

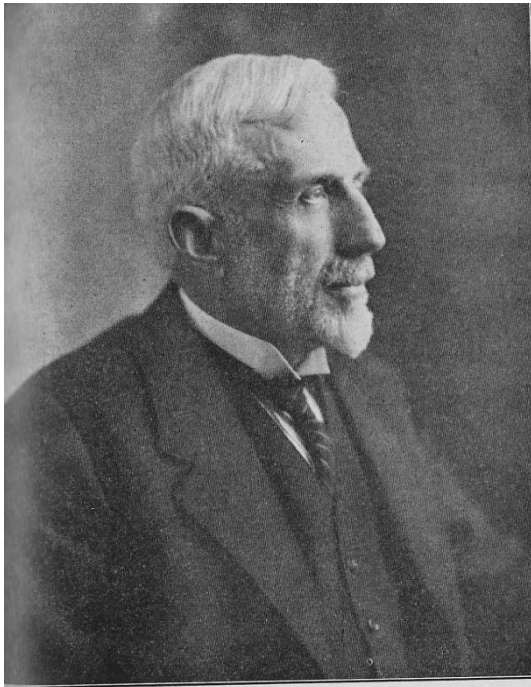
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Chapter 4
MIT and American History of Chemistry:
F.J. Moore and Tenney Davis

Introduction

The Massachusetts Institute of Technology was founded to train leaders in science and technology. William Barton Rogers (1804-1882) was the visionary who brought this institution into being. He was formerly the Professor of Natural Philosophy and Chemistry at the College of William and Mary. He hired several chemists among the early faculty, including Charles William Elliot (1834-1926), who later became President of Harvard University. Elliot was a favored pupil of Josiah Parsons Cooke when he was at Harvard. Elliot's early career at MIT included creating a serious curriculum in Chemistry, along with Francis Humphreys Storer (1832-1914).

Forris Jewett Moore (1867-1926)



(Photo. by Notman)
PROFESSOR F. J. MOORE
(Reproduced by permission from the photograph by Notman of Cambridge, Mass.)

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21 F.J. Moore joined MIT in 1894 as an Assistant in Analytical Chemistry. He
22 received his undergraduate degree in chemistry at Amherst College in 1889. One
23 of his inspirations was Elijah Paddock Harris (1831-1920). While Harris inspired
24 Moore to become a chemist, he never lost his love of history and philosophy
25 encouraged by an Amherst education. Moore studied in Heidelberg under Ludwig
26 Gatterman (1860-1920) and Victor Meyer (1848-1897) and received his Ph.D. in
27 1893. Upon his return to the United States, he served as an instructor at Cornell
28 for a year.

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30 During the initial phase of Moore's career at MIT he taught analytical chemistry to
31 elementary students. This consumed all his time, but he devoted himself to his
32 students and they remembered him fondly. Dr. Richard Tolman, the famous
33 Statistical Mechanician, commented that "Moore was the first teacher who taught
34 him to think and to use his imagination."

35
36 In 1902 he entered the "tenure track" and began to carry out significant research in
37 organic chemistry, the subject of his Dissertation: "A Method of Isolating
38 Aromatic Sulfo Acids." His first paper in JACS appeared in 1903. His research
39 output continued to rise, and he was appointed Professor of Organic Chemistry in
40 1912. He published his course in organic chemistry as "Outlines of Organic
41 Chemistry" (a very MIT title) in 1910 and the lab manual in 1911.

42
43 F.T. Moore was the first American to write a general History of Chemistry. It was
44 published in 1918. (My own copy is the Third Edition of 1939, edited by William
45 T. Hall (1874-1957), also from MIT. Hall was most famous as an abstractor for
46 Chemical Abstracts.) I still enjoy reading Moore as I prepare my own History of
47 Chemistry in America.

48
49 Moore was one of the founders of the Division of the History of Chemistry. He
50 was one of the nine speakers at the informal gathering in Rochester, NY in 1921.
51 He taught an actual course at MIT on the History of Chemistry. His book was
52 based on the lectures for his course.

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A HISTORY OF CHEMISTRY

by F. J. MOORE, PH. D.
Late Professor of Organic Chemistry
in Massachusetts Institute of Technology

Revision Prepared by

WILLIAM T. HALL
Associate Professor of Analytical Chemistry
in the Massachusetts Institute of Technology

Third Edition

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73 **Tenney Lombard Davis (1890-1949)**

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77 Another important figure from MIT in the history of the Division is Tenney Davis.
78 He attended Dartmouth College and finally received his B.S. in chemistry from
79 MIT in 1913. He received his Ph.D. from Harvard University in 1917. He was a
80 polymath and spent the next year as the Sheldon Traveling Fellow in Philosophy at
81 the University of California at Berkeley.

82

83 He was most famous for his classic book “The Chemistry of Powder and
84 Explosives,” published in 1941. His interest in this area was piqued by his service
85 with the Ordnance Corps in France during the World War. He pursued this area
86 throughout his professional career and after his retirement worked part-time for
87 National Fireworks, Inc.

88

89 After the war he joined the Massachusetts Institute of Technology as a Professor of
90 Organic Chemistry. He published dozens of articles on pyrotechnics. This work
91 has been gathered and published by Mr. Warren K. Klofkorn (Prometheus
92 Publications, 1999).

93

94 Davis is most known within the Division of the History of Chemistry as both a
95 prolific author on historical subjects and a tireless servant of the Division. He was
96 one of the founders of the Division and served as its first Secretary/Treasurer after
97 its achievement of full status from 1927-1934. He then ascended to the Chair from
98 1935-1939.

99

100 One of the most insightful biographies of Tenney Davis was written by Henry M.
101 Leicester (1906-1991) and Herbert S. Klickstein (1921-1975). (Leicester and
102 Klickstein authored the magisterial “Source Book in Chemistry, 1400-1900.) They
103 noted that “Throughout his entire career he considered the philosophical and
104 historical background of every field and every idea with which he was concerned.”

105

106 He examined the writings of Roger Bacon (1220-1292) on gunpowder. Davis was
107 a skilled linguist and knew many languages, including Greek and Latin. This
108 motivated him to explore the literature of alchemy. He was a scholar of the works
109 of Robert Boyle (1627-1691) and Herman Boerhaave (1668-1838). And he
110 studied an array of New England chemists.

111

112 In the 1930s Davis began to publish papers on Chinese alchemy. Eventually 35
113 such papers appeared. He collaborated with many Chinese scholars to both obtain
114 and translate these ancient texts.

115

116 Upon the death of Charles Browne (1870-1947) Davis became the Editor of the
117 journal *Chymia*. He set a rigorous tone and issued two volumes before his own
118 death in 1949.

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