermak was an Austrian mineralogist and petrographer who helped establish modern mineral classification. Educated in Vienna and Heidelberg, he became professor at the University of Vienna and long-time editor of the mineralogical journal *Tschermaks Mineralogische und Petrographische Mitteilungen*. Largely overlooked, however, is that Tschermak made a significant and very early contribution to the

development of the periodic table (which as far as I know has been mentioned by historians only once previously, in a 2002 book by German historian Ralph M. Cahn). This contribution grew out of his study during the late 1850s of the densities of liquids, which he summarized in a two-part paper published in 1859. In this publication, Tschermak showed that atoms could be assigned characteristic 'relative volumes.' The density of a liquid compound could then be estimated by dividing its molecular weight by the sum of the relative volumes corresponding to the atoms in its formula. Interestingly, Tschermak used the atomic weights that had been recommended by Stanislao Cannizzaro only a few months before in his *Sunto di un Corso* of 1858, making Tschermak one of the early adopters of the Cannizzaro's proposed weights. Partly for this reason, Tschermak was able to see both intra- and inter-group relationships between the relative volumes and atomic weights of the main group elements, which he summarized in a table having five columns and five rows. The five columns were headed by F, O, N, C, and B, and within each column were the other elements in their respective groups (what are now called halogens, chalcogens, etc.). Tschermak left a vacancy between silicon and tin, later to be filled by the discovery of germanium in 1886. The table is remarkably similar to that proposed by Lothar Meyer six years later in 1864. It is worth pointing out that in 1856 Dmitri Mendeleev wrote his master's thesis on the molar volumes of chemical compounds, in which he showed that there were consistent mathematical regularities between the volumes of compounds having related chemical formulas. Whether Tschermak's papers were known to Mendeleev remains uncertain, but the possibility raises an intriguing question about the intellectual background of Mendeleev's own periodic system of 1869.