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Mendeleev at Home¹

MARY VIRGINIA ORNA

ChemSource, Inc., 39 Willow Drive, New Rochelle, New York, USA
E-mail: maryvirginiaorna@gmail.com

Abstract. Dmitri Mendeleev was “at home” at the St. Petersburg State University for forty years. The museum set up in his former place of work/living quarters is well worth a visit.

Keywords. Mendeleev Museum, Mendeleev Archives, personal effects, memorabilia, laboratory equipment.

INTRODUCTION

Situated along the banks of the Neva River is St. Petersburg State University, just a short walk over the Dvortsovyy Bridge from the Hermitage Museum. Founded in 1724 by decree of Czar Peter the Great, the university still occupies the massive building designated by Peter as the “Twelve Colleges.” And it is here, on the street now called Mendeleevskaya liniya, that the Mendeleev Museum and Archives (Figure 1) is located.

This remarkable museum was originally the apartment designated for the university’s professor of chemistry and laboratory curator. In that capacity, Dmitri Mendeleev (1834–1907) lived here with his wife, Anna Popova-Mendeleeva, during his professorial tenure from 1866 to 1890. It was here that he wrote many of his scientific papers.² After his death in 1907 the university and the Russian Chemical Society purchased his personal library, archives, and some furniture from his widow. These effects formed the basis of the museum that was established there only four years later in 1911.

¹ This essay is reprinted (with added photographs and references) with the kind permission of the Science History Institute, Philadelphia, PA, USA. <https://www.sciencehistory.org/distillations/magazine/mendeleev-at-home>, last accessed 12 March 2019.

² Mendeleev was never elected to the Russian Academy of Sciences, which would have supplied the living quarters, research facilities, etc. for life. Although he was, admittedly, the most famous Russian scientist both at home and abroad, his nomination was turned down by the so-called “German Party,” which, in 1881, elected Friedrich Konrad Beilstein (1838-1906) instead. In response, the Russian Chemical Society, of which Mendeleev was one of the founders, drew up a statement that said, in part: “The indisputable value of the services of this candidate, whose equal cannot be found in Russian science, and his reputation abroad, make his rejection entirely incomprehensible.” H. M. Leicester, *J. Chem. Educ.* **1948**, *25*, 439.



Figure 1. Plaque at the Entrance of the Mendeleev Museum and Archives. Courtesy of Jan and Mary Kochansky. It reads: “Here the great Russian chemist Dmitrii Ivanovich Mendeleev taught, worked and lived from 1850-1890.”³

CENTRAL ATTRACTIONS

The central attractions of the museum are the three rooms that were originally Mendeleev’s living room, dining room, and study. The first room contains memorabilia associated with his childhood and youth, as well as photographs of family members, artists, scientists, architects, and close colleagues who gathered for socializing and conversation each Wednesday evening. (As a chemist, Mendeleev acted as an adviser to artists and



Figure 2. Mendeleev photographs and memorabilia. Photograph courtesy of Roger Rea.

architects on the composition of pigments and of building materials.)

The second room, which in Mendeleev’s lifetime served as a dining room, is devoted to recording Mendeleev’s life before he came to St. Petersburg University, including his study at the Main Pedagogical Institute in St. Petersburg from 1850 to 1855 and his work trip to Heidelberg from 1859 to 1861. Also recorded in the second room is his discovery of the periodic law in 1869. Here the visitor can view his stand-up desk (he was a very tall man for the times) and some of his monographs on a variety of subjects, such as mineralogy, isomorphism, and specific volume. These monographs reflect Mendeleev’s early interest in connecting internal properties to external form. There are also some examples from his mineral collection and the wooden models of crystalline forms that he constructed himself.

The third, and most evocative room, is Mendeleev’s reconstructed study, where everything remains as it was during the last years of his life. Here one can see, among other items, a group of photographs of Mendeleev with the discoverers of some of his “eka-elements” (elements whose future discovery Mendeleev predicted in 1869): Lars Fredrik Nilson (1840-1899), who discovered scandium in 1879;⁴ Paul-Émile Lecoq de Boisbaudran (1838-1912), who discovered gallium in 1875;⁵ and Clemens Winkler (1838-1904), who discovered germanium in 1886.⁶

MENDELEEV’S MAJOR CONTRIBUTIONS TO CHEMISTRY

The museum also conserves Mendeleev’s personal archives. This famous collection has as its base a cataloging system developed by Mendeleev himself and consists of over 35,000 titles, encompassing manuscripts, draft

³ Translation courtesy of David Lewis, University of Wisconsin, Eau Claire, WI, USA

⁴ Nilson, L. C. *R. Chim.* **1879**, 88, 642.

⁵ P.-É. Lecoq de Boisbaudran, *C. R. Chim.* **1875**, 81, 493.

⁶ Winkler, C., *J. prakt. Chem.* **1887**, 36, 177.

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6,941 3 Li ЛИТИЙ	9,012182 4 Be БЕРИЛЛИЙ	12,00931 5 B БОР	10,811 6 C УГЛЕРОД	12,011 7 N АЗОТ	14,00674 8 O КИСЛОРОД	15,9994 9 F ФТОР	18,9984032 10 Ne НЕОН	39,948 18 Ar АРГОН	79,904 26 Fe ЖЕЛЕЗО	58,93320 27 Co КОБАЛЬТ	58,69 28 Ni НИКЕЛЬ			
22,989768 11 Na НАТРИЙ	24,3050 12 Mg МАГНИЙ	26,981539 13 Al АЛЮМИНИЙ	28,0855 14 Si КРЕМНИЙ	30,973762 15 P ФОСФОР	32,066 16 S СЕРА	35,4527 17 Cl ХЛОР	39,948 18 Ar АРГОН	79,904 26 Fe ЖЕЛЕЗО	58,93320 27 Co КОБАЛЬТ	58,69 28 Ni НИКЕЛЬ				
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132,90543 55 Cs ЦЕЗИЙ	137,327 56 Ba БАРИЙ	173,054 81 Tl ТАЛЛИЙ	204,3833 82 Pb СВИНЕЦ	208,98037 83 Bi ВИСМУТ	208,98037 84 Po ПОЛОНИЙ	209,9871 85 At АСТАТ	222,0176 86 Rn РАДОН	222,0176 86 Rn РАДОН						
223,0197 87 Fr ФРАНЦИЙ	226,0254 88 Ra РАДИЙ	227,0278 89 Ac АКТИНИЙ	261,11 104 (Ku) (КУРЧАТОВИЙ)	262,114 105 (Ns) (НИЛЬСБОРИЙ)	263,118 106 (Nh) (НИЛЬСБОРИЙ)	262,12 107 (Nh) (НИЛЬСБОРИЙ)	262,12 107 (Nh) (НИЛЬСБОРИЙ)							
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140,115 5 Ce ЦЕРИЙ	140,90765 59 Pr ПРАЗЕОДИЙ	144,24 60 Nd НЕОДИМ	144,9127 61 Pm ПРОМЕТИЙ	150,36 62 Sm САМАРИЙ	151,965 63 Eu ЕВРОПИЙ	157,25 64 Gd ГАДОЛИНИЙ	158,92534 65 Tb ТЕРБИЙ	162,50 66 Dy ДИСПРОЗИЙ	164,93032 67 Ho ГОЛЬМИЙ	167,26 68 Er ЭРБИЙ	168,93421 69 Tm ТУЛИЙ	173,04 70 Yb ИТТЕРБИЙ	174,967 71 Lu ЛЮТЕЦИЙ	
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232,0381 90 Th ТОРИЙ	231,0359 91 Pa ПРОТАКТИНИЙ	238,0289 92 U УРАН	237,0482 93 Np НЕПУТНИЙ	244,0642 94 Pu ПУЛТОНИЙ	243,0614 95 Am АМЕРИЦИЙ	247,0703 96 Cm КУРИЙ	247,0703 97 Bk БЕРКЛИЙ	251,0796 98 Cf КАЛИФОРНИЙ	252,083 99 Es ЭЙНШТЕЙНИЙ	257,0951 100 Fm ФЕРМИЙ	258,10 101 Md МЕНДЕЛЕВИЙ	259,1009 102 (No) (НОБЕЛИЙ)	260,105 103 (Lr) (ЛОУРЕНСИЙ)	

Figure 3. A Russian Periodic Table showing elements 104 and 105 as kurchatovium and nielsbohrium respectively. Courtesy of Mary and Jan Kochansky.



Figure 4. Mendeleev's Study. Photograph courtesy of Margaret Comaskey.



Figure 5. Mendeleev's Apparatus for Measuring Gas Densities. Photograph courtesy Roger Rea.

documents, letters, telegrams, diaries, notebooks, laboratory registers, expenditure accounts, and correspondence with Russian and foreign scientists. In addition, over 200 scientific instruments, many of them built specifically for Mendeleev, are housed here. There is also a world

map that shows all the places Mendeleev visited (including northwestern Pennsylvania) as part of his scientific travels.

Although Mendeleev is best remembered for his discovery of the periodic law, his other major achievements were authorship of a major textbook, *Principles of*

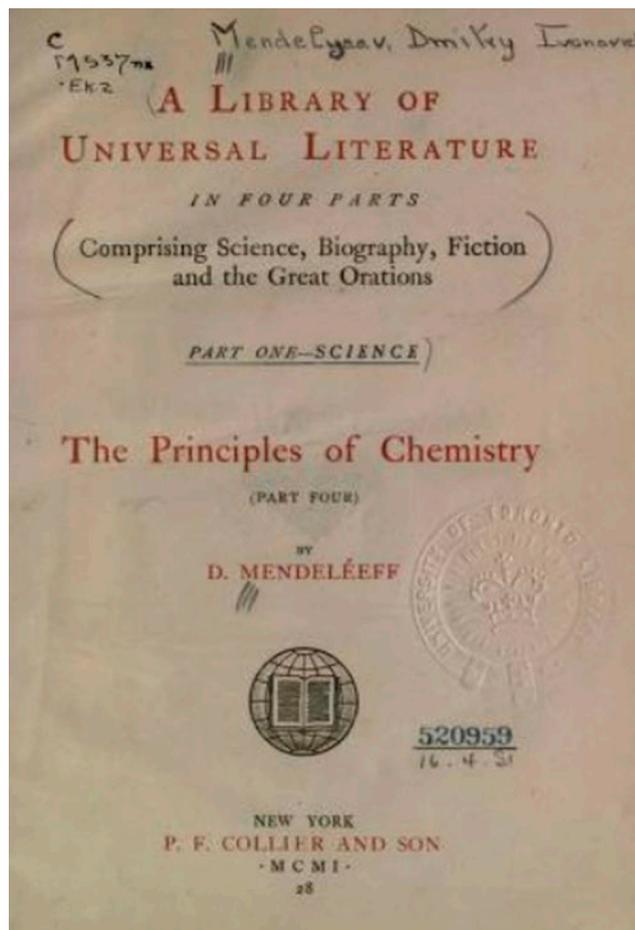


Figure 6. Title Page of a 1901 American reprinting of the the English edition of Mendeleev’s “Principles of Chemistry.”⁷

Chemistry (which included the periodic law), his studies on the elasticity of gases, and his studies of solutions as associations, to say nothing of his far-ranging eclectic interests in a variety of other fields. A visit to this museum evokes an appreciation for all of his interests in one small space.

If the Mendeleev aficionado’s curiosity has not been satisfied with this museum chock-full of memorabilia, a short subway ride to the Technological Institute (via line 1 or line 2) will bring him or her face to face with the famous cigar-smoking Mendeleev statue at the foot of the giant periodic table built into the wall of one of the university buildings. From the viewpoint of this explorer, it is well worth the journey.



Figure 7. Mendeleev Monument (Ilya Ginzburg, 1930). On the wall behind is the famous giant version of the Periodic Table. The building is the former Bureau of Weights and Measures where Mendeleev was Director. It now houses the Mendeleev All-Russian Institute of Meteorological Research. Photograph: Mary Virginia Orna.

⁷ Mendeleev’s “Principles of Chemistry,” <https://archive.org/details/principlesofchem00menduoft/page/n4> , last accessed 21/03/2019.