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Guide to the James Franck Papers 1882-1966



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Descriptive Summary

Identifier ICU.SPCL.FRANCK

Title Franck, James. Papers

Date 1882-1966

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Abstract James Franck (1882-1964). Physicist. Contains personal and professional correspondence; manuscripts of speeches, articles, and other publications; laboratory notes; memoranda; sound recordings and photographs; personal documents; newspaper clippings; biographies and obituaries of Franck and others; medals, honorary degrees, and certificates. Correspondents include Niels Bohr, Max Born, Richard Courant, Paul Ehrenfest, Albert Einstein, Philip Elkan, Hans Gaffron, Fritz Haber, Otto Hahn, Gustav Hertz, Helmut Hertz, Walter Lochte-Holtgreven, Lise Meitner, Otto Oldenberg, Wolfgang Pauli, Max Planck, Robert Pohl, Eugene Rabinowitch, Otto Stern, Edward Teller, Max von Laue, Wilhelm Westphal, and others. Topics relate to laboratory data from the Franck-Hertz experiments, Franck's work on photosynthesis, the impact of politics and war on science, Franck's role in helping scientists expelled from Nazi Germany, the atomic scientists' movement regarding the development and control of atomic energy, and the Franck Memorial Symposium. Also contains the "Franck Report" of June 1945, in which Franck and other Chicago scientists urged that the atomic bomb be demonstrated to the Japanese before deployment. Papers contain no scientific manuscripts or notebooks from Franck's tenure at the University of Göttingen (1921-1933).

Acknowledgments

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Information on Use

Access

No restrictions.

Citation

When quoting material from this collection, the preferred citation is: Franck, James. Papers, [Box #, Folder #], Special Collections Research Center, University of Chicago Library

Biographical Note

James Franck was born August 26, 1882 in Hamburg, Germany, where his Sephardic Jewish forebears had lived for over two hundred years [Box 20, folder 58 and Box 21, folder 1]. His father, Jacob Franck, was a banker who wanted his son to follow a business career in keeping with family tradition. From childhood on, however, James could imagine no other life but science. An X-ray photograph illustrates his fascination with new discoveries in physics. He had already read of Roentgen's X-ray photography when he broke his arm in 1896. A mere boy of thirteen, he went alone to a municipal physics laboratory for a demonstration of Roentgen's discovery on his broken arm, which he later proudly recalled was the first use of X-ray in Hamburg [Box 21, folder 9]. Despite these scientific interests, Franck was considered a very dull schoolboy, for success within the curriculum of the classical gymnasium depended on one of his weakest faculties, rote memory.

In his first year of studies at Heidelberg, 1901, Franck met Max Born and others who shared his love of science. Born helped him persuade his parents to let him study physics, although at that time a scientific career offered little financial security. In 1902, he went to Berlin to study at the Friedrich Wilhelm University with some of Germany's most famous physicists, including Max Planck, whose formulation of the quantum in 1900 had given the new mechanics its names, and Emil Warburg, who became his thesis advisor. Among the remains from his student days are his notes of Planck's lectures, entitled "Mechanik nach Planck." [Box 11, folders 1 and 3 (Notebook 2).}

After earning a doctorate in physics in 1906 and spending a few months as a research assistant at Frankfurt am Main, Franck returned to the University of Berlin to work with Heinrich Rubens. Berlin became the setting for important personal as well as professional developments in Franck's life. There he met a talented pianist, Ingrid Josephson of Göteborg, Sweden, whom he married on December 23, 1907 [Box 21, folder 5]. Two daughters were born of this marriage, Dagmar on October 2, 1909, and Elisabeth on December 19, 1911.

In 1911, James Franck and Gustav Hertz began the study of elastic collisions between electrons and atoms. Their work led to the discovery of excitation potentials, the amount of energy which an electron must absorb before it can move further away from the nucleus of the atom. Two laboratory notebooks, stamped "Dr. G. Hertz," contain data from some of these experiments [Box 11, folders 7, 8, and 9 (Notebooks 5 and 6)].

The outbreak of World War I in 1914 ended the collaboration of Franck and Hertz. Both joined the German army. For his war service, Franck received the Iron Cross, first and second class, and the Hanseatic Cross of his native city, Hamburg [Box 21, folders 13 through 15]. His front line

service ended in 1916 when he contracted severe polyneuritis affecting his legs [Box 21, folder 12].

After the war, Franck joined the faculty of the Kaiser Wilhelm Institute for Physical Chemistry in Berlin, where he continued the experiments which he had begun earlier with Gustav Hertz. Franck's work in this period is represented by three folders of data from helium experiments he conducted with Paul Knipping and Fritz Reiche [Box 11, folders 10 through 12]. In their November 1, 1919, article in *Physikalische Zeitschrift* reporting some of the findings of these helium experiments, Franck and Knipping added to the vocabulary of physics the term "metastable" to describe an atom in a condition of marginal stability.

It was during these postwar years in Berlin that Franck met Niels Bohr and realized for the first time that the Franck-Hertz experiments of 1911-1914 provided the first experimental evidence for Bohr's revolutionary and highly controversial atomic theory published in 1913. A lifelong friendship between Franck and Bohr developed from the respect the two scientists held for each other's work. The Franck-Bohr correspondence dates from October 19, 1920 to 1962, the year of Bohr's death [Box 1, folder 5].

Franck went to Göttingen in 1921 as professor physics and director of the Second Physics Institute. The years he spent there were among the happiest and most productive of his life. He was fortunate to have as colleagues Max Born and Robert Pohl, physicists who were also his longtime friends. Born, who had encouraged Franck to study physics when they were students at Heidelberg in 1901 and 1902, accepted the post of professor of theoretical physics at Göttingen in 1920 on the condition that Franck be offered a professorship for experimental physics [Box 21, folder 58]. Pohl, who had been a student with Franck in Berlin, held the professorship of experimental physics at the First Physics Institute [Box 20, folder 1 (1905 photograph)].

Franck, Born, and Pohl attracted some of the best young physicists in Germany to Göttingen. Among Franck's students and assistants whose correspondence is preserved in the collection are Günther Cario, Wilhelm Hanle, Gerhard Herzberg, Arthur von Hippel, Fritz G. Houtermans, Werner Kroebel, Hans Kopfermann, Heinrich G. Kuhn, Walter Lochte-Holtgreven, Rienhold Mannkopf, Heinz Maier-Leibnitz, Otto Oldenberg, Eugene Rabinowitch, and Hertha Sponer. [Arthur von Hippel married Dagmar, the elder of Franck's two daughters, in 1930]. The reputation of the Physics Institutes also drew many foreign students. Of those who worked with James Franck, two Englishmen, Patrick M. S. Blackett and Robert d'E. Atkinson, and three Americans, Francis Wheeler Loomis, Louis A. Turner, and J. Gibson Winans, are represented in the Franck correspondence. The mood of these Göttingen years is caught in an album of photographs kept by Hertha Sponer, Franck's research assistant at Göttingen [Box 19]. The pictures in Miss Sponer's album of group outings, parties at local inns, and afternoon coffees evoke the warmth and informality of Franck's relationships with his students.

Franck's international reputation was established during his years at the Second Physics Institute. In November, 1926, he received word that he and Gustav Hertz were to receive the 1925 Nobel Prize in physics. With this award, the Swedish Academy of Science gave recognition to the Franck-Hertz experiments which had led to the "discovery of the laws governing the collisions of electrons [with atoms]." [Box 5, folder 9]. The Franck Papers contain the Nobel certificate [Box 23, folder 4] and Franck's gold Nobel medal, as well as pictures of James and Ingrid Franck and Gustav and Ellen Hertz traveling to Stockholm and of the presentation ceremony on December 10, 1926 [Box 22. In 1934, Franck placed his Nobel medal in an office safe at Niels Bohr's Institute for Theoretical Physics in Copenhagen, and apparently forgot to reclaim it when he emigrated to America the following year. The medal remained in the safe until April, 1940, when, to keep it from the invading German army, George de Hevesy converted it to powder along with Bohr's Nobel medal. In 1950, Bohr sent the gold dust from the two medals to the Nobel Foundation for recasting (Box 5, folder 9). At the presentation of the recast medal in 1951, Franck said: "I am so delighted about this, as I know now that half of my medal is Niels Bohr's." (Victor Weisskopf, verbal communication to Elisabeth Lisco, October, 1974.) [Box 20, folders 7 through 14]. The Papers contain no scientific manuscripts or notebooks produced at Göttingen or reflecting Franck's distinguished work during that period.

The course of James Franck's life was radically altered in 1933 by the enactment, under the national socialist government, of laws removing Germans of Jewish descent from government positions. Franck's war record made him eligible for an individual exemption from this provision of the Jewish exclusion laws and would have allowed him, despite his Jewish background, to remain director of the Second Physics Institute. As director, however, he would have been required to take part in the dismissal of Jewish assistants and students. In a letter to the Minister of Culture, dated April 17, 1933, he resigned both his professorship and the directorship of the Second Physics Institute in protest of "the position of the government toward German Jews." [Box 7, folder 4]. Because of Franck's stature as a veteran of World War I and a Nobel laureate, his resignation created a sensation. In the following days and weeks he received many letters of praise and support for his stand not only from friends and colleagues but also from strangers [Box 7, folders 5 through 7].

Franck's desire to continue his scientific work in Germany proved impossible. Months of searching failed to turn up a suitable position which would not require political compromises. At the end of 1933 he left Germany for America to accept a temporary appointment as Speyer Professor of Physics at Johns Hopkins University.

In 1934, Franck returned to Europe as a guest professor in Niels Bohr's laboratory at the Institute for Theoretical Physics, Copenhagen. Bohr attracted to the Institute many of the best German physicists of the mid-1930's, both Jews and non-Jews, who were leaving the German institutes then deteriorating under the Jewish exclusion laws and the Nazi attack on "Jewish" science [For example, see Box 7, folder 4, "German Physics and Jewish Physics," *Volkischer Beobachter*, February 28, 1936 [A group photograph shows the remarkable wealth of scientific talent gathered in Copenhagen in 1935; seated beside James Franck in the front row of a lecture

hall are Otto Stern, Lise Meitner, Max Born, Werner Heisenberg, Pascual Jordan, and Wolfgang Pauli. During his stay in Copenhagen Franck performed experiments with Hilde Levi on the fluorescence of chlorophyll [Box 20, folder 21]. Four notebooks from these experiments are preserved in the Franck papers [Box 11, folders 13 through 16].

Franck returned as a professor of physics to Johns Hopkins in 1935 where, for the next three years, he taught and continued his research on the fluorescence of chlorophyll. The small amount of material from his work at Baltimore consists of three folders of lecture notes, [Box 12, folders 2 through 4] one notebook of laboratory data, [Box 12, folder 1 (Notebook 14)] and two folders of drafts and notes [Box 12, folders 14 and 15].

In 1938 Franck accepted an invitation to become professor of physical chemistry at the University of Chicago, where a special laboratory, supported by the Samuel S. Fels Fund of Philadelphia, was established for his photosynthesis research. The outbreak of World War II in 1939, however, cast a shadow on this promising beginning. As the war progressed, Franck considered the German fascist threat so grave that he laid aside his photosynthetic work to support the war effort. Despite misgivings about the atomic bomb's potential for destruction, he joined the Manhattan Project on December 1, 1942, one day before the first self-sustaining, controlled nuclear reaction was achieved. He directed the Chemistry Division of the Metallurgical Laboratory at the University of Chicago until December, 1943, when he began gradually to disengage himself from the project by becoming associate director, then serving as a consultant from May 1, 1944, until July 1, 1945.

The unprecedented destructive capability of the atomic bomb continued to trouble Franck as well as many other scientists who had helped create it. In 1944, when the main activity of the Manhattan Project had shifted to Los Alamos, Chicago became a center of discussion about the consequences of the bomb's impending use. During the summer and fall of that year, Franck served on a committee chaired by Zay Jeffries which solicited from group leaders at the scattered project sites opinions for a report on the future of nuclear energy. The "Jeffries Report," formally entitled "Prospectus on Nucleonics," was given to Arthur Compton on November 18, 1944, who forwarded it to General Leslie Groves [Box 18, folder 11] In the spring of 1945, Franck directed a personal appeal to the executive branch of the federal government in a memorandum he wrote with Eugene Rabinowitch [Box 18, folder 13] On April 21, he delivered this memorandum to Secretary of Commerce Henry A. Wallace at a breakfast meeting in Washington arranged by Arthur Compton.

The following June, Franck chaired a committee composed of six other members of the Metallurgical Laboratory (Eugene Rabinowitch, Leo Szilard, Joyce Clennam Stearns, Glenn T. Seaborg, James Joseph Nickson, and Donald J. Hughes) which produced a second memorandum on the social and political implications of atomic energy [Box 18, folder 23]. The "Franck Report," the name by which this memorandum became known, was a further development of the April 21 memorandum. J. J. Nickson's handwritten notes on a Franck Committee

meeting in early June outline the ideas contributed by individual members of the committee [Box 18, folder 15]. At Franck's request, Rabinowitch drafted the report [Box 18, folder 18] and D. J. Hughes, Glenn T. Seaborg, and Robert S. Mulliken (who was not on the Franck Committee) wrote criticisms of it [Box 18, folder 21]. Although Rabinowitch, more than any other individual, was the author of the "Franck Report," it was essentially a group effort, summarizing months of informal discussion among Metallurgical Laboratory scientists on the implications of their work.

Franck traveled to Washington on June 11 to present the report at the office of the Secretary of War, Henry Stimson, in hopes of preventing the military use of the atomic bomb against Japan [Alice Kimball Smith, *A Peril and A Hope: The Scientists' Movement in America, 1945-1947*. Chicago: University of Chicago Press, 1965. p 14-48]. Although the recommendations of the "Franck Report" went unheeded, it became a symbol of awareness among scientists of the political and social impact of their discoveries. For Franck, the report was the product of a bitter lesson he had learned in Germany-that he could not afford to be apolitical. He expressed this insight in a letter written to German Ambassador Knappstein in 1964: "What has happened in our lifetime stems, I believe, from the fact that the people as a whole have left the solution of political questions chiefly to the government." [Box 3, folder 8 (German Embassy correspondence)].

World War II significantly altered Franck's personal life. Initially, it severed his lines of communication with Germany by curtailing the extensive correspondence he had carried on with German friends and colleagues since his emigration in 1935. At the same time, it strengthened his commitment to his American citizenship, which he received in July, 1941. In a letter written to the Baden Minister of Education in response to the offer of an appointment at Heidelberg after the war, Franck explained that his new allegiance made it impossible to consider returning to Germany: "I took this step, as soon as it was legally possible, not only to free myself from enforced statelessness, but also because I earnestly wanted to create a new homeland here. I have neither the wish to go back on this step, nor would I consider it justified." [Box 3, folder 12 (Heidelberg Universität correspondence)].

The close of the war enabled Franck to resume his correspondence with friends and former colleagues in Germany. Just as before the war many German Jews had turned to him for help in finding new jobs abroad, now many non-Jewish Germans asked him for money, food, and clothing. Franck responded generously out of his modest salary. The CARE packages Franck sent to his former teacher, Max Planck, occasioned an especially poignant exchange of letters in 1946 and 1947, for the frail and aged Planck had lost everything in the war, including his favorite son executed by the Nazis [Box 6, folder 4].

The reestablishment of contact with former friends who had stayed in Nazi Germany was sometimes painful. Franck was asked to understand and forgive compromises with totalitarianism and to vouch to the Occupation authorities for the character and conduct of men

with whom he had not communicated for years. In a letter written May 26, 1947, to Eugene Wigner, Franck expressed his dilemma: "Within my narrow limits, I try to help everyone whose behavior I know was decent...After all that happened and after so many disillusionments about people whom I trusted in earlier times, I take nothing for granted anymore; now I have to know that those I trust are deserving of it." [Box 10, folder 5].

Despite his feelings of having been betrayed by some Germans whom he had considered friends, Franck remained open to reconciliation with a reconstructed Germany. In 1945, he joined other German and Austrian émigrés in America in signing an appeal for the economic rebuilding of Germany as a prerequisite to its moral recovery [Box 18, folder 26]. In the same spirit, he accepted German gestures of restitution. He agreed to rejoin the Göttingen Academy of Sciences, which had expelled him under fascist pressure in 1933, because, as he wrote to Theodore von Karman in a letter of February 11, 1948, "if one does not help the people who want to work for a future Germany free of nationalism and racism, etc. the chances for such a Germany to develop become practically zero." [Box 3, folder 8 (Göttingen Akademie der Wissenschaften correspondence)].

Immediately after the war, Franck was concerned not only with Germany, but also with the development and control of atomic energy in America. In the earliest days of the Cold War, the American government's policy of secrecy, designed to keep the technology of the atomic bomb from the Soviets, threatened to hinder research in atomic energy by suppressing the exchange of scientific information. Franck, with other scientists who had chafed under the security requirements of the Manhattan Project, was unwilling to see wartime restrictions continue in peace and sought to change the policy of secrecy in favor of international controls. To inform the American public of the issues, he became one of the founding members of the Atomic Scientists of Chicago, which on December 10, 1945, produced the first issue of the *Bulletin of the Atomic Scientists*. But Franck remained uncomfortable with political activity, although he considered it imperative. Frustration at continued distraction from his work is expressed in a letter he wrote to Peter Pringsheim on September 13, 1945: "Against my wishes, I am again busy with discussions and plans on how to make it clear to the so-called statesmen and to the public what is at stake—that secrecy will not save the country and that a real world agreement is absolutely necessary; furthermore, that scientists are not obedient servants that one can muzzle at will...Damn it all! I really long for undisturbed concentration on scientific work." [Box 6, folder 7].

Franck returned to photosynthesis research after the interruptions of the war and post-war politics. Upon Frank's retirement in September, 1947, from his position as professor of physical chemistry at the University of Chicago, the University and the Samuel S. Fels Fund made arrangements to continue supporting his work. In 1948, the original ten-year Fels Fund grant was renewed for an indefinite period. Franck's photosynthesis laboratory was absorbed by the Institute of Radiobiology at the University of Chicago in July, 1949. The Fels Fund agreed in 1951 to provide a lifetime salary for Franck as director emeritus of the photosynthesis project [Box 2, folder 9] Hans Gaffron, Franck's research associate at the University of Chicago since 1939, assumed the directorship of the project in 1952.

Until his death in May of 1964, Franck continued to devote as much of his time as his health permitted to theoretical work on photosynthesis. He spent the winter months in Durham, North Carolina, with his second wife, Hertha Sponer-Franck, who had been a member of the Physics Department at Duke University since 1936. The Francks usually spent the summer at their house in Falmouth, Massachusetts. Each year, in the spring and fall, James Franck returned to Chicago for about a month in order to continue scientific discussions with his colleagues and to work on his publications. This pattern continued until about 1960, when Hans Gaffron moved the photosynthesis project from Chicago to Florida State University at Tallahassee. In collaboration with Jerome L. Rosenberg, Franck further developed his theoretical model of photosynthesis; a paper summarizing his ideas was finished shortly before he departed on his last journey to Europe in the spring of 1964 [See below, page 17].

Studies in Photosynthesis

From his first publication on photosynthesis in 1935, [Box 12, folder 14] Franck's attention focused on mechanisms by which quanta are absorbed and their energy transferred. Franck's interest in photosynthesis represents a logical progression from his pre-World War I studies leading to the discovery of excitation potentials of atoms. At Göttingen, Franck continued to study excitation potentials, using fluorescence to measure the conversion of excitation energy to other forms of energy. At the same time, biochemists and plant physiologists were just beginning to describe similar processes in plants, but the question of how light energy was transformed into energy utilizable by plants remained a mystery. In the early 1930's, observations of fluorescence in plant extracts were reported. As Franck became aware of these and other studies which paralleled his own work with fluorescence of free radicals in solution and of dye stuffs, he became increasingly interested in the question of energy conversion and transfer in plants [Although his major preoccupation from the 1930's on was photosynthesis, Franck did not completely abandon physics. A small group of manuscripts in the Franck Papers (Box 12, folder 5-13) relates to his publications in physics between 1935 and 1958, chiefly with Robert Platzman (Box 12, folder 6, 8, 10-11, 13), but also including one article with Edward Teller in 1938 (Box 12, folder 5) and one with his wife, Hertha Sponer in 1956 (Box 12, folder 12)].

Perhaps Franck's most enduring contribution to the advance of knowledge about photosynthesis is that his hypotheses and critiques stimulated other researchers to reconsider previously accepted theories, often resulting in the formulation of new theories [Roderick K. Clayton, *Molecular Physics in Photosynthesis* (New York: Blaisdell Publishing Company, 1965), p 182-91]. An example of this process is the effect of Franck's and Edward Teller's critique of the photosynthetic unit theory, published in the *Journal of Chemical Physics* in 1938, as part of an article on excitation energy in crystals [Box 12, folder 5]. The photosynthetic unit, as proposed by Robert Emerson and William Arnold in 1932 and modified by the reaction center hypothesis of Hans Gaffron and Kurt Wohl in 1936, was defined as a set about 2,000 chlorophyll molecules acting together with associated enzymes to reduce carbon dioxide and to produce glucose. The reaction center was postulated as the site in the photosynthetic unit where the light energy

gathered by chlorophyll molecules is changed into chemical energy. In their 1938 article, Franck and Teller used quantum mechanical principles to distinguish among three types of energy transfer, later designated by Theodore Förster as "fast," "intermediate," and "slow." Each of these three types of energy transfer became an area of major research interest from which developed theoretical advances in the description of the size and organization of the photosynthetic unit and of its reaction center.

Franck's photosynthesis research under the first ten-year Fels Fund grant (1938-48) is represented in the Franck Papers by only two folders of manuscripts and notes [Box 12, folders 16 and 17]. Sometime after his retirement in September, 1947, Franck went through his files and disposed of his rough notes and drafts. Most of the manuscripts preserved in the Franck Papers date from the period after 1948 when Franck's need to conserve his energy for work on his publications left him no time for sorting and discarding his papers.

Franck's work on photosynthesis received greater attention after 1949, when he became involved in a bitter controversy [This controversy followed Franck to the grave when Warburg published, in *Die Naturwissenschaften* 23 (1964), pp. 550-51, a rebuttal to Wernre Kroebe's obituary of Franck, "Zum Tode von James Franck," *Die Naturwissenschaften* 18 (1964), pp. 421-23 (Box 21, folder 51)] with the German biochemist, Otto Warburg (the son of the Franck's thesis advisor, Emil Warburg) [See the tribute to Emil Warburg on his eighty-fifth birthday by James Franck and Robert Pohl, Box 21, folder 44]. The "Warburg controversy" centered on the quantum yield of photosynthesis, i.e., the measurement of the amount of light energy necessary to effect the primary photochemical act. Otto Warburg reported a quantum requirement of four quanta per carbon dioxide molecule for the process of photosynthesis. This requirement would have made photosynthesis a highly complex chemical reaction proceeding with virtually no friction at seventy-five per cent overall efficiency in the conversion of light energy into chemical energy. To Franck this finding was physically impossible by the laws of thermodynamics and of the quantization of energy; four quanta could not effect the conversion. According to his interpretation of quantum theory, thermodynamics, and chemical kinetics, the requirement had to be at least eight quanta, and most experimentalists reported measurements of between six and ten. Warburg denied that these laws of physics applied to the living cell and stood by his measurements even though no other research groups could verify them. Warburg's obstinacy was particularly irritating to Franck, who characteristically would alter his photosynthetic model to take into account experimental data from other laboratories as well as his own.

In his 1949 article in *Archives of Biochemistry*, [Later the *Archives of Biochemistry and Biophysics*] Franck explained the disparity between quantum yields obtained by Robert Emerson at the University of Illinois and those of Warburg's group in Berlin by suggesting that Warburg was measuring the photochemical reduction of respiratory intermediates rather than normal photosynthesis [Box 12, folder 18 through 21]. Warburg not only refused to be persuaded, but also published new measurements which lowered the quantum requirement from four to two and seven-tenths quanta per carbon dioxide molecule. In a second article, appearing in the July, 1952 *Archives of Biochemistry and Biophysics*, Franck marshaled evidence for another attempt at convincing Warburg. The extensive notes and drafts of this article in the Franck Papers testify

to the care Franck took in preparing it [Box 13, folders 1 through 29]. His closely reasoned essay provided a physical explanation for the reaction mechanisms of the Calvin-Benson cycle of carbon dioxide reduction and for the high quantum yields obtained by Warburg's research group.

One of Franck's arguments in this 1953 article illustrates his characteristic ability to keep in view, in the most complex discussions, consideration so simple and obvious that others tended to overlook them: Warburg's highest quantum yields occurred under conditions unfavorable to plant growth. Franck made this point about Warburg's technique with subtle humor: "In principle it is certainly justified to vary the conditions until the photochemical process works at its highest efficiency. However, the value of such variation becomes dubious if one finds that the photosynthetic apparatus can only be induced to do its 'best' under conditions where other tests show that the cells are not functioning well... Thus we find that high yields seem to be connected with influences generally regarded as harmful to the plants." [Box 13, folder 1, p. 26-27].

The Gatlinburg Conference on Photosynthesis held October 25-29, 1955, in eastern Tennessee, [Box 14, folders 1 through 13] was organized specifically to discuss the mechanism of the primary process of photosynthesis [Hans Gaffron, ed., *Research in Photosynthesis* (New York: Interscience Publishers, Inc., 1957), p. v-vi]. The quantum yield controversy was excluded from the conference agenda because it was stalemated. In the mid-1950's, there appeared to be no prospect of resolving the issue. It was only after Franck's death that Warburg was proven wrong.

Franck was unable to attend the Gatlinburg Conference which related so directly to his interests because of a heart attack. Before being stricken, however, he had prepared two papers for the conference on the theoretical implications of the experiments on the chemiluminescence of chlorella algae, which his young University of Chicago colleague, John E. Brugger, had performed for his dissertation research [Box 14, folder 6]. Brugger presented the first of Franck's two Gatlinburg papers, as well as two papers of his own. Robert Livingston of Minnesota presented Franck's second paper. One significant outcome of the Gatlinburg Conference was a book edited by Franck's co-worker Hans Gaffron, *Research in Photosynthesis*, containing all of the conference papers, and transcripts of a good portion of the ensuing discussions [Box 14, folders 4, 9-13] The papers of Franck and Brugger which were presented at Gatlinburg in 1955 were not summarized for publication in a journal until 1958, since Franck, with characteristic thoroughness, wanted to develop a theory encompassing all observed afterglow phenomena [Box 14, folders 11-33].

In 1955, Franck agreed to prepare a section of the *Handbuch der Pflanzenphysiologie* (Berlin: Springer-Verlag, 1960) on the fluorescence of chlorophyll in relation to the primary processes of photosynthesis. He reluctantly undertook what was to become a major project because he did not want to see the article written by researchers whose ideas he did not respect. He was somewhat chagrined at his own motivation, as he explained to his collaborator on the project, Robert Livingston: "I feel in this matter like the dog who is willing to eat salad if only to prevent

the other dog from getting it even if he dislikes it himself." [Box 9, folder 1 (Springer-Verlag correspondence)]. The lively and sometimes acrimonious debates sparked by photosynthesis research led Franck to take great care that his publications were as accurate and comprehensive as he could make them. The effort that went into the Handbuch article is clear from the large amount of material related to it in the Franck papers [Box 15, folders 1-21].

Toward the end of his life, James Franck's poor health increasingly frustrated his efforts to continue his work. He agreed to serve as a moderator at the Symposium on Light and Life sponsored by the McCollum-Pratt Institute of Johns Hopkins University; but, as he wrote to William D. McElroy in October, 1959: "My health is unreliable...I have the great wish to come to your meeting, and if you want me to be the moderator of Session II, I think that I could do that without undue stress on my health. However, I don't want to write a paper because I know by experience that to work for a deadline in writing papers is something which does me no good, and I took a solemn vow not to do it anymore. So my answer would be 'yes' with pleasure, but there is a risk involved for you that until March maybe my health will deteriorate." [Box 5, folder 3].

Franck was able to participate in the Symposium on Light and Life, however, which met in Baltimore, March 28-31, 1960. At this symposium, he became involved in a debate with University of California biochemist Melvin Calvin, regarding light activation in photosynthesis. Calvin insisted that the role of light in photosynthesis was limited to the photoionization of chlorophyll in chloroplasts, resulting in a migration of charged electrons and positive holes to a "solar battery" which then electrolyzed water. Franck found Calvin's thesis inadequate for explaining a number of experimental observations, including the Emerson effect, the doubling of fluorescence, the afterglow phenomena, and the chemical kinetics of photosynthesis rates under various external conditions [Box 15, folder 22. Franck's contributions to the discussions following the session which he moderated and to other symposium session are recorded in a book edited by William D. McElroy and Bentley Glass, *A Symposium on Light and Life* (Baltimore: Johns Hopkins Press, 1961)].

The Calvin controversy was the background for James Franck's last three publications in 1962, 1963, and 1964, which he wrote with Jerome L. Rosenberg of the University of Pittsburgh. Rosenberg had been at the University of Chicago from 1948 to 1950 on an Atomic Energy Commission post-doctoral fellowship. After the fellowship expired, he had stayed at the University with the photosynthesis project until 1953, when he was appointed to the Chemistry Department at the University of Pittsburgh. In 1961, 1962, and 1963, Franck spent some months working with Rosenberg in Pittsburgh. Their first article, "The Primary Photochemical Step in Photosynthesis: A Comparison of Two Theories," was published in *Luminescence of Organic and Inorganic Materials* (New York: John Wiley and Sons, Inc., 1962), under the editorship of Hartmut P. Kallman and Grace Marmor Spruch. This article dealt specifically with Franck's and Rosenberg's critique of Calvin's theory of light utilization.

Before Rosenberg left the United States in the summer of 1962 to spend his sabbatical year in Israel, he and Franck completed an article for the *Journal of Theoretical Biology*, which offered an alternative to Calvin's model of light utilization. On October 10, 1962, Franck wrote to Rosenberg to tell him that he had decided to withdraw their article for revision in view of new observations by Melvin Calvin, C. S. French, Warren Butler, and R. A. Olsen. He explained to Rosenberg the probable consequences when word of this got out: "I believe my reputation as an absolutely unreliable character will certainly be considerably enhanced among the biochemists... At least, there will not be many physical chemists who believe that someone's changing his mind is proof for utter lack of character. I personally regard it not as too bad a sign that at my age, I'm not incorrigible, but able to be slowly reformed." [Box 7, folder 10].

Franck and Rosenberg presented a short abstract of this article at a symposium sponsored by the Committee on Photobiology of the National Academy of Science-National Research Council, held at Airlie House in Warrenton, Virginia, October 14-18, 1963. Eugene Rabinowitch later recalled that Franck found very gratifying the serious and critical response which met his presentation at this symposium [Box 21, folder 61]. Subsequently the abstract appeared with other papers from the symposium in a book entitled *Photosynthetic Mechanisms in Green Plants* (Washington, D. C.: National Academy of Sciences-National Research Council, 1963). The revised article finally was published in the *Journal of Theoretical Biology* shortly before Franck's death in the spring of 1964.

Recognition of a Scientific Legacy

James Franck took a modest view of his scientific achievements. Talking on the pioneer era of quantum physics, at the International Conference on Luminescence, New York University, October 1961, he praised Max Planck, Albert Einstein, Niels Bohr, and Walther Nernst for opening the "new path," and described himself as one of those who "went along and picked flowers to the right and to the left which were growing in abundance." [Box 21, folder 9]. That his achievements were not esteemed so lightly by others is evident from the many honorary degrees, certificates of society membership, and medals preserved in the Franck Papers [Box 22 and Box 23, folder 4 through Box 24, folder 2].

Franck's self-effacing attitude toward many of the awards which came late in his life is expressed in a letter of August 21, 1963, to Robert Livingston: "In most cases, it [an honorary degree] is just a sign of old age." [Box 5, folder 1]. Several of the honors must have given him special satisfaction, however. He was deeply moved by the personal tributes from his friends, colleagues, and former students, collected by Robert Platzman, and presented in a leather-bound volume at the Franck summer house in Falmouth, Massachusetts on his seventieth birthday, August 26, 1952 [Box 23]. Also gratifying to him were the Rumford Medal awarded by the American Academy of Arts and Sciences in 1955 [See his letter to George Wald, Box 10, folder 1] and the Dannie-Heineman Prize given by the Göttingen Academy of Sciences in 1962. These two

awards recognized his contributions to the understanding of photosynthesis which he often felt were not appreciated.

The receipt of honors sometimes provided occasions for trips to Germany to visit old friends. As he became frail, Franck recognized that each visit might be the last, and in the spring of 1964 he made his final trip abroad. The highlight of this trip was a Berlin reunion with colleagues from his days at the Friedrich Wilhelm University and the Kaiser Wilhelm Institute. With Lise Meitner, he visited Gustav Hertz in East Berlin, and then met briefly with Wilhelm Westphal in West Berlin. From Berlin, he took the train to Göttingen, where he died of a heart attack on May 21, 1964.

A James Franck Memorial Symposium on energy exchange in molecular systems, sponsored by the Department of Chemistry of the University of Chicago with the support of the Samuel S. Fels Fund, was held at the University on May 12-13, 1966. In the symposium's four scientific sessions, talks on physical chemistry were given by Gerhard Herzberg, William Klemperer, Edwin N. Lassettre, Lewis M. Branscomb, Alfred Kastler, and Mark G. Inghram; a talk on photochemistry was presented by G. S. Hammond, and one on photosynthesis by Eugene Rabinowitch. These talks acknowledged Franck's scientific legacy, as exemplified by current research in which his theories and methods were being employed. In a luncheon address on May 12, Rabinowitch spoke of Franck's political contributions, focusing on the best-known example, the "Franck Report." At dinner, Hans Gaffron and Edward Teller recalled Franck's remarkable personal qualities, as did Robert Pohl in a talk delivered for him by his son. All of the symposium talks and discussion were recorded on tapes, which are preserved in the Franck Papers [Box 19]. Photographs taken at the session of the Franck Memorial Symposium are included in the photograph collection [Box 20, folder 47-54].

On the occasion of this symposium, a volume of "selected papers" of James Franck was to have been published. For this project, Robert Platzman compiled a bibliography of Franck's published writings, selected a number of those works to be reprinted in the volume, and solicited from Franck's co-authors memoirs to introduce each paper [See Appendix, p. 124-34]. The correspondence, manuscripts, Platzman's annotated copy of the bibliography and related notes, and a set of photocopies of Franck's published articles are preserved in the Franck Papers [Box 24, folder 3 through Box 26, folder 4]. According to notes appended to his draft of the Franck bibliography, Platzman never was satisfied that the bibliography was comprehensive. Following the symposium, he continued to work on the Franck volume, but the project was left unfinished at his death in the summer of 1973 [Box 25, folders 5-9].

Scope Note

The James Franck Papers are organized in five series: correspondence, manuscripts, tape recordings and photographs, personal documents and memorabilia, and Robert Platzman's editorial papers for the "Selected Papers of James Franck."

Series I: Correspondence is arranged alphabetically by correspondent, with letters under each name in chronological order. All correspondence with a single family is under the name of the husband; letters from institutions, organizations, or publications are listed by corporate name. Personal and professional letters are intermingled, reflecting the friendships Franck enjoyed with many of his professional associates. Letters which discuss the progress of scientific articles frequently include family news and greetings. The collection, however, includes little personal correspondence from members of Franck's family. Within the alphabetically arranged correspondence occur the following eight topical entries:

Autograph hunters

Condolences to Hertha Sponer-Franck on the death of James Franck

Franck, James; Eightieth birthday greetings

Franck, James; Fiftieth doctorate jubilee

Franck Memorial Symposium: Correspondence and memoranda

Institute of Radiobiology, University of Chicago: Reports and memoranda

Nobel Prize

Resignation from Göttingen professorship, April 17, 1933

Researchers interested in particular correspondents should consult these topics as well as the list of contributors to Franck's seventieth birthday book and to the "Selected Papers of James Franck"

For some persons named in the correspondence section of the guide, cross-references give locations of additional letters filed under another person's name or under an institution, organization, or publication, as well as of letters in which those individuals are major subjects of discussion. These cross-references, however, do not constitute a complete index to the correspondence. Box 10, folder 9 contains cross-references from the correspondence files compiled by Mrs. Norene Mann, Franck's secretary at the University of Chicago from 1942 until 1947, who continued to perform secretarial services for him informally until his death. While Mrs. Mann's filing system has not been preserved, her cross-references may furnish clues to researchers interested in particular topics.

Included with the correspondence of Richard Courant, Albert Einstein, Niels Bohr, Max Born, and Lise Meitner are photocopies of Franck's replies acquired by his daughter, Elisabeth Lisco. The copies in the correspondence of Richard Courant came from an exchange with Mrs.

Courant. Mrs. Lisco received copies of Franck's letters to Niels Bohr and to Albert Einstein from their secretaries. The copies of Franck's letters to Lise Meitner and Max Born were reproduced for the Franck Papers at Mrs. Lisco's request from original papers in the Library of Churchill College, Cambridge University. They should be identified, in publications based upon the James Franck Papers, with reference to the original manuscripts in the Library of Churchill College. The Papers of Niels Bohr, including Franck's letters, are now in the Niels Bohr Institute of the University of Copenhagen, and should be similarly identified in publications.

The following list identifies especially extensive or significant correspondence with indications of the chronological span of the correspondence. In some cases, correspondence with a writer's family or biographers extends beyond his own lifetime.

Niels Bohr, 1920-1964

Max Born, 1921-1964

Richard Courant, 1932-1958

Paul Ehrenfest, 1919-1960

Albert Einstein, 1921-1955

Philip Elkan, 1933-1963 (lifelong friend of Franck; not a scientist)

Hans Gaffron, 1941-1964

Fritz Haber, 1920-1954

Otto Hahn, 1925-1963

Gustav Hertz, 1916-1964

Helmut Hertz, 1944-1964 (son of Gustav Hertz)

Werner Kroebel, 1930-1962

Walter Lochte-Holtgreven, 1956-1964

Rudolph Ladenburg, 1933-1948

Lise Meitner, 1921-1964

Otto Oldenberg, 1933-1963

Grete Paquin, 1933-1963 (Franck's secretary at Göttingen)

Wolfgang Pauli, 1944-1959

Max Planck, 1915-1961

Robert Pohl, 1919-1964

Peter Pringsheim, 1933-1964

Eugene Rabinowitch, 1933-1964

Gert Rathenau, 1933-1963

Otto Stern, 1933-1963

Edward Teller, 1935-1957

Max von Laue, 1922-1960

Wilhelm Westphal, 1933-1965

Series II: Manuscripts includes manuscripts of Franck's publications and related notes identified by reference to the Franck bibliography compiled by Robert Platzman, and available from the Special Collections Research Center. [Occasionally, at the end of a manuscript description, reference is made (by citation of Platzman numbers) to Franck publications on the same subject but whose direct relationship to the manuscript in question has not been established. Thus, for example, data from helium experiments performed between 1919 and 1920 in Box 11, folders 10 through 12, may be related to a series of Franck's publications with Paul Knipping and Fritz Reiche which are numbered 44, 46, 47, and 48 in the Platzman bibliography.- See Appendix, p. 124-134]. Photocopies of all the publications listed in the bibliography are preserved in Box 25, folder 10 through Box 26, folder 4.

The Franck manuscripts are organized into ten subseries.

Physics-Franck's work in Germany and Denmark, 1905-34

Physics-Franck's work in America, 1935-58

Biophysics-Franck's work on photosynthesis at John Hopkins, 1935-38

Biophysics-Franck's work on photosynthesis at the University of Chicago, 1938-48

Biophysics-Franck's work on photosynthesis after 1948

General articles and talks on science

Papers by other scientists

Miscellany-general notes, administrative memoranda, and unidentified fragments

Atomic scientists' movement, 1944-53

Franck Memorial Symposium, May 12-13, 1966

The chronological and bibliographical relationships among the Franck manuscripts had been thoroughly obscured by Franck's own use of these papers before they came into the possession of the University of Chicago Library. The present reconstruction of these relationship is based upon a sorting of the manuscripts by subject and by date based on publication references. Sorting errors will be greatest for manuscripts associated with articles which were published in close succession during the course of a the controversy, repeating similar data or arguments. For example, considerable overlap in argumentation and terminology occurs in the three articles related to the Warburg quantum yield controversy [Platzman, 138, 140, 143] and in the three articles which grew out of the Calvin light utilization arguments [Platzman 157, 158, 159].

The material related to each publication is arranged on the principle of decreasing approximation of manuscript text to publication, proceeding from the most finished to the least finished form, as follows:

Galley proofs

Complete drafts (both typescripts and holographs)

Partial drafts (frequently of specific theses identified by subtitles in the final publication)

Notes (usually on the organization of Franck's major arguments and on articles by others relevant to the article being prepared)

Bibliographic apparatus (other researcher's manuscripts, offprints, and dissertation abstracts relating to Franck's major arguments; graphs; bibliographies)

Similarly, within the first three classes of manuscripts the later forms will be followed by earlier forms; typescripts of a complete final draft and related carbons will be followed by earlier complete drafts, whether typescript, holograph, or a combination of both.

Series III: Tape recordings and photographs. The Franck papers include six tape recordings [Box 19] Four reels consist of talks given at the Franck Memorial Symposium, May 12-13, 1966, and a fifth reel records a talk given by Friedrich Hund on the Saturday following the symposium, May 14, 1966, entitled "Paths to Quantum Theory, Historically Viewed." The sixth tape is a recording of Franck reminiscing about the early history of quantum physics. This tape was made in Chicago, October 19, 1960, by Weldon Brown, professor in the Chemistry Department, University of Chicago.

A photograph album compiled by Hertha Sponer in the 1920's and early 1930's is the source from which the first half of the Franck photograph collection was reproduced [Box 19]. The present arrangement of the photographs preserves that of the album, which remains in the possession of the family of James Franck [See the photocopy facsimile of the album in Box 19, folder 55]. The titles of these photographs as listed in the guide are English translations of Hertha Sponer's descriptive captions. (A duplicate set of photographs reproduced from the Sponer album is located at the Center for History of Physics at the American Institute of Physics in New York.)

Photographs of James Franck with his friends and associates, [Box 20] arranged in apparent chronological order, were acquired from the family of James Franck [Box 20, folders 1, 4-14, 29, 40, 43-45] and from Mrs. Norene Mann, Franck's secretary at the University of Chicago [Box 20, folder 35, in color]. In addition, some photographs were transferred from the Franck correspondence [Box 20, folders 17-18, 21, 27-28, 30]. Included in Box 20 are copies of photographs assembled by Robert Platzman in 1966 for use at the Franck Memorial Symposium. Most of these photographs were supplied to Platzman by Franck's family [Box 20, folders 15 and 16; list in Box 20, folder 46]. The photographs of participants in the Franck Memorial Symposium were taken by Gamma Photo Labs, Inc., of Chicago [Box 20, folder 47 through 54].

Series IV: Personal documents and memorabilia includes personal documents, newspaper clippings, and biographies and obituaries of Franck and others are arranged in three chronological series, [Box 21] followed by Franck's medals,[Box 22] and honorary degrees, certificates and a hand-bound book of letters and photographs presented to Franck in honor of his seventieth birthday [Box 23].

Series V: Robert Platzman's Editorial Papers for the "Selected Papers of James Franck" The subject matter of Robert Platzman's editorial papers [Box 24, folder 3 through Box 26, folder 4] overlaps to some extent with material on the Franck Memorial Symposium in Series III. since the planning of the "Selected Papers of James Franck" volume started as a project of the Franck Symposium committee. Robert Platzman's editorial papers were given by his family to the University of Chicago Library in the spring of 1975. Platzman's editorial papers consist of alphabetically arranged correspondence, minutes of the Franck Symposium committee, manuscripts arranged alphabetically by author, working papers for a bibliography of Franck's

published works in apparent chronological order and photocopies of Franck's journal articles arranged chronologically as they appear in the Platzman bibliography.

Related Resources

The following related resources are located in the Department of Special Collections:

<http://www.lib.uchicago.edu/e/spcl/select.html>

Max Rheinstein. Papers

Department of Physics. Papers

Eugene Rabinowitch. Papers

Samuel King Allison. Papers

Presidents Papers, 1924-45

Papers of the Atomic Scientists of Chicago

Papers of the Bulletin of the Atomic Scientists

The James Franck Collection of Scientific Offprints is a separate collection consisting of offprints of articles which were sent as complimentary copies to James Franck.

Subject Headings

- Bohr, Niels Henrik David, 1885-1962
- Born, Max, 1882-1970
- Courant, Richard, 1888-1972
- Ehrenfest, Paul, 1880-1933
- Einstein, Albert, 1879-1955
- Franck, James, 1882-1964
- Gaffron, H. (Hans)
- Haber, Fritz, 1868-1934
- Hahn, Otto, 1879-1968
- Hertz, Gustav, 1887-
- Laue, Max von, 1879-1960

- Lochte-Holtgreven, W.
- Meitner, Lise, 1878-1968
- Oldenberg, Otto, 1888-
- Pauli, Wolfgang, 1900-1958
- Planck, Max, 1858-1947
- Platzman, Robert Leroy
- Pohl, Robert O.
- Rabinowitch, Eugene, 1901-
- Stern, Otto, 1888-
- Teller, Edward, 1908-
- Westphal, Wilhelm H. (Wilhelm Heinrich), 1882-
- Photosynthesis
- Atomic bomb -- Moral and ethical aspects
- Nuclear energy -- Moral and ethical aspects
- Atomic bomb -- History
- Atomic theory
- Nuclear disarmament
- Science and state
- Science -- Political aspects
- Physicists

INVENTORY

Series I: Correspondence

Box 1

Folder 1

Correspondence, A-Am

- Abrams, Samuel J.
- Academic Assistance Council of German Jewish Emigration Council. See also-
- Society for the Protection of Science and Learning
- Academic Press, Inc.
- Acharya Jagadish Chandra Bose Birth Centenary Committee
- Adams Transport Co.
- Adler, Peter
- Albrecht, Herbert O.
- Allen, Frank L.
- Allison, Samuel King. See also Bothe; Weller
- American Academy of Arts and Sciences
- American Academy of Political and Social Science
- American Association for the Advancement of Science and Associated Societies
- American Chemical Society
- American Philosophical Society
- American Physical Society
- American Red Cross
- American Society for Metals
- American Society of European Chemists and Pharmacists

- Ames, Joseph S., President, Johns Hopkins University
- Amrine, Michael

Box 1

Folder 2

Correspondence, An-At

- Andry, Harold J.
- Archives of Biochemistry and Biophysics
- Argonne National Laboratory
- Argus Press clipping Bureau
- Arndt, Fritz
- Arnold, William. See also Rosenberg, J.
- Arrhenius, Sven
- Ascher, Felix
- Ascher, Richard
- Ashford, Theodore Askounes
- Association d'Etude pour l'Expansion de la Recherche Scientifique
- Atkinson, Robert d'E
- Atom Industry
- Atoms for Peace Awards, Inc.

Box 1

Folder 3

Correspondence, Au

- Ausschuss für Einheiten und Formelgrößen
- Autograph hunters

Box 1

Folder 4

Correspondence, Ba-Bod

- Baeck, Leo
- Baerwald, Hans
- Baker, Thomas S.
- Baltimore and Ohio Railroad
- Banaras Hindu University
- Bass, Robert E.
- Bauer, E.
- Beadle, George W.
- Berendsohn, Walter A.
- Berger, Karl R.
- Bergius, Eva von Bahr
- Bergmann, M.
- Berl, Ernst
- Berliner, Arnold. See also Resignation...Friends and Colleagues
- Berliner Handels Gesellschaft
- Bernhard-Cohn, Emil
- Beth, Erich
- Beth, Karl
- Beyer, Herbert

- Birge, Raymond
- Bishop, Norman I.
- Black, N. Henry
- Blaschko, Herman
- Blasius, Eugen
- Bloch, Alfred
- Bodenstein

Box 1

Folder 5

Correspondence, Bohr

- Bohr, Niels with correspondence from his brother, Harold Bohr, and his wife, Margrethe Bohr. See also Pauli; Rosenfeld

Box 1

Folder 6

Correspondence, Bon-Borg

- Bondy, Curt
- Bonhoeffer, Karl F. See also Burton
- Borgese, Antonio

Box 1

Folder 7

Correspondence, Born

- Born, Max, with correspondence from his wife, Hedwig Born

Box 1

Folder 8

Correspondence, Bos-Bro

- Bosch, Carl
- Boschwitz, Carl
- Bothe, Walther
- Boulware, C. Elwood
- Bowen, E. J.
- Boyke, Paul
- Brackett, Frederick S.
- Brändström-Ulich, Elsa
- Brann, Fritzi
- Brauner, Leo
- Bredig, Georg
- Brennhovd, Olav
- Breslau, (Professor)
- Breysig, Kurt
- Brooklyn Technical High School
- Brown, Allan H.

Box 1

Folder 9

Correspondence, Bru-Bur

- Brüller, Hans
- Brugger, John

- Brunauer, Stephen
- Bucy, Paul C.
- Bücher, Theodor
- Bulletin of the Atomic Scientists
- Burk, Dean
- Burlew, John S.
- Burton, Milton

Box 2

Folder 1

Correspondence, But-Ci

- Butler, Warren
- California, University of. See University of California.
- Calvin, Melvin. See also Hildebrand.
- Cario, Gunther
- Carnegie Institute of Technology
- Carsten, Richard
- Cassel, E. J.
- Cassian, Brother Timothy, FSC
- Cermak, Johann Paul
- Chassel, Hans
- Chicago, University of. See University of Chicago.
- Chuang, C. K.
- Citizens Committee for a Nuclear Test Ban Treaty

Box 2

Folder 2

Correspondence, Cl-Cos

- Clayton, Roderick K.
- Clusius, Klaus
- Coehn, Alfred
- Colby, E. C.
- Compton, Arthur Holly
- Compton, Karl Taylor
- Condolences to Hertha Sponer-Franck on the death of James Franck
- Conference on the Status of Soviet Jews
- Congress of Scientists on Survival
- Conn, Eric E.
- Cori, Carl F.
- Coryell, Charles
- Coster, Dirk

Box 2

Folder 3

Correspondence, Courant

- Courant, Richard. See also Rockefeller Foundation

Box 2

Folder 4

Correspondence, Cra-Dr

- Cracauer, Rita
- Cross, Ernest S.
- Csizi, Theresa
- Dacca, University of. See University of Dacca
- Dailey, Ben P.
- Daniels, Farrington
- Danmarks Naturvidenskabelige Samfund
- Danzel, Theodor-Wilhelm
- Davies, Harrison
- Davis, Bernard D.
- Debye, Peter J. W.
- Dember, Harry
- Dempster, R. N.
- Despres, Leon
- Detroit Institute of Cancer Research
- Deutsche Akademie der Naturforscher Leopoldina
- Deutsche Akademie der Wissenschaften zu Berlin
- Deutsche Bunsen-Gesellschaft
- Deutsche Physikalische Gesellschaft
- Dibner, Bern
- Dieke, Gerhard
- Diesselhorst, Hermann George Heinrich
- Dillinger, Joseph R.
- Dohme, Alfred R. L.
- Donig, Arthur
- Drude, Emilie with correspondence from her daughter, Gerta Drude

Box 2

Folder 5

- Correspondence, Du
- Duffendack, O. S.
- Duhm, Berndt
- Duke University

Box 2

Folder 6

- Correspondence, Ea-Eig
- Eastman Kodak Company. See also Sheppard.
- Ebert, Hermann Heinrich Franz
- Eckart, Carl
- Eckert, Fritz
- Edgar, Mrs. Graham
- Educational Services Incorporated
- Egle, Karl
- Ehrenberg, Mrs. E. A.
- Ehrenberg, Hans
- Ehrenberg, Paul D.

- Ehrenfest, Paul with correspondence from his daughter, Gala Ehrenfest, and his wife, Tatyana Ehrenfest
- Ehrenhaft, Felix
- Ehrlich, Eva
- Eigen, Manfred

Box 2

Folder 7

- Correspondence, Einstein
- Einstein, Albert

Box 2

Folder 8

- Correspondence, El-Ew
- Elkan, Philip, with correspondence from his aunt, Anni Elkan
 - Emergency Committee in Aid of Displaced German Scholars
 - Emerson, Robert
 - Engl, Jo
 - Epstein, Hans
 - Ernst-Reuter-Gesellschaft
 - Errera, Jacques
 - Eucken, Arnold
 - Evanston Institute for Ecumenical Studies
 - Ewald, Paul with correspondence from Ella Ewald

Box 2

Folder 9

- Correspondence, Fa-Fin
- Faber, Aksel
 - Faber Foundation
 - Fager, E. W.
 - Faraday Society
 - Federation of American Scientists
 - Feinberg, R.
 - Feise, Ernst
 - Felitti, Vincent J.
 - Fels Fund (Samuel S. Fels Fund). See also Shay
 - Fengler, E.
 - Fermi Award correspondence (U. S. Atomic Energy Commission)
 - Finanzamt, 1933

Box 3

Folder 1

- Correspondence, Fis-Fr
- Fischer, Hans
 - Fleischmann, Herbert J.
 - Flexner, Abraham
 - Flügge, Siegfried
 - Foede, Ingeborg
 - Förster, Theodore

- Fox, Maurice
- Fraenkel, Eduard. See also Resignation...Friends and Colleagues
- Fraenkel, Hermann. See also Resignation...Friends and Colleagues
- Franck, James; Eightieth birthday greetings (official)

Box 3

Folder 2

Correspondence, Franck

- Franck, James; Eightieth birthday greetings (former colleagues and friends)

Box 3

Folder 3

Correspondence, Franck

- Franck, James; Eightieth birthday greetings (telegrams, friends and family)

Box 3

Folder 4

Correspondence, Franck

- Franck, James; Fiftieth doctorate-jubilee

Box 3

Folder 5

Correspondence, Franck

- Franck Memorial Symposium, 1966; Correspondence and Memoranda

Box 3

Folder 6

Correspondence, Frank-Fu

- Frank, Sylvia
- Franklin, Henry L.
- Freiburg, Institut für Physikalische Chemie der Universität
- Frenkel, Albert W.
- Freudenberg, Kurt
- Freundlich, E. Finlay
- Freundlich, Martin
- Frick, Wilhelm
- Fried, Heinz Erich
- Friedenwald, Harry
- Friedenwald, Jonas S.
- Friedlander, Walter A.
- Friedmann, Walter
- Friedrich Vieweg & Sohn Verlag
- Frisch, Otto Robert
- Frum, A.
- Fuchs, Walter
- Fürth, Adolphe
- Fues, Erwin
- Funk and Wagnalls

Box 3

Folder 7

Correspondence, Gaffrons

- Gaffrons, Hans. See also Pringsheim

Box 3

Folder 8

Correspondence, Gag-Gun

- Gage, Robert Stanley
- Gallwitz, Hans
- Gans, Richard Martin
- Garms, Anne
- Gdynia America Line
- Geiger, Moritz
- Gerlach, Walter. See also Born; Deutsche Akademie der Naturforscher Leopoldina)
- Germany Embassy (Washington, D. C.)
- Gesellschaft Deutscher Chemiker
- Giauque, William F.
- Gibbs, Roswell Clifton
- Göttingen, Akademie der Wissenschaften
- Göttingen, Georg-August Universität
- Goldberg, Gennie
- Goldfinger, Paul
- Goldmann, Fritz
- Goldschmidt, Richard Benedikt
- Goldstein, Eugen
- Gordon, Walter
- Gouterman, Martin
- Grace, A. F.
- Grossman, Ernst Jakob Erich
- Grotrian, Walter
- Grüneisen, Eduard with correspondence from Lotte Gruneisen
- Günter, Paul

Box 3

Folder 9

Correspondence, Gur-Hah

- Gurewich, Vladimir
- Gurney, Ronald W.
- Gustafson, Karin and Torsten
- Gustavus Adolphus College
- Gumann, Marianne
- Haas, Wander Johannes de
- Haber, Fritz. See also Resignation...Friends and colleagues
- Haber, Hermann with correspondence from Margarethe Haber and Else Freyhan Haber
- Hahn, Raphael

Box 3

Folder 10

Correspondence, Hahn

- Hahn, Otto with correspondence from Edith Hahn. See also-

- Resignation...Friends and colleagues; Atoms for Peace

Box 3

Folder 11

Correspondence, Ham-Hec

- Hamberger, Ludwig
- Hammerschlag, Meinhard
- Hanle, Wilhelm. See also Resignation..Friends and colleagues
- Hanson, Howard Grant
- Hanstein, Walther
- Harms, Ernst
- Harries, Wolfgang
- Harris, Wolfgang
- Hassel, Odd
- Hebrew University
- Heckmann, Gustav

Box 3

Folder 12

Correspondence, Hed-Hern

- Hedderich, Frida
- Heidelberg Co.
- Heidelberg, city
- Heidelberg, Universität
- Heil Oskar
- Heilbronn, Mrs.
- Heimann, Eduard
- Heinsenber, Werner
- Heitler, Walter
- Hellmann, Sophie
- Hendley, Dan
- Henrici, Adolf. See also Mulliken.
- Hermansen, Ejnar V.
- Herneck, Friedrich

Box 3

Folder 13

Correspondence, Hertz

- Hertz, Gustav. See also Resignation...Friends and colleagues

Box 4

Folder 1

Correspondence, Hertz

- Hertz, Hellmuth (Gustav Hertz's son). See also Bohr; Gustafson

Box 4

Folder 2

Correspondence, Hertz-Hev

- Hertz, Paul
- Herzberg, Gerhard. See also Fleischmann
- Herzberger, Maximilian Jakob

- Herzfeld, Karl Ferdinand
- Hesburgh, Theodore Martin
- Heubner, Wolfgang Otto Leonard with correspondence from Lisa Heubner
- Hevesy, George Charles de. See also Atoms for Peace Awards

Box 4

Folder 3

Correspondence, Hi-Hy

- Hiedemann, Egon
- Hilbert, David
- Hildebrand, Joel H.
- Hill, Robert
- Hinrichs, Walther
- Hinrichsen, Ruth
- Hippel, von See von Hippel
- Hirshclaff, Ernst
- Hirschwaldsche Buchhandlung
- Hochheim, E.
- Hoff, Joh. Friedrich with correspondence from Grete Hoff
- Hoffman, Richard
- Hogness, Thorfin R. See also Loomis.
- Hollander, Jacob H.
- Holm, R.
- Holst, G.
- Honig, Mrs.
- Hopf, Ludwig
- Horwitz, Leonard
- Houtermans, Fritz with correspondence from Charlotte Houtermans
- Hull, Gordon Ferrie
- Humboldt University of Berlin
- Hund, Friedrich. See also Born
- Hyde Park Neighborhood Club

Box 4

Folder 4

Institute of Radiobiology, University of Chicago; Reports and Memoranda

Box 4

Folder 5

Correspondence, Int-John

- International Catholic Help for Refugees and War Victims
- International Conference on Luminescence
- International Critical Tables
- International Federation of University Women
- International Movement for Atlantic Union, Inc.
- International Students Service
- Interscience Publishers, Inc.
- Israelitische Union E. V.
- Jaap, August

- Jaffe, Hans
- Janicki, Tomine
- Japan Council against A and H bombs
- Japanese Society of Plant Physiologists
- Jeffries, Zay
- Jellinek, Stefan
- Jennings, Hans
- Jensen, H. H.
- Jensen, Hans D.
- Jewish Daily Forward
- Joffe, Abram Feodorovich
- John Wiley and Sons, Inc.

Box 4

Folder 6

- Correspondence, Johns-Ju
- Johns Hopkins University
 - Jones, Lauder W.
 - Jordan, Pascual
 - Josefsohn, Arnold
 - Joshi, S. S.
 - Journal of Biological Chemistry
 - Journal of Chemical Physics
 - Journal of Photochemistry and Photobiology
 - Journal of Theoretical Biology
 - Jüdische Gemeinde in Cakovec
 - Jung, Ch.
 - Junge Welt

Box 4

Folder 7

- Correspondence, Ka-Ke
- Kahler
 - Kahn, Ludwig W.
 - Kaiser Foundation Research Institute
 - Kaiser-Wilhelm-Gesellschaft zur Förderung der Wissenschaften
 - Kallmann, Hartmut
 - Kamen, Martin
 - Kapitza, Peter
 - Kaplan, Joseph
 - Kartell, Jüdischer Verbindungen E. V.
 - Kasha, Michael. See also Faraday Society
 - Kaufmann, Hans with correspondence from his mother, Else Kaufmann
 - Kautsky, Hans
 - Kennedy, John Fitzgerald
 - Kennedy Lecture
 - Kessler, Erich
 - Kessler, Friedrich

Box 4**Folder 8**

Correspondence, Ki-Kopf

- Kienle, Hans with correspondence from Else Kienle
- Kimpton, Lawrence
- Kirschstein, Bernhard
- Klar, Richard
- Klein, Felix
- Klein, Harold P.
- Klemperer, Otto
- Knebel, Fletcher
- Knudsen, Martin
- Koenigsberger, Kate
- Körösy, Francis. See also Teller
- Köster, Martha
- Kolin, Alexander
- Kongelige Danske Videnskabernes Selskab
- Kopfermann, Hans

Box 4**Folder 9**

Correspondence, Kopp-Kru

- Kopp, B. D. A.
- Kotschuig, Walter
- Kovarik, Alois F.
- Kraft, Hans. See also Duhm
- Kramers, Hendrik Anthony
- Kraus, Herbert (with photo) with correspondence from Katherine Kraus
- Kroebe, Werner. See also Schlenger
- Kromhout, Robert A.
- Kronecker, Elisabeth
- Krüdener, Brigitta
- Krüner, H.
- Kruse, Hans-Heinrich

Box 4**Folder 10**

Correspondence, Ku-Les

- Kühn, Alfred
- Kuhn, Heinrich
- Lachman, Arthur
- Ladenburg, Rudolf. See also Misc
- Lamla, Ernst, See also Tietze
- Landau, Marianne
- Landsberger, U.
- Last, Murray A.
- Latimer, Paul
- Laue, von. See von Laue

- Lauger, Brahma
- Lawrence, Donald S.
- Lawrence, Ernest Orlando Memorial Award correspondence
- Leighton, Philip A.
- Lennard-Jones, Sir John
- Lenz, Friedrich
- Leppard, Leon B.
- Lessing, Walter

Box 4

Folder 11

Correspondence, Lev-Lit

- Levi, Hilde with correspondence from her father, Adolf Levi
- Levy, Hans
- Lewin, Bruno
- Liberson, David M.
- Liepman, Eduard
- Lindemann, Frederick Alexander
- Linschitz, Henry
- Lippert, Ernst
- Lipsky, Sanford
- Lisco, Eduard with correspondence from his wife, Berta Lisco (parents of Hermann Lisco who married Franck's daughter, Elisabeth). See also Resignation...Friends and colleagues)
- Litchfield, Edward H.

Box 5

Folder 1

Correspondence, Liv-Loc

- Livingston, Robert. See also Springer
- Lochte-Holtgreven, Walter

Box 5

Folder 2

Correspondence, Loe-Ly

- Loeb, Leonard B.
- Loest, Werner
- Löwenthal, Fritz
- Loewi, Otto
- Loymann, Wolfgang
- London, Fritz
- Loomis, F. Wheeler
- Lorentz, Hendrik Anton
- Lotmar, Walter
- Lotz, Albert
- Lowenstein, E.
- Lowin, Gretel
- Lucknow, University of. See University of Lucknow
- Lübke, Heinrich

- Ludloff, Hanfried
- Lummitzsch, Otto with correspondence from Kaethe Lummitzsch
- Lumry, Rufus. See also Butler
- Lyman, Theodore

Box 5

Folder 3

Correspondence M-Meis

- McElroy, William David
- Macht, Sarah A.
- McKeehan, Louis Williams
- McMillan, William George
- Mahanty, Shri S. R.
- Mahncke, Horst
- Maier-Leibnitz, Heinz
- Mainsohn, Karl
- Malche, Albert
- Mann, Norene
- Mann, Thomas. See also Pringsheim
- Mark, Hermann
- Marti, Fritz
- Martin, C. S. J.
- Martinez, Karl
- Mayer, Emil E.
- Mayer, Maria Goppert
- Mecke, Reinhard
- Meisenheimer, Mrs. E.

Box 5

Folder 4

Meitner, Lise. See also Scherbatskoy; Atoms for Peace Awards

Box 5

Folder 5

Meitner, Lise

Box 5

Folder 6

Meitner, Lise

Box 5

Folder 7

Correspondence, Meit-Mik

- Meitner, Lise
- Meissner, Karl Wilhelm
- Mendelsohn, Felix, Jr.
- Menorah Association, Inc.
- Merck, Carl
- Merritt, Ernest
- Metz, Phillipp-Josef
- Meyer, Edgar

- Meyer, Else
- Meyer, Erich
- Meyer, Heinz
- Meyer, Klaus
- Meyerhof, Otto with correspondence from Hedwig Meyerhof
- Michaelis, L.
- Michels, Walter
- Michelsen, Peter
- Mikva, Abner J.

Box 5

Folder 8

Correspondence, Mil-Ni

- Millikan, Robert A.
- Ministerium für Wissenschaft, Kunst und Volksbildung
- Minkowski, Rudolph Leo B.
- Misch, Georg with correspondence from his son, Peter Misch
- Mitchell, Allan C. G.
- Mohler, Fred L.
- Morales, Manuel F.
- Müller, Detlev
- Mulliken, Robert, with correspondence from his wife Mary Helen and his daughter Lucia Mulliken
- Nachtrieb, Norman H.
- National Academy of Sciences
- National Science Foundation
- Nelson, Richard C.
- Nernst, Walther
- Neugebauer, Otto
- Neumann, Edel-Agathe
- Neumark, F.
- Newhouse, Hugo D.
- New York Academy of Sciences
- Nickerson, Stanton P.
- Nier, Alfred O. C.

Box 5

Folder 9

Nobel Prize

Box 5

Folder 10

Correspondence, Noh-Noy

- Nohl, Herman
- Nordheim, Lothar
- Notgemeinschaft der Deutschen Wissenschaft
- Notgemeinschaft Deutscher Wissenschaftler im Ausland
- Notre Dame, University of. See University of Notre Dame
- Noyes, Bradford

Box 6**Folder 1**

- Correspondence, O
- Oberlaender, Gustav
 - Oertmann, Paul
 - Oeser, Erwin. See also Jaffe
 - Oldenberg, Otto
 - Ollendorff, Franz
 - One World Award Committee, Inc.
 - Oppenheimer, Robert
 - Optical Society of America
 - Ornstein, L. S.
 - Oseen, G. W.

Box 6**Folder 2**

- Correspondence, Pai-Paq
- Paixao, Jose Cruz
 - Palmer, Albert de Forest
 - Paneth, Friedrich Adolf with correspondence from his son, Henry Rudolph
 - Paneth
 - Pao, Yoh-Han
 - Paquin, Grete (Franck's secretary at Göttingen)

Box 6**Folder 3**

- Correspondence, Par-Physik
- Pargellis, Mrs. Stanley
 - Paschen, Friedrich
 - Pathe News, Inc.
 - Pauli, Wolfgang with correspondence from Franziska Pauli
 - Pauling Linus
 - Pedersen, P.O.
 - Pegram, George B.
 - Correspondence, Par-Physic
 - Peisak, Helmut
 - Pennsylvania, University of. See University of Pennsylvania
 - Peter, Wilhelm with correspondence from his wife, Martha Peter
 - Petry, Loren C.
 - Pevsner, Nikolaus
 - Pfund, A. Herman
 - Phi Beta Kappa
 - Philips Research Laboratories (Eindhoven, The Netherlands)
 - Physical Review

Box 6**Folder 4**

- Correspondence, Physik-Plan
- Physik Verlag

- Physikalischer Verein
- Physikalisches Institut (Göttingen)
- Phywe Aktiengesellschaft
- Piggot, Charles Snowden
- Pincus, [Gregory?]
- Pines, Herman
- Piper, Otto A.
- Pirani, Marcello Stefano
- Pirk, Alfred
- Pirson, Andre
- Placzek, George
- Planck, Max with correspondence from his wife, Marga Planck
- Planck Medal correspondence

Box 6

Folder 5

Correspondence, Plat-Poh

- Platt, John R.
- Platzman, Robert L.
- Poggendorff Redaktion der Sächsischen Akademie der Wissenschaften
- Pohl, Robert W. with correspondence from his son, Robert O. Pohl.
- See also Hanle; Pringsheim

Box 6

Folder 6

Correspondence, Pol-Princ

- Polanyi, Michael with correspondence from his son, George Polanyi, and his daughter-in-law, Priscilla Polanyi
- Polaroid Corporation
- Pollak, Arthur
- Pollak, Manfred J.
- Popular Science Monthly
- Prandtl, Ludwig
- Preer, John R.
- President's Committee on Scientists and Engineers
- President's Committee on the National Medal of Science
- Price, Donna
- Princeton University

Box 6

Folder 7

Pringsheim, Peter with correspondence from his wife, Emeke Pringsheim

Box 6

Folder 8

Correspondence, Prof-Rabe

- Prof. –Dr. Jan van der Hoeven Foundation for Theoretical Biology (Leiden)
- Przibram, Karl
- Puck, Theodore
- Purdue University

- Rabel, T. E.

Box 7

Folder 1

Atomic Scientists

- Rabinowitch, Eugene I. See also Archives of Biochemistry and Biophysics
- Bulletin of the Atomic Scientists; Journal of Chemical Physics; Lewin

Box 7

Folder 2

Correspondence, Rad-Reiche

- Radio Corporation of America (R.C.A. Victor Division)
- RAI Corporation (Italian Radio TV System)
- Raman, C. V.
- Ramsay, Allan
- Raney, M. Llewellyn
- Rasmussen, Ebbe with correspondence from his wife, Ingeborg Rasmussen
- Rathenau, Fritz
- Rathenau, Gerhart W. See also Coster; Jaffe
- Rathmann, F. H., Lt. Dcr., U.S.N.R.
- Ration Board
- Rau, (Professor)
- Reach, William
- Reaction, Motors, Inc.
- Redfield, Robert
- Refugee Aid and War Relief, University of Chicago
- Regener, Erich
- Regia Societas Scientiarum Upsaliensis
- Reiche, Fritz

Box 7

Folder 3

Correspondence, Rei-Res

- Reichenbach, Hans
- Reichenheim, Otto
- Reichsbund Judischer Frontsoldaten, E. V.
- Reis, Alfred
- Reissner, Hans
- Research Corporation

Box 7

Folder 4

Resignation from Göttingen Professorship, April 17, 1933

- Official papers and newspaper clippings

Box 7

Folder 5

Resignation from Göttingen Professorship, April 17, 1933

- Letters from Strangers

Box 7

Folder 6

Resignation from Göttingen Professorship, April 17, 1933

- Letters from Strangers

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Folder 7

Resignation from Göttingen Professorship, April 17, 1933; Letters from Friends and Colleagues

Box 7

Folder 8

Correspondence, Ret-Rieg

- Rettberg, Ernst (handyman at the Second Physics Institute)
- Reviews of Modern Physics
- Rheinstein, Max
- Rice, Charles
- Rice, F. O. with correspondence from his wife, Kitty Rice
- Rice, Oscar K.
- Richards, Horace C.
- Richter, Werner with correspondence from his son, Eckhart Richter
- Richtmyer, Floyd, Karker
- Ridenour, Louis N.
- Rieger, Wallter

Box 7

Folder 9

Correspondence, Riek-Rod

- Rieke, Foster Frederick with correspondence from his wife, Carol Rieke
- Ries, Herman E., Jr.
- Riggsby, Ernest D.
- Ritschl, Rudolf
- Ritter, Elisabeth V.
- Ritter, William E.
- Rockefeller Foundation
- Rockefeller Institute for Medical Research
- Rockford College
- Rodebush, Worth H.

Box 7

Folder 10

Correspondence, Roe-Rosenb

- Roeder, Hermann
- Roenan, Ernst
- Rössler, Fritz. See also Jaffe
- Rogalski, Adolphe
- Rohdewald, Margarete
- Rollefson, Gerhard K.
- Rona, Elisabeth
- Rosen, Boris
- Rosenbaum, Eugene J.
- Rosenberg, Jerome L.

- Rosenberg, Karl
- Rosenberg, Max

Box 8

Folder 1

Correspondence, Rosenf-Roy

- Rosenfeld, Leon
- Rosenstein, Paul
- Rosenstock-Huessy, Eugen
- Rosenthal, Adolf H.
- Rosenthal, Arthur
- Rosenthal, Gottfried
- Rosenwald, Carl
- Rosseland, Svein
- Rossini, Frederick D.
- Roters, Hilda
- Rothemund, Paul
- Rothenborg, Max
- Rothman, Stephen
- Rothschild, Kurt
- Rowe, Mary B.
- Rowen, John W.
- Royal Society (London)
- Royal Swedish Academy of Sciences

Box 8

Folder 2

Correspondence, Ru-Rut

- Ruben, Samuel
- Rubens, Ernst
- Rubin, Jack
- Runge, Carl with correspondence from his daughter, Iris Runge
- Rupp, Philipp Heinrich Emil
- Rupp, Henriette
- Russell, Bertrand A. W.
- Russell, Erwin R.
- Rutgers, A. J.
- Rutherford, Ernest

Box 8

Folder 3

Correspondence, S-Schla

- Sachs, Niels
- Sachs, Robert Green
- Saha, M. N.
- Salomon, Ernest F.
- Salomon, Walter
- Salomon-Calvi, Wilhelm
- Salz und Chemikalien Gesellschaft

- Sams, Wiley Mitchell
- Samter, Max
- Samuel, Rudolf
- Sauer, Walter
- Saur, Heinz
- Sawyier, Calvin P.
- Schäfer, Clemens
- Schafer, Fred K.
- Scheel, Karl
- Scheibe, Gunther with correspondence from Johanna Scheibe
- Schenck, Gunther O.
- Scherbatskoy, S. A.
- Schilpp, Paul Arthur
- Schimmel, Fritz
- Schindler, Richard
- Schlapp, Miss

Box 8

Folder 4

Correspondence, Schle-Schr

- Schlecht, Adolf
- Schlenger, J.
- Schlesinger, Hermann I. With correspondence from his wife, Edna Schlesinger
- Schlichenmaier, Walter
- Schmidt, Johann L.
- Schmidt, Otto
- Schmidtmuller, R.
- Schneider, Erich Ernst
- Schnurmann, Robert
- Schönberg, A.
- Schoenberg, Dolli
- Schoengut, Lucio
- Schonsee, Charlotte
- Schrader, Friedrich with correspondence from Marta Schrader
- Schrader, Hugo
- Schramm, Percy Ernst
- Schroder, Kurt
- Schröder, Albrecht
- Schroeder, Anita Maria
- Schrödinger, Erwin with correspondence from Annemarie Schrödinger

Box 8

Folder 5

Correspondence, Schrot-Sci

- Schröter, Hellmut
- Schubert, Jack
- Schuler, Hermann
- Schwartz, Philip

- Schwart, Izor
- Schwarz, Gunther
- Schwarz, Ludwig
- Schwarz, Paul
- Science
- Science Service
- Scientific American
- Scientific Monthly

Box 8

Folder 6

Correspondence, Sec-Sel

- Seckel, Helmut P. G.
- Seeliger, Rudolf
- Segre, Emilio
- Seitz, Eva (nee Springer)
- Seitz, Frederick
- Self help for German Émigrés, Inc. (name changed in 1939 to Self-help of Émigrés from Central Europe, Inc.)

Box 8

Folder 7

Correspondence, Sen-Sie

- Senftleben, Albrecht
- Sen Gupta, P. K.
- Sereth, J.
- Shank, Paul
- Shapley, Harlow
- Shaw, Charles Henry
- Shay, Harry
- Sheppard, Samuel Edward
- Shiau, Yen Guang
- Shive, John Northrup
- Shohat, J. A.
- Siegheim, Friedrich

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Folder 8

Sigma Xi; The Society for the Promotion of Research

Box 8

Folder 9

Correspondence, Sil-Smy

- Silver, Marvin
- Silverman, Shirleigh
- Silvius, Russell E.
- Simon, Eugene
- Simon, Francis E.
- Simon, Sidney
- Simons, Erich

- Singer, Hans
- Sklar, Alfred Lee
- Slater, John C.
- Slobodin, Roman
- Smakula, Alexander
- Smith, Alice Kimball
- Smith, Emil L.
- Smith, James H. C.
- Smith, Lloyd P.
- Smithsonian Institution (Washington, D. C.)
- Smyth, Henry de Wolf

Box 8

Folder 10

Correspondence, Sny-Spo

- Snyder, Eric G.
- Snyder, Thomas
- Sobotka, Harry
- Societe de Physique et d'Histoire Naturelle de Geneve (Switzerland)
- Society for the Protection of Science and Learning (formerly Academic Assistance Council, q.v.)
- Söllner, Karl
- Solmitz, Frank T.
- Sommerfeld, Arnold
- Sommermeyer, Kurt Hans
- Sources for the History of Quantum Physics
- Sperber, Mrs. M.
- Speyer, James
- Spiegelberg, W.
- Spitzer, Leo
- Spoehr, Herman Augustus

Box 8

Folder 11

Sponer, Hertha. See also Coster; Rockefeller Foundation; Platzman

Box 8

Folder 12

Sponer, Hertha

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Folder 1

Correspondence, Spons-Stein

- Sponsler, O. L.
- Spratte, Elnora
- Springer, Ferdinand with correspondence from Julius Springer
- Springer-Verlag
- Sproul, Robert G.
- Squire, Charles F.
- Stamford Association of Organization and Citizens for a Greater United Nations

- Stanford University
- Stark, Johannes
- Stanton, Leroy W.
- Stein, Simon

Box 9

Folder 2

Correspondence, Ster-Still

- Stern, Axel Ludwig with correspondence from August Stern
- Stern, Clara (Mrs. William)
- Stern, F.
- Stern, Kathe
- Stern, Kurt G.
- Stern, Liselotte (Mrs. Karl)
- Stern, Otto. See also Born.
- Stern, Rudolf A.
- Stevens, Don E.
- Stewart, Albert B.
- Stewart, George Walter
- Stewart, Oscar Milton
- Stifterverband für die deutsche Wissenschaft
- Still, Karl F. with correspondence from Hanna Still

Box 9

Folder 3

Correspondence, Stille-Stuck

- Stille, Hans
- Stille, Ulrich
- Stiller, Mary
- Stobbe, M.
- Stoll, Arthur
- Stolper, Gustav
- Strain, Harold H.
- Strait, Louis A.
- Stransky, Siegmund
- Straub, Harald W.
- Straus, Moritz
- Strauss, Julia Friedenwald (Mrs. Meyer)
- Strehler, Bernard. See also Rosenberg, J.
- Struve, Otto
- Stryer, Lubert
- Stuart, Herbert
- Stucklen, Hildegard

Box 9

Folder 4

Correspondence, Su-Ta

- Sugarman, Nathan
- Sugiura, Y.

- Suits, Chauncy Guy
- Sullivan, William H.
- Svenska Dagbladet
- Sverdrup, Harald U.
- Swain, Robert E.
- Szasz, George J.
- Szilard, Leo. See also Fox
- Takamine, Toshio
- Talalay, Paul
- Tammann, Gustav
- Tate, John T.
- Taube, Henry
- Taylor, Hugh
- Taylor, Moddie
- Taylor, Nelson W.

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Folder 5

Technion, Israel Institute of Technology, Inc. See also Tumpeer

Box 9

Folder 6

Correspondence, Te-Thom

- TeLinde, Richard W.
- Teller, Edward. See also Turkevich
- Telschow
- Terwoord, Dolores
- Tetenbaum, Marvin
- Theoretical Physics Conference
- Thirring, Hans
- Thomas, Charles L
- Thompson, Dorothy
- Thomson, Francis A.
- Thomson, Joseph John

Box 9

Folder 7

Correspondence, Thor-Tu

- Thorne, Robert J.
- Thornton, Norwood C.
- Tietze, Heinrich
- Toeplitz, Otto
- Tolmach, Leonard J.
- Tolman, Richard with correspondence from Ruth Tolman
- Tomlinson, Joseph Bailey
- Toronto, University of. See University of Toronto
- Townsend, John S.
- Trelease, Sam
- Trendelenberg, Wanda

- Trowbridge, Augustus
- Tseng, C. K.
- Tuckerman, Louis B. with correspondence from his son, Bryant
- Tuckerman
- Tulin, Anna (Mrs. Abraham)
- Tumpeer, Joseph J.
- Turkevich, Anthony
- Turner, John S.
- Turner, Peggy W. (Mrs. Louis A.)
- Tuve, Merle Anthony

Box 9

Folder 8

Correspondence, U-Unit

- Uhlmann, Erich
- Ungar, Georg
- Union of Soviet Socialist Republics, Academy of Sciences
- United Electrical, Radio, and Machine Workers of America
- United Nations
- United States Atomic Energy Commission. See also Fermi Award
- United States Department of Agriculture
- United States Department of Commerce
- United States Department of Defense
- United States Department of Labor
- United States Department of State
- United States Department of the Interior
- United States High Commissioner for Germany
- United States House of Representatives
- United States Information Agency
- United States Information Service
- United States Internal Revenue Service
- United States News
- United States Public Health Service
- United States Rubber Company
- United States War Department

Box 9

Folder 9

Correspondence, Univ-von Hentig

- Universal Jewish Encyclopedia, Inc.
- Universal Knowledge Foundation
- Universität Göttingen. See Göttingen, Universität
- Universität Heidelberg. See Heidelberg, Universität
- Universität Koln
- Universitetets Institut for Theoretisk Fysik (Copenhagen, Denmark)
- University of California (Berkeley)
- University of Chicago
- University of Dacca (India)

- University of Lucknow (India)
- University of Notre Dame
- University of Pennsylvania
- University of Toronto
- Upsala College
- Urey, Harold C. with correspondence from his wife, Frieda Urey. See also Journal of Chemical Physics
- Valentiner, Marie
- Valouch, M. A.
- van de Graff, Robert Jemison
- van der Merwe, C. W.
- van Dyken, Alexander Robert
- Vaughan, George
- Veblen, Elizabeth
- Vegard, L.
- Veith, Ilza
- Verein der blinden Akademiker Deutschlands, E. V.
- Verein jüdischer Frontsoldaten
- Vette, Eduard
- Vishniac, Wolf
- Visscher, Maurice B.
- Vitztum, Georg
- V. M. Thomas Company
- Vogel, Rudolf
- von Euler, Hans
- von Hamos, Laszlo
- von Hentig, Hans

Box 9

Folder 10

Correspondence, von Hippel-Vr

- von Hippel, Arthur with correspondence from his father, Robert von Hippel
- Hippel, and his sons, Arndt Robert von Hippel and Peter von Hippel
- von Keussler, Victor von Laue, Max with correspondence from his son, Theodor von Laue, and his daughter, Hildegard Lemcke
- von Trautenberg, Heinrich Rausch with correspondence from Marie Rausch von Trautenberg von Wartenberg, Hans with correspondence from Gertrud von Wartenberg
- Vrtiak, E. G.

Box 10

Folder 1

Correspondence, W-Ward

- Wakefield, Ernest
- Wald, Dave
- Wald, George
- Wang, Theodore J.
- Warburg, Otto. See also von Wartenberg

- Wardman Park Hotel (Washington, D. C.)

Box 10

Folder 2

Correspondence, War-Weiss

- Warzecha, Paul
- Washington Academy of Sciences
- Washington Post
- Wasshausen, Karl
- Watson, C. W.
- Watson, W. F.
- Watson, William Weldon with correspondence from his wife, Betty Watson
- Waverly Press, Inc.
- Wavre, Rolin
- Weigert, Karl M.
- Weigl, John W. See also Brown
- Wein, Joseph
- Weisbach, Max
- Weiser, David W.
- Weishut, Frederic T.
- Weiss, Charles Jr.

Box 10

Folder 3

Correspondence, Weiss-Wiezm

- Weiss, Joseph
- Weissenberg, Gustav
- Weisskopf, Victor
- Weissman, Fred S.
- Weissman, Sam
- Weisz, Paul B.
- Weizl, Walter
- Weizmann, Chaim
- Weizmann Institute of Science, Inc.
- Weizmann Research Foundations

Box 10

Folder 4

Correspondence, Weizs-Wes

- Weizsacker, Carl Friedrich von
- Weller, Sol William
- Welley, E. J. R.
- Wendt,
- Wenzel, Kurt
- Wertheimer, Irma
- Wertz, John E.
- Westphal, Wilhelm with correspondence from his wife, Olga Westphal

Box 10

Folder 5

Correspondence, Wey-Win

- Weyl, Hermann with correspondence from his first wife, Hella Weyl, and his second wife, Ellen Baer Weyl
- Wheeler, John Archibald. See also Sources for the History of Quantum Physics
- Whitehead, John Boswell
- Whitney, Willis R.
- Whittingham, C. P.
- Who's Important in Science
- Wieland, Heinrich Otto
- Wien, Max Karl
- Wiener, Alfred
- Wigner, Eugene P. with correspondence from his wife, Mary Wigner
- Wildman, Sam G.
- Wilhelm-Gymnasiasten, E. V. (Hamburg, Germany)
- Williams, Ferd Elton
- Williams, Richard
- Willstatter, Richard
- Wilson, Charles Thomson Rees
- Windaus, Adolf
- Winternitz, Paul F.

Box 10

Folder 6

Correspondence, Wis-Wur

- Wischoot, F. T.
- Wise, Henry
- Witmer, Enos E.
- Witt, Horst
- Wobbermin, G.
- Woermann, Dietrich
- Wohl, Kurt
- Wolf, Jenny
- Wolfsohn, Guenther
- Wolfson, Louis M.
- Wonnell, Tom
- Wood, Mrs. C. R.
- Wood, Robert Williams
- Woods, Leona (Mrs. John Marshall, Jr.)
- Works Projects Administration
- World Federalists
- Wulf, Oliver
- Wurmser, Rene

Box 10

Folder 7

Correspondence, Y-Z

- Yale University Press
- Yerkes Observatory

- Yerkes, Robert M.
- Yngve, Victor H.
- Young, Gale
- Young, James Kimble
- Young, Thomas Fraser
- Zartman, I. F.
- Zeeman, Pieter
- Zeiller, Fritz M.
- Zeisler, Erwin Paul
- Zeitschrift für Naturforschung
- Zentralstelle für Jüdische Wirtschaftshilfe
- Zimmerman, George Landis
- Zirkind, Ralph
- Zirkle, Conway
- Zirkle, Raymond E.
- Zocher, Hans
- Zoff, Otto

Box 10

Folder 8

Unidentified correspondence

Box 10

Folder 9

Cross references from Franck's files (compiled by Franck's secretary at the University of Chicago, Mrs. Norene Mann)

Series II: Manuscripts

Subseries 1: Physics - work in Germany and Denmark, 1905-1934

Box 11

Folder 1

- Laboratory notes, January 1905. (Notebook 1) Holograph, 138 leaves, of which leaves 67-118 are blank
- "Mechanik nach Planck." (Notebook 2) Notes on Max Planck's lectures, [n.d]. Holograph, 189 leaves, numbered 1-168, of which leaves 86-189 are blank

Box 11

Folder 2

Loose manuscripts from Notebook 1, itemized 1-1 through 1-21. Holograph, 32 leaves

Box 11

Folder 3

Loose papers from Notebook 2, itemized 2-1 through 2-2.

- Holograph, 2 leaves

Box 11

Folder 4

- "Beweglichkeit der Restatome (Thorium) in Wasserstoff." (Notebook 3) Laboratory notes, [n.d]. Holograph, 96 leaves, of which all except leaves 2-5 are blank

- Eva von Bahr and James Franck, "Über Zusammenstöße zwischen Elektronen und den Molekülen des Quecksilberdampfes und die Ionisierungsspannung desselben." (Notebook 4) Laboratory notes in the hands of Eva von Bahr and James Franck, [n.d]. Holograph, 98 leaves, of which leaves 60-98 are blank. See Verhandlungen der Deutschen Physikalischen Gesellschaft 16 (1914) pp. 512-517. (Platzman 38)

Box 11

Folder 5

Loose manuscripts from Notebook 3, itemized 3-1 through 3-2. Holograph, 2 leaves

Box 11

Folder 6

- Loose manuscripts from Notebook 4, itemized 4-1. Holograph, n11 leaves, numbered 1-9
- J. Franck, "Bemerkungen über Stossionisation." Galley proof which cites the above article by von Bahr and Franck. See Sitzung des Gauvereins Niedersachsen in Göttingen am 15. Februar 1922

Box 11

Folder 7

- "Hertz I." Laboratory notes in the hand of Gustav Hertz, Berlin, September 25, 1912-March 10, 1913. (Notebook 5) Holograph, 119 leaves. (Platzman 30-32, 34-37)
- "Dr. G. Hertz, Berlin N. W. 7, Reichstagufer 7/8." (Notebook 6) Laboratory notes in the hands of Gustav Hertz and James Franck, March 27, 1913-May 25, 1913. Holograph, 94 leaves, of which leaves 39-94 are blank. (Platzman 30-32, 34-37.)

Box 11

Folder 8

Loose manuscripts from Notebook 5, itemized 5-1. Holograph, 1 leaf

Box 11

Folder 9

Loose manuscripts from Notebook 6, itemized 6-1. Holograph, 1 leaf

Box 11

Folder 10

Laboratory notes from helium experiments performed by James Franck and Paul Knipping with the advice of Fritz Reiche, March 14, 1919-May 26, [1919]. (Notebook 7) Holograph, 104 leaves, numbered a-o, q-x, 1-13a, 14-17a, 18-27, 1-2, III, 4-22a, 22b, 23-35. (Platzman 44, 46, 47, 48)

Box 11

Folder 11

Laboratory notes from helium experiments performed by James Franck and Paul Knipping, June 2, 1919-March 11, 1920. (Notebook 7) Holograph, 101 leaves, numbered 1-9, 9, 10, 10, 11, 11, 12, 12, 13i, 13ii, 13iii, 13, 14i, 14ii, 14-15, 15, 15, 16i, 16ii, 16, 17, 17i, 17, 18-23, 24a, 24b, 25-28, I, 2-26, I-II, I-III, I-II, I, I, I-III, I, I, I, II. (Platzman 44, 45, 47, 48)

Box 11

Folder 12

- J. Franck and F. Reiche, "Über Helium under Parhelium." Holograph, 5 leaves, numbered 1-5. See Zeitschrift für Physik I (1920) pp. 154-160. (Platzman 47)

- "Franck I." (Notebook 8) Holograph, blank except for the first leaf
- "Franck u. Knipping." Holograph, Figures 1-3b, 4-7.
- Loose notes in James Franck's hand and unidentified hands. Holograph, 27 leaves

Box 11

Folder 13

- "Absorption von Chlorophyll, Mai 1934." (Notebook 9) Laboratory notes in the hands of Hilde Levi. Holograph, 21 leaves. (Platzman 106-107)
- "Fluoreszenz des Chlorophylls, Juni-July, 1934." (Notebook 10) Laboratory notes in the hand of Hilde Levi. Holograph, 23 leaves. (Platzman 106-107)

Box 11

Folder 14

Loose manuscripts in James Franck's hand from Notebook 10, itemized 10-1 through 10-9. Holograph, 9 leaves. (Platzman 106-107)

Box 11

Folder 15

- "Fluoreszenz des Chlorophylls, August 1934." (Notebook 11) Laboratory notes in the hand of Hilde Levi with comments in James Franck's hand. Holograph, 24 leaves. (Platzman 106-107)
- "Fluoreszenz des Chlorophylls, September 1934." (Notebook 12) Laboratory notes in the hands of Hilde Levi and James Franck. Holograph, 21 leaves. (Platzman 106-107)

Box 11

Folder 16

- "Chlorophyllbuch S. 240 und folgende." Typescript with notes in Hilde Levi's hand, 2 leaves
- Laboratory notes in Hilde Levi's hand. Holograph, 2 leaves

Box 12

Folder 1

- Laboratory notes, John Hopkins University, 1930's. (Notebook 14) Holograph, 78 leaves, numbered 1-152, of which leaves 37-78 are blank.
- "Fluorescence of Chlorophyll in living leaves." Loose manuscripts from Notebook 14. Typescript (carbon), 1 leaf, numbered 1a; holograph, 9 leaves, numbered 1b-4, 4-6, 11

Box 12

Folder 2

Lecture notes, John Hopkins University, October 9 and 16, 1935. Holograph, 16 leaves

Box 12

Folder 3

Lecture notes, Johns Hopkins University, 1930's. Holograph, 9 leaves, numbered 1-8

Subseries 2: Physics - work in United States, 1935-1958

Box 12

Folder 4

Lecture notes, Johns Hopkins University, 1930's. Holograph, 11 leaves

Box 12

Folder 5

James Franck and Edward Teller, "Migration and Photochemical Action of Excitation Energy in Crystals." Notes. Holograph, 15 leaves. See *Journal of Chemical Physics* 6 (1938) pp. 861-872, (Platzman 113)

Box 12

Folder 6

James Franck and Robert Platzman, "The Photolysis of the Aqueous Iodide Ion and the General Problem of the Spectra and Photochemistry of Negative Ions in Solution," [1946-1948]. Typescript, 22 leaves, numbered 1-15, 1-3

Box 12

Folder 7

James Franck, "Bemerkungen über Lumineszenz von Ionenkristallen." Notes. Holograph, 2 leaves; typescript (carbon), 1 leaf. See *Annalen der Physik* 3 (1948) pp. 62-68 (Platzman 132)

Box 12

Folder 8

Robert Platzman and James Franck, "Theory of the Absorption Spectra of Halide Ions in Solution." Notes. Holograph, 11 leaves, numbered I-II, I-IV. See *L. Farkas Memorial Volume, Research Council of Israel, Special Publication No. 1* (1952) pp. 21-36. (Platzman 142)

Box 12

Folder 9

- American Chemical Society Division of Physical and Inorganic Chemistry and American Physical Society Division of Chemical Physics Symposium, "Electron Transfer and Isotopic Reactions," held at the University of Notre Dame, Notre Dame, Indiana, June 11-13, 1952. Abstracts of Papers. Printed, 8 leaves, numbered 1-16
- James Franck, "Influence of Hydration on Electron Transfer Processes of Electrolytic Ions." Abstract of a paper presented at the Symposium with discussion notes. Mimeograph copy, 1 leaf; typescript (carbon), 3 leaves

Box 12

Folder 10

Robert Platzman and James Franck, "The Role of Hydration Configuration in Electronic Processes Involving Ions in Aqueous Solution." Mimeograph copy, 36 leaves, numbered 1-36. See *Zeitschrift für Physik* 138 (1954) pp. 411-431. (Platzman 144)

Box 12

Folder 11

James Franck and Robert Platzman, "Physical Principles Underlying Photochemical Radiation-Chemical, and Radiobiological Reactions." Introduction. Typescript (carbon), 2 leaves, numbered 1-2. See A. Hollaender, ed., *Radiation Biology, Vol. 1, Part 1* (New York, 1954) pp. 191-253. (Platzman 145)

Box 12

Folder 12

James Franck and Hertha Spöner, "Remarks on Radiationless Transitions in Complex Molecules." Notes. Holograph, 10 leaves; typescript with notes in the hands of James Franck and Hertha Spöner, 5 leaves, numbered 1-5. See *Journal of Chemical Physics* 25 (1956) p. 172. (Platzman 148)

Box 12

Folder 13

Robert Platzman and James Franck, "A Physical Mechanism for the Inactivation of Proteins by Ionizing Radiation." Notes. Holograph, 2 leaves, numbered 1-2. See H. P. Yockey, R. L. Platzman, and H. Quastler, eds., *Symposium on Information Theory in Biology* (New York, 1958) pp. 262-275. (Platzman 151)

Subseries 3: Biophysics - work on Photosynthesis at Johns Hopkins, 1935-1938**Box 12****Folder 14**

James Franck, "Remarks on Photosynthesis." Notes. Holograph, 17 leaves. See *Chemical Reviews* 17 (1935) pp. 433-438. Platzman 108)

Box 12**Folder 15**

James Franck and R. W. Wood, "Fluorescence of Chlorophyll in its Relation to Photochemical Processes in Plants and Organic Solutions." Notes. Holograph, 7 leaves. See *Journal of Chemical Physics* 4 (1936) pp. 551-560. (Platzman 109)

Subseries 4: Biophysics - work on Photosynthesis at the University of Chicago, 1938-48**Box 12****Folder 16**

James Franck and Karl F. Herzfeld, "Contribution to a Theory of Photosynthesis." Draft. Typescript (carbon), 4 leaves. See *Journal of Physical Chemistry* 45 (1941) pp. 978-1025. (Platzman 120)

Subseries 5: Biophysics - work on Photosynthesis after 1948**Box 12****Folder 17**

James Franck, Hiroshi Tamiya, and Sol Weller, "Photosynthesis in Flashing Light." Notes. Holograph, 2 leaves. See *Journal of Physical Chemistry* 45 (1941) pp. 1359-1373

Box 12**Folder 18**

James Franck, "An Interpretation of the Contradictory Results in Measurements of the Photosynthetic Quantum Yields and Related Phenomena." Draft. Typescript (carbon), 20 leaves, numbered 1-20. See *Archives of Biochemistry* 23 (1949) pp. 297-314. (Platzman 138)

Box 12**Folder 19**

James Franck, "An Interpretation of the Contradictory Results in Measurements of the Photosynthetic Quantum Yields and Related Phenomena." Draft with notes and criticisms. Typescript with corrections in Franck's hand, 14 leaves, numbered 1-13, 44; holograph, 25 leaves

Box 12**Folder 20**

James Franck, "An Interpretation of the Contradictory Results in Measurements of the Photosynthetic Quantum Yields and Related Phenomena." Draft (in German). Holograph, 4 leaves

Box 12

Folder 21

James Franck, "An Interpretation of the Contradictory Results in Measurements of the Photosynthetic Quantum Yields and Related Phenomena." Notes on quantum yield (in German). Holograph, 3 leaves

Box 12

Folder 22

James Franck, review of Eugene Rabinowitch, *Photosynthesis and Related Processes* (New York, 1951). Typescript, 3 leaves, numbered 1-3; typescript (carbon), 3 leaves, numbered 1-3; galley proof, 1 leaf; typescript (carbon), 2 leaves, numbered 1-2; typescript with corrections in Franck's hand, 2 leaves

Box 12

Folder 23

James Franck, "A Critical Survey of the Physical Background of Photosynthesis." Draft. Typescript with corrections in Franck's hand, 3 leaves, numbered 1-3. See *Annual Review of Plant Physiology* 2 (1951) pp. 53-86. (Platzman 140)

Box 12

Folder 24

James Franck, "A Critical Survey of the Physical Background of Photosynthesis." Draft. Holograph, 16 leaves, numbered 9, 11-15, 17-18, 18-22

Box 12

Folder 25

James Franck, "A Critical Survey of the Physical Background of Photosynthesis." Outlines and drafts. Holograph, 14 leaves; typescript, 5 leaves, numbered 2-6

Box 12

Folder 26

James Franck, "A Critical Survey of the Physical Background of Photosynthesis." Notes on the internal conversion of excitation energy in complex molecules. Holograph, 2 leaves

Box 12

Folder 27

James Franck, Notes on the role of metastable state of chlorophyll for fluorescence and photochemistry. Holograph, 6 leaves

Box 12

Folder 28

James Franck, Notes on conditions which influence chlorophyll fluorescence in vitro. Holograph, 10 leaves

Box 12

Folder 29

James Franck, Notes on energy migration in chlorophyll in vitro. Holograph, 16 leaves

Box 12

Folder 30

James Franck, Notes on self-quenching of chlorophyll fluorescence in vitro. Holograph, 10 leaves

Box 12

Folder 31

James Franck, Notes on enzyme inhibition; narcotic influences in photosynthesizing cells; differentiation between limitations of photosynthesis caused by poisons or by narcotics. Holograph, 11 leaves

Box 12

Folder 32

James Franck, Notes on critique and hypothesis of the reaction center of the photosynthetic unit. Holograph, 12 leaves

Box 12

Folder 33

James Franck, Notes on the influence of O₂ on photosynthetic saturation rate. Holograph, 10 leaves

Box 12

Folder 34

James Franck, Notes on induction periods of photosynthesis. Holograph, 17 leaves

Box 12

Folder 35

James Franck, Notes on remarks on quantum yields. Holograph, 17 leaves

Box 12

Folder 36

James Franck, Bibliography. Typescript (carbon), 5 leaves, numbered 1-5

Box 13

Folder 1

James Franck, "Participation of Respiratory Intermediates in Yields." Typescript, 51 leaves, numbered 1-47, 1-3. See Archives of Biochemistry and Biophysics 45 (1953) pp. 190-229. (Platzman 143)

Box 13

Folder 2

James Franck, Draft. Typescript with corrections in Franck's hand, 59 leaves, numbered 1-17, 29, 28-33, 42-44; holograph, 5 leaves

Box 13

Folder 3

James Franck, Draft. Holograph, 18 leaves; typescript with corrections in Franck's hand, 6 leaves, numbered 14-19

Box 13

Folder 4

James Franck, Draft. Holograph, 14 leaves

Box 13

Folder 5

James Franck, Outline. Holograph, 2 leaves

Box 13

Folder 6

James Franck, Notes for organization of argument. Holograph, 3 leaves

Box 13

Folder 7

James Franck, Diagrams. Holograph, 25 leaves

Box 13

Folder 8

James Franck, Notes. Holograph, 9 leaves

Box 13

Folder 9

James Franck, Notes. Holograph, 7 leaves

Box 13

Folder 10

James Franck, Part I; Thermodynamic Considerations, Drafts and notes. Holograph, 13 leaves; typescript (carbon), 1 leaf; mimeograph copy with notes in Franck's hand, 1 leaf

Box 13

Folder 11

James Franck, Part II; Interpretation of Observation of Higher Quantum Yields by Otto Warbur, Dean Burk, et al. Notes. Holograph, 7 leaves

Box 13

Folder 12

James Franck, Notes and outline of historical development of quantum yield controversy. Holograph, 5 leaves

Box 13

Folder 13

James Franck, Notes on changes in photostatic induction rates. Holograph, 16 leaves

Box 13

Folder 14

James Franck, Notes on nicotinic acid as a respiratory enzyme. Holograph, 6 leaves

Box 13

Folder 15

James Franck, Notes of Fe⁺² complexes and quinines. Holograph, 7 leaves

Box 13

Folder 16

James Franck, Part III; Otto Warburg's and Dean Burk's New Theory. Drafts. Holograph, 10 leaves

Box 13

Folder 17

James Franck, Draft. Holograph, 13 leaves

Box 13

Folder 18

James Franck, Notes. Holograph, 25 leaves; typescript with notes in Franck's hand, 2 leaves

Box 13

Folder 19

James Franck, Notes on Chlorella. Holograph, 3 leaves

Box 13

Folder 20

James Franck, Notes on Robert Emerson. Holograph, 8 leaves

Box 13

Folder 21

James Franck, general background. Notes on Warren Butler. Holograph, 4 leaves

Box 13**Folder 22**

James Franck, Notes on Melvin Calvin. Holograph, 1 leaf

Box 13**Folder 23**

James Franck, Notes on M. G. Evans and N. Uri, "Photochemical Polymerization in aqueous solution," *Nature* 164 (1949) pp. 404-405. Holograph, 2 leaves

Box 13**Folder 24**

James Franck, Notes on E. W. Fager. Holograph, 20 leaves

Box 13**Folder 25**

James Franck, E. W. Fager, Jerome L. Rosenberg, and Hans Gaffron, "Intermediates in Photosynthesis." Mimeograph copy, 15 leaves, numbered 1-13

Box 13**Folder 26**

James Franck, Notes on Theodor Foerster, "Fluoreszenz Spektrum und Wasserstoffionenkonzentration," *Die Naturwissenschaften* 36 (1949) pp. 186-187. Holograph, 1 leaf

Box 13**Folder 27**

James Franck, Notes on Dean F. McAlister and Jack Myers. Holograph, 1 leaf

Box 13**Folder 28**

James Franck, Notes on fluorescence in the hand of Hertha Sponer. Holograph, 1 leaf

Box 13**Folder 29**

James Franck, Bernard L. Strehler, "Absorption Spectrum Changes in *Chlorella* and the Primary Process." Typescript (carbon), 9 leaves, numbered 1-7

Box 13**Folder 30**

Frank L. Allen and James Franck, "Photosynthetic Evolution of Oxygen by Flashes of Light." Drafts. Holograph, 8 leaves; typescript with corrections in Franck's hand, 1 leaf, numbered 5. See *Archives of Biochemistry and Biophysics* 58 (1955) pp. 124-143. (Platzman 147)

Box 13**Folder 31**

James Franck, Drafts. Holograph, 7 leaves

Box 13**Folder 32**

James Franck, Notes. Holograph, 5 leaves

Box 13**Folder 33**

James Franck, Notes dated June 15, 1954. Typescript, 2 leaves

Box 13

Folder 34

James Franck, Notes dated Jan. 8-16, 1955. Holograph, 23 leaves, numbered 1, 1a, 2-6, I, 1b, II-III, II, II, IV, Ia, IIa, IIb, A, B

Box 13

Folder 35

James Franck, Graphs, Printed, 3 leaves

Box 14

Folder 1

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, Outline of proposed discussion topics. Mimeograph copy, 2 leaves

Box 14

Folder 2

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, James Franck, "General Remarks about Chlorophyll Sensitized Photochemical Reactions in vitro." Franck's address, read by Robert Livingston at Gatlinburg, and transcript of the ensuing discussion. Typescript with editorial corrections in an unidentified hands, 21 leaves, numbered 1-21; photocopy, 23 leaves, numbered 1-5, D1-D17

Box 14

Folder 3

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, James Franck, Abstract of address. Mimeograph copy, 4 leaves

Box 14

Folder 4

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, James Franck, "A Theory of the Photochemical Part of Photosynthesis." Galley proof, 2 leaves. See Hans Gaffron, ed., Research in Photosynthesis (New York, 1957)

Box 14

Folder 5

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, James Franck, Drafts, Typescript (carbon), 7 leaves; typescript, 10 leaves, numbered 1-5, 1-5

Box 14

Folder 6

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, James Franck, John E. Brugger, "Observations of the Chemiluminescence of Algae." Ph.D. dissertation. Typescript (carbon) with corrections in Franck's hand, 71 leaves, numbered 1-31, 20-43, 35-43

Box 14

Folder 7

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, James Franck, Draft. Typescript with corrections in Franck's hand, 25 leaves, numbered 1-6, 1-14, 1-5; holograph, 4 leaves

Box 14

Folder 8

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, John E. Brugger, "The Effect of an Autogenous Depressant upon Photosynthesis in Chlorella." Typescript (carbon), 2 leaves; printed graphs, 2 leaves

Box 14

Folder 9

- Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, John E. Brugger, "Fluorescence Yield of Chlorophyll in Chlorella as a Function of Light Intensity." Abstract and draft. Mimeograph copy of abstract with corrections in Brugger's hand, 1 leaf; typescript (carbon), 8 leaves, numbered 1-4
- Notes on Figures 3-10 of the above draft. Holograph, 2 leaves. See Hans Gaffron, ed., *Research in Photosynthesis* (New York, 1957)

Box 14

Folder 10

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, John E. Brugger, "Some Observations on the Chemiluminescence of Algae." Typescript (carbon), 9 leaves, numbered 1-13, 2-4. See Hans Gaffron, ed., *Research in Photosynthesis* (New York, 1957)

Box 14

Folder 11

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, Gerald Oster, "Photoreduction of Synthetic Dyes." Notes. Holograph, 4 leaves. See Hans Gaffron, ed., *Research in Photosynthesis* (New York, 1957)

Box 14

Folder 12

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, Jerome L. Rosenberg, Rufus Lumry, [and S. Takashima], "Spectroscopy of Flash-Illuminated Chloroplasts." Notes. Holograph, 2 leaves. See Hans Gaffron, ed., *Research in Photosynthesis* (New York, 1957)

Box 14

Folder 13

Conference on Photosynthesis, Gatlinburg, Tennessee, October 25-29, 1955, Drafts dated January 10-17, 1956, on Gatlinburg Conference and related notes in Brugger's hand. Typescript with corrections in Franck's hand (drafts Jan. 10-16) and in Brugger's hand (drafts Jan. 16-17); 19 leaves; holograph, 9 leaves. See Hans Gaffron, ed., *Research in Photosynthesis* (New York, 1957)

Box 14

Folder 14

- John E. Brugger and James Franck, "Experimental and Theoretical Contribution to Studies of the Afterglow of Chlorophyll in Plant Materials." Draft entitled "Theory of the Afterglow of Chlorophyll in Plants." Typescript with corrections in the hands of James Franck and John Brugger, 19 leaves, numbered 1-9, 14-18, 20-22. See *Archives of Biochemistry and Biophysics* 75 (1958) pp. 465-496. (Platzman 152)
- John E. Brugger to James Franck, note on above draft. Typescript with corrections in Brugger's hand, 1 leaf. Outline of theses in the above draft. Holograph, in the hand of John Brugger, 1 leaf

Box 14

Folder 15

John E. Brugger, Preliminary summary of afterglow research prior to publication. Notes. Typescript (carbon), 2 leaves, numbered 1-2

Box 14**Folder 16**

John E. Brugger, "A Theoretical Discussion of the Chlorophyll Chemiluminescence in Plants." Draft. Typescript with corrections in Brugger's hand, 24 leaves, numbered 1-18, 1-6

Box 14**Folder 17**

John E. Brugger, Notes and drafts of preliminary work on intermediates and afterglow. Typescript with corrections in Franck's hand, 23 leaves; holograph, 47 leaves

Box 14**Folder 18**

John E. Brugger, Draft. Typescript with correction in Franck's hand, 12 leaves, numbered 1-8, 10, 11, 13, 14; holograph, 1 leaf

Box 14**Folder 19**

John E. Brugger, Draft and notes. Typescript with corrections in Franck's hand, 17 leaves, numbered 1-15; holograph, 11 leaves

Box 14**Folder 20**

John E. Brugger, Notes on afterglow. Holograph, 14 leaves

Box 14**Folder 21**

John E. Brugger, Notes on afterglow beginning "[Hans] Gaffron Cyanide curve in air and N₂." Holograph, 1 leaf

Box 14**Folder 22**

John E. Brugger, Notes on afterglow. Holograph, 10 leaves

Box 14**Folder 23**

John E. Brugger, Notes on chemiluminescence. Holograph, 13 leaves

Box 14**Folder 24**

John E. Brugger, Notes on induction including notes entitled "[Jerome L] Rosenberg, [Warren] Butler, Changes of the Ratio of Short and Long Wave Length Fluorescence during Induction Period." Holograph, 8 leaves

Box 14**Folder 25**

John E. Brugger, Notes on work of William Arnold. Holograph, 3 leaves

Box 14**Folder 26**

John E. Brugger, Seymour Steven Brody, "Fluorescence and Energy Transfer in Porphyrinium cruentum." Typescript (carbon) with corrections in an unidentified hand,

29 leaves, numbered 1-19. Printed graphs, 11 leaves. Notes on manuscript by James Franck. Holograph, 20 leaves

Box 14

Folder 27

John E. Brugger, Notes on work of Seymour Steven Brody. Holograph, 3 leaves

Box 14

Folder 28

John E. Brugger, Notes on work of Seymour Steven Brody. Holograph, 8 leaves

Box 14

Folder 29

John E. Brugger, Notes on articles by [James M. ?] Lyons and by Melvin Calvin on afterglow. Holograph, 2 leaves

Box 14

Folder 30

John E. Brugger, Notes on paper by Michael Kasha. Holograph, 2 leaves

Box 14

Folder 31

James Franck, "Remarks on the Long-Wavelength Limits of Photosynthesis and Chlorophyll Fluorescence" (written in reply to Robert Emerson, Ruth Chalmers, and Carl Cedarstrand; see Folder 32). Notes and drafts. Typescript with corrections in Franck's hand, 9 leaves, numbered 4-8, 1-3, 10; holograph, 39 leaves. See Proceedings of the National Academy of Sciences 44 (1958) pp. 941-948. (Platzman 153)

Box 14

Folder 32

John E. Brugger, Robert Emerson, Ruth Chalmers, and Carl Cedarstrand, "Some Factors Influencing the Long-Wave Limit of Photosynthesis." Typescript carbon with corrections in an unidentified hand, 20 leaves (including 3 printed graphs)

Box 14

Folder 33

John E. Brugger, Notes on Emerson effect. Holograph, 11 leaves

Box 14

Folder 34

James Franck, "Photosynthesis." Copy prepared by the editors. Typescript (carbon) on sheets marked "Author's Copy," 6 leaves, numbered 1-6. See Technion Yearbook 15 (1958) pp. 39-41. (Platzman 154)

Box 14

Folder 35

James Franck, "A Reply to the Comments by [Gordon] Tollin on Franck's Theory of the Primary Steps in Photosynthesis." Notes and drafts. Typescript with corrections in Franck's hand, 31 leaves, numbered 1-3, 1-6, 1-8, 1-4, 6, 7, 1-6, 9; holograph, 8 leaves; typescript (carbon), 7 leaves, numbered 1-7. See Archives of Biochemistry and Biophysics 80 (1959) pp. 378-382. (Platzman 155)

Box 15

Folder 1

James Franck, "Fluoreszenz des Chlorophylls in Zellen und Chloroplasten und ihre Beziehungen zu den Primarakten der Photosynthese." Galley proof. Printed with

typescript and Franck's handwritten corrections, 50 leaves, numbered 1-50; typescript, 7 leaves, numbered 19, 19a, 19b, 34, 43, 37. See W. Ruhland, ed., *Handbuch der Pflanzenphysiologie; Die Co₂-Assimilation* 5, Teil 2 (1960) s. 689-735. (Platzman 156)

Box 15

Folder 2

James Franck, Galley proof. Printed with typescript and Franck's handwritten corrections, 50 leaves, numbered 1-50; typescript, 7 leaves, numbered 8, 9, 11, 19, 34, 35

Box 15

Folder 3

James Franck, Typescript with corrections in Franck's hand, 93 leaves, numbered 1-93

Box 15

Folder 4

James Franck, Typescript with correction in Franck's hand, 68 leaves, numbered 1-58, 66a-75; typescript (carbon) with corrections in Franck's hand, 8 leaves, numbered 59-66; holograph, 2 leaves, numbered 62, 71

Box 15

Folder 5

James Franck, Fragments of text. Typescript with corrections in Franck's hand, 33 leaves, numbered 28-54, 84, 85, 90, 1-3; holograph, 7 leaves

Box 15

Folder 6

James Franck, Fragments of text. Typescript with corrections in Franck's hand, 21 leaves, numbered 2, 3, 5, 6, 8-12, 18-23, 25, 26, 52-55

Box 15

Folder 7

James Franck, Fragments of text. Typescript (carbon) with corrections in Franck's hand, 19 leaves, numbered 11-15, 19, 20, 29-36, 90-93; holograph, 1 leaf

Box 15

Folder 8

James Franck, Fragments of text. Typescript (carbon) with corrections in Franck's hand, 22 leaves, pages 51-58, 61-66, 72, 73, 78a-81; holograph, 8 leaves, numbered 76, 77, 82-86

Box 15

Folder 9

James Franck, Typescript with corrections in Franck's hand, 44 leaves, numbered 2, 3, 5, 6, 8-12, 18-23, 25, 26, 28, 50, 52-55; holograph, 1 leaf, numbered 54

Box 15

Folder 10

James Franck, Typescript (carbon), 54 leaves, numbered 1-54

Box 15

Folder 11

James Franck, Draft. Holograph, 59 leaves, numbered I-XXXVIII, 56-64, 74, 78a-80, 72, 73

Box 15

Folder 12

James Franck, Draft. Holograph, 29 leaves, numbered 11a-15a, 20a, 29a-34, 91-92

Box 15

Folder 13

James Franck, Draft. Holograph, 12 leaves, numbered 1-3, 57, 59, 60, 62, 65, 74, 80

Box 15

Folder 14

James Franck, Remarks and suggestions by Eugene Rabinowitch. Typescript with additions in Franck's hand, 2 leaves

Box 15

Folder 15

James Franck, Notes. Holograph, 3 leaves

Box 15

Folder 16

James Franck, Notes on Roger Y. Stanier, M. Doudoroff, R. Kunisawa, and R. Contopoulou, "The Role of Organic Substrates in Bacterial Photosynthesis," Proceedings of the National Academy of Sciences 45 (1959) 1246-1260. Holograph, 1 leaf

Box 15

Folder 17

James Franck, Notes on CO₂ uptake and fluorescence. Holograph, 10 leaves

Box 15

Folder 18

James Franck, Notes on luminescence. Holograph, 5 leaves

Box 15

Folder 19

James Franck, Notes of the Fager Effect and induction. Holograph, 5 leaves

Box 15

Folder 20

James Franck, Bibliographies. Holograph, 2 leaves; typescript with corrections in Franck's hand, 6 leaves, numbered 1-4, 16, 17; typescript (carbon) with corrections in Franck's hand, 13 leaves, numbered 1-2, 1-4, 25

Box 15

Folder 21

James Franck, Editorial reference materials for contributors to the Handbuch der Pflanzenphysiologie; Synopsis of the contents of the Handbuch; suggestions for preparation of manuscripts. Printed outline, 21 leaves; typescripts (carbon), 1 leaf; typescript, 2 leaves

Box 15

Folder 22

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Transcript of discussions with notes and cover letter from William McElroy. Typescript cover letter, 1 leaf; photocopy, 39 leaves, numbered 1-5, 1-4, 1-4, 1-4, 1-4, 1, 2; holograph, 6 leaves

Box 15

Folder 23

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Notes for introductory remarks delivered by James Franck.

Holograph, 11 leaves; typescript, 1 leaf. See William E. McElroy and Bentley Glass, eds., *A Symposium on Light and Life* (Baltimore, 1961), pp. 386-389

Box 15

Folder 24

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, James Franck, Typescript (carbon), 1 leaf, numbered 2; typescript, 2 leaves, numbered 2, 3; holograph, 17 leaves

Box 15

Folder 25

Notes on the Emerson Effect for introductory remarks by James Franck. Holograph, 2 leaves

Box 15

Folder 26

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Notes on the work of William Arnold and Roderick K. Clayton taken at the Symposium. Holograph, 2 leaves

Box 15

Folder 27

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Notes on the work of Warren Butler taken at the Symposium. Holograph, 9 leaves

Box 15

Folder 28

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Notes on the work of Melvin Calvin taken at the Symposium. Holograph, 9 leaves

Box 15

Folder 29

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Notes on the work of C. S. French taken at the Symposium. Holograph, 5 leaves

Box 15

Folder 30

Symposium on Light and Life, McCollum-Pratt Institute of Johns Hopkins University, March 28-31, 1960, Notes on Otto Warburg's studies taken at the Symposium. Holograph, 1 leaf

Box 15

Folder 31

- Hans Gaffron, "Properties of the Photosynthetic Unit According to James Franck as (Probably Mis-) Understood by H. Gaffron," Spring, 1962. Typescript (carbon), 3 leaves, numbered 1-3
- Hans Gaffron, "Further Remarks on Franck's Theory of the Photochemistry in Chloroplasts-a propos the Discrepancies between the Gaffron and the Clayton Reports." Typescript (carbon), 3 leaves, numbered 1-3

Box 15

Folder 32

James Franck, "Contribution to the Theory of the Photochemical Steps in Photosynthesis." Drafts; notes on Gaffron. Typescript with corrections in Franck's hand, 3 leaves, numbered 1-3; holograph, 2 leaves

Box 15

Folder 33

Answer to Hans Gaffron's critique of Franck's Reaction Center Hypothesis. Holograph, 2 leaves

Box 16

Folder 1

James Franck, Jerome L. Rosenberg, and Charles Weiss, Jr., "The Primary Photochemical Step in Photosynthesis; A Comparison of Two Theories." Draft. Holograph, 1 leaf; typescript (carbon) with corrections in Franck's hand, 19 leaves, numbered 1-16, 20-22. See Harmut P. Kallmann and Grace Marmor Spruch, eds., *Luminescence of Organic and Inorganic Materials* (New York, 1962), pp. 11-29. (Platzman 157)

Box 16

Folder 2

James Franck, Draft. Typescript (carbon) with corrections in Franck's hand, 6 leaves, numbered 1, 2, 3, 3, 5

Box 16

Folder 3

John E. Brugger, "The Problems of Photosynthetic Conversion of Light Energy into Chemical Energy. A Critical Survey of its Status and a Summary of a Theory." (Early title for the article cited above, Folder 1.) Draft. Typescript, 28 leaves, numbered 1a-28a

Box 16

Folder 4

James Franck, Draft. Typescript (carbon), 25 leaves, numbered 1-12, 1-12, 6; typescript with corrections in Franck's hand, 10 leaves, numbered 2-11; typescript (carbon), 6 leaves; holograph, 40 leaves; mimeograph diagrams, 2 leaves

Box 16

Folder 5

James Franck, Draft. Holograph, 40 leaves; typescript with corrections in Franck's hand, 7 leaves, numbered 1-12, 1-2; typescript (carbon) with corrections in Franck's hand, 3 leaves

Box 16

Folder 6

James Franck, Draft. Holograph, 40 leaves; typescript with corrections in Franck's hand, 7 leaves, numbered 1-2, 1-2; typescript (carbon) with corrections in Franck's hand, 3 leaves

Box 16

Folder 7

James Franck, Draft. Typescript with corrections in Franck's hand, 2 leaves; holograph, 17 leaves; typescript (carbon), 5 leaves, numbered 43-47

Box 16

Folder 8

James Franck, Draft. Holograph, 9 leaves; typescript (carbon), 14 leaves, numbered 1-7, 1-7

Box 16

Folder 9

James Franck, Notes. Typescript (carbon), 4 leaves, numbered 4-7; typescript with corrections in Franck's hand, 3 leaves, numbered 4-6

Box 16

Folder 10

James Franck, Abstract. Typescript (carbon) with corrections in Franck's hand, 1 leaf

Box 16

Folder 11

James Franck, Notes on energy levels in photosynthesis of chlorophyll a. Holograph, 26 leaves; printed graph, 1 leaf

Box 16

Folder 12

James Franck, Notes on energy levels in photosynthesis of chlorophyll a (overall photosynthetic reaction pathway). Holograph, 38 leaves; typescript with corrections in Franck's hand, 2 leaves

Box 16

Folder 13

James Franck, Note from Hans Gaffron to James Franck on Gaffron's amino-acid condensation reaction mechanism to pyrrole ring. Holograph, 1 leaf

Box 16

Folder 14

James Franck, Notes on L. R. Blinks. Holograph, 12 leaves

Box 16

Folder 15

James Franck, Notes on Melvin Calvin. Holograph, 22 leaves; typescript with corrections in Franck's hand, 3 leaves

Box 16

Folder 16

James Franck, C. S. French. Holograph, 5 leaves

Box 16

Folder 17

James Franck, Notes on Renner (Joseph Rennert?). Holograph, 2 leaves

Box 16

Folder 18

James Franck, Notes by Jerome L. Rosenberg. Holograph, 2 leaves

Box 16

Folder 19

James Franck, Notes by Charles Weiss, Jr. Holograph, 2 leaves

Box 16

Folder 20

James Franck, General notes by James Franck. Holograph 39 leaves

Box 16

Folder 21

James Franck, Notes on the role of pyruvic acid in photosynthesis. Typescript, 6 leaves, numbered 1-3, 9-11; holograph, 32 leaves

Box 16

Folder 22

- James Franck, Notes on the work of John E. Brugger. Holograph, 2 leaves
- James Franck, Daniel Arnon, "Photochemical Reaction and CO₂ Assimilation in Photosynthesis by Chloroplasts." Printed abstract, 1 leaf

Box 16

Folder 23

James Franck, Bibliography. Typescript (carbon) with corrections in an unidentified hand, 1 leaf

Box 16

Folder 24

James Franck and Jerome L. Rosenberg, "Principles of a Theory of Energy Utilization in Photosynthesis." Drafts. Typescript with corrections in Franck's hand, 30 leaves, numbered 1-4, 16-37; holograph, 7 leaves See *Photosynthetic Mechanisms in Green Plants* (Washington, D. C., 1963). (Platzman 158)

Box 16

Folder 25

James Franck, Draft. Typescript (carbon) with corrections in Franck's hand, 3 leaves, numbered 3-4, 6

Box 16

Folder 26

James Franck, Drafts dated May 13-31, 1963. Typescript with corrections in Franck's hand, 31 leaves, numbered 1-8, 1-5, 1-3, 1-3, 1-2, 1-4, 1-5

Box 16

Folder 27

James Franck, Drafts. Holograph, 5 leaves

Box 16

Folder 28

James Franck, General notes by James Franck. Holograph, 23 leaves

Box 16

Folder 29

James Franck, Notes on non-green algae. Holograph, 3 leaves

Box 16

Folder 30

James Franck, Notes on R. S. Kepler, P. E. Bierstedt, and R. E. Merrillfield, "Electronic Conduction and Exchange Interaction in a New Class of Conductive Organic Solids," *Physical Review Letters* 5 (1960) pp. 503-504. Holograph, 1 leaf

Box 16

Folder 31

James Franck, "Notes for Supplements to the Luminescence Conference Paper," October 21, 1963. Typescript, 3 leaves, numbered 1-3; holograph, 10 leaves

Box 16

Folder 32

James Franck and Jerome L. Rosenberg, "A Theory of Light Utilization in Plant Photosynthesis." Mimeograph copy with corrections in Franck's hand, 32 leaves, numbered 1-12, 18-37. See *Journal of Theoretical Biology* 7 (1964) pp. 276-301. (Platzman 159)

Box 16

Folder 33

James Franck, Fragments of drafts. Typescript with corrections in Franck's hand, 5 leaves, numbered 1-2, 5, 10, 17; typescript (carbon) with corrections in Franck's hand, 4 leaves, numbered 1-2, 10, 17

Box 16**Folder 34**

James Franck, Draft. Holograph, 24 leaves; typescript with corrections in Franck's hand, 8 leaves

Box 16**Folder 35**

James Franck, Outline. Holograph, 2 leaves

Box 16**Folder 36**

James Franck, Criticisms and corrections by Jerome L. Rosenberg, and addendum by Franck. Typescript with corrections in Franck's and Rosenberg's hands, 5 leaves, numbered 1-4; holograph, 1 leaf

Box 16**Folder 37**

James Franck, Notes by James Franck and Jerome L. Rosenberg. Holograph, 36 leaves; typescript graph, 1 leaf

Box 16**Folder 38**

James Franck, General notes by James Franck entitled "Collection of Final Remarks." Holograph, 10 leaves

Box 16**Folder 39**

James Franck, Notes by James Franck and Jerome L. Rosenberg on electron-hole conductivity in photosynthesis. Printed graph, 1 leaf; holograph, 25 leaves

Box 16**Folder 40**

James Franck, Notes on Calvin's theory of electron-hole conductivity in photosynthesis. Holograph, 4 leaves

Box 16**Folder 41**

James Franck, Notes on fluorescence and afterglow. Holograph, 6 leaves

Box 16**Folder 42**

James Franck, Notes on afterglow, bleaching and inhibition by Jerome L. Rosenberg, with comments by James Franck. Holograph, 3 leaves; typescript with holograph corrections, 10 leaves, numbered 1-2, 1-3; typescript (carbon), 2 leaves, numbered 1-2; printed graph, 1 leaf

Box 16**Folder 43**

James Franck, Notes on photoionisation of aromatic compounds. Holograph, 6 leaves

Box 16**Folder 44**

James Franck, Notes on photoionisation of aromatic compounds from M. Silver and W. Moore, "Spatial Distribution of Trapped Electrons in Anthracene." Holograph, 3 leaves

Box 16

Folder 45

James Franck, Notes on the photoionisation of aromatic compounds based on Hartmut P. Kallmann and Martin Pope, "Photovoltaic Effect in Organic Crystals," *Journal of Physical Chemistry* 30 (1959) pp. 585-586, and "Decomposition of Water by Light," *Nature* 188 (1960) pp. 935-936. Holograph, 4 leaves

Box 16

Folder 46

James Franck, Notes on photoionisation of chlorophyll a. Holograph, 7 leaves

Box 16

Folder 47

James Franck, Notes on Melvin Calvin's "new theory." Holograph, 3 leaves

Box 16

Folder 48

James Franck, Notes on Jose Fernandez and Ralph S. Becker, "Unique Luminescences of Dry Chlorophylls." Holograph, 6 leaves See *Journal of Chemical Physics* 31 (1959) pp. 467-472

Box 16

Folder 49

James Franck, Notes entitled "[Roderick K] Clayton; Toward the Isolation of a Photochemical Reaction Center in *Rhodospseudomonas Spheroides*." Holograph, 4 leaves

Subseries 6: General Articles and Talks on Science

Box 17

Folder 1

"Skizze ueber Vorlesung von Prof. Franck ueber 'Atomphysik' fuer Hoerer aller Fakultaeten.." Typescript, 2 leaves, numbered 1-2

Box 17

Folder 2

"Physikalische Grundlage der Photosynthese." Typescript (carbon) with holograph corrections, 3 leaves, numbered 1-3

Box 17

Folder 3

"Relationship between Pure and Applied Science." Text of an address delivered to the Chicago Chapter of the American Society of the Hebrew Institute of Technology in February, 1947. Typescript (carbon) dated May 9, 1947, 5 leaves, numbered 1-4

Box 17

Folder 4

"Remarks on Photosynthesis in Relation to Energy Supply on Earth." Typescript (carbon), 20 leaves, numbered 1-10, 1-10; typescript with corrections in the hands of James Franck and Hertha Sponer, 12 leaves, numbered 1-12; typescript (carbon), 3 leaves, numbered 2, 3, 10 with cover letter from James Franck to David C. Gross, ed., *The Technion Yearbook*, December 8, 1957; typescript (carbon), 3 leaves, numbered, 2, 3, 10; holograph

with corrections in the hand of Hertha Spomer, 2 leaves See The Technion Yearbook 15 (1958) pp. 941-948. (Platzman 154)

Box 17

Folder 5

Untitled address on the Kok Effect. Typescript (photocopy), 3 leaves, numbered 1-3

Box 17

Folder 6

"Early History of Natural and Artificial Radioactivity." Typescript (carbon) 16 leaves, numbered 1-16

Box 17

Folder 7

- "Some Remarks on the Epistemological Attitudes of Scientists at Various Periods." Notes for an address delivered at Woods Hole Oceanographic Institution, August 20 [no year]. Holograph, 2 leaves
- Announcement of seminar on the history of science, held at Woods Hole Oceanographic Institution, August 20 [no year]. Mimeograph copy, 1leaf

Box 17

Folder 8

Draft of comments delivered by Franck in epilogue of 1961 film on the Franck-Hertz experiment. Typescript with holograph corrections in Franck's hand, 2 leaves, numbered 1-2. Typescript (carbon), 4 leaves, numbered 1-2, 1-2. Holograph, 3 leaves See Franck-Hertz Extension Epilogue, June 8, 1961 (Motion picture), Education Development Center, Inc

Box 17

Folder 9

- "Remarks on Topics of Round Table Discussion No. 2." Probably the University of Chicago radio program. Typescript, 2 leaves
- "Remarks on Topics of Round Table Discussion No. 8." Probably the University of Chicago radio program. Typescript with holograph corrections, 2 leaves; typescript (carbon) with holograph corrections, 2 leaves

Box 17

Folder 10

- "Introduction to a New Journal." Galley proof, 2 leaves (See Photochemistry and Photobiology; An International Journal 1 (1962) p. 11)
- Draft of the above "Introduction." Holograph, 1 leaf

Subseries 7: Papers by other scientists

Box 17

Folder 11

Norman I. Bishop, "The Reactivity of a Naturally Occurring Quinon (Q-255) in Photochemical Reactions of Isolated Chloroplasts." Typescript, 13 leaves, numbered 1-9, including 2 holograph graphs

Box 17

Folder 12

G. J. Brealey and Norbert Uri, "Photochemical Oxidation-Reduction and Photocatalysis. The Photochemical Activity of FeC14 in Alcohol as Oxidizing Agent and as Catalyst." Typescript (carbon) with corrections in an unidentified hand, 19 leaves, numbered 1-13

Box 17

Folder 13

- Warren Butler, untitled paper comparing O₂ and CO₂ exchange during transient phenomena of photosynthesis. Holograph, 17 leaves, numbered 1-17. With cover letter from Butler to James Franck. Holograph, 2 leaves
- Warren Butler, "Abstract; The Time Course of the Assimilatory Quotient During Photosynthetic Transient Phenomena." Typescript (carbon), 1 leaf With cover letter from Butler to James Franck. Holograph, 1 leaf
- Warren Butler, "A Far-Red Absorbing Form of Chlorophyll." Typescript (carbon), 5 leaves With graph, photocopy, 1 leaf With cover letter from Butler to James Franck. Typescript, 1 leaf
- Warren Butler, "A Far-Red Absorbing Form of Chlorophyll." Draft dated October 13, 1960. Typescript (carbon) with corrections in the hand of James Franck, 16 leaves, numbered 1-15
- Warren Butler, "The Effects of Red and Far-Red Light on the Fluorescence Yield of Chlorophyll in vivo." Draft dated January 22, 1964. Typescript (carbon), 15 leaves, numbered 1-12. With graph, photocopies, 9 leaves

Box 17

Folder 14

Roderick K. Clayton, "Primary Reactions in Bacterial Photosynthesis. II. The Quantum Requirement for Bacteriochlorophyll Conversion in the Chromatophore." Typescript (photocopy), 19 leaves, numbered 1-15

Box 17

Folder 15

E. W. Fager, "Photochemical Carbon Dioxide Fixation by Cell-Free Leaf Macerates." Typescript (carbon) with corrections in an unidentified hand, 12 leaves, numbered 1-9

Box 17

Folder 16

- C. S. French and Violet K. Young, "The Fluorescence Spectra of Red Algae and the Transfer of Energy from Phycocyanin and Chlorophyll." Typescript (carbon) with correction in an unidentified hand, 27 leaves, numbered 1-27
- Printed graphs, 8 leaves
- Cover letter from French to Franck, November 30, 1951. Typescript, 1 leaf
- Notes on the above paper in an unidentified hand

Box 17

Folder 17

Hans Gaffron, Norman Bishop, [Mary?] Stiller, and Richter, "Mechanism of Photosynthesis." Typescript (carbon), 1 leaf

Box 17

Folder 18

Lionel Goodman and Harrison Shull, "A Semiempirical Treatment of n- Transitions." Typescript (carbon) with corrections in an unidentified hand, 4 leaves, numbered 1-4. See Journal of Chemical Physics 22 (1954) pp. 1138

Box 17

Folder 19

[M. Gouterman], Untitled paper. Typescript (carbon) 21 leaves, numbered 1-20. With printed graphs, 8 leaves

Box 17

Folder 20

Gerhard Herzberg, "On the Heat of Sublimation of Carbon." Dated "Received April 20, 1942." Typescript (carbon), 4 leaves, numbered 1-4. With holograph notes in the hand of James Franck and an unidentified hand, 1 leaf

Box 17

Folder 21

D. Kearns, "Organic Semiconductors." Dated June 15, 1962, by Charles Weiss, Jr. Typescript (photocopy), with corrections and notes in the hand of Charles Weiss, Jr., 4 leaves, numbered 35-38

Box 17

Folder 22

A. A. Krasnovskii and L. M. Kosbutskaya, "Different states of chlorophyll in plant leaves" Typescript (carbon), 1 leaf See Chemical Abstracts 47 (1953)

Box 17

Folder 23

Robert Livingston, "Intermolecular Transfer of Electronic Excitation." Typescript (carbon) with corrections in an unidentified hand, 19 leaves, numbered 1-18

Box 17

Folder 24

- Rufus Lumry, Berger Mayne, and J. D. Spikes, "Fluorescence Yield-Velocity Relationships in the Hill Reaction of Chloroplast Fragments." Mimeograph copy, 24 leaves, numbered 1-17
- Notes on the above article. Holograph in the hand of James Franck, 2 leaves, numbered I-II

Box 17

Folder 25

R. A. Olson, W. L. Butler, and W. H. Jennings, "The Orientation of Chlorophyll Molecules in vivo; Further Evidence from Dichroism." Typescript (carbon) 6 leaves, numbered 1-4. Holograph drawings, 1 leaf

Box 17

Folder 26

R. H. Potterill, O. J. Walker, and J. Weiss, "Electron Affinity Spectrum of Ferrous Ion in Aqueous Solution." Typescript (carbon) with corrections in an unidentified hand, 13 leaves, numbered 1-11. Printed graph, 1 leaf

Box 17

Folder 27

Jerome L. Rosenberg, "Annual Progress Report to Office of Naval Research." Dated February 20, 1962. Mimeograph copy, 11 leaves, numbered 1-11

Box 17

Folder 28

Erich Schneider, "Anomale Dispersion von angeregtem Wasserstoff im Gebiet ultrakurzer elektrischer Wellen." Freiburg University dissertation, November, 1933. Typescript (carbon), 13 leaves, numbered 1-13. Printed graphs, 7 leaves

Box 17

Folder 29

[Hertha Sponer], Notes. Holograph, 6 leaves, numbered 1-4

Box 17

Folder 30

Per S. Stensby and Jerome L. Rosenberg, "Fluorescence and Absorption Studies of Reversible Aggregation in Chlorophyll." Abstract and text fragment of a talk delivered at the Symposium on Molecular Fluorescence, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, March, 1960. Typescript (carbon), 1 leaf

Box 17

Folder 31

Bernard L. Strehler and William A. Arnold, "Light Production in Green Plants." Typescript, 1 leaf

Box 17

Folder 32

Shiro Takashima, "Chlorophyll-Lipoprotein Obtained in Crystals." Typescript with corrections in an unidentified hand, 4 leaves, numbered 1-4. See Nature 169 (February 2, 1952) p. 182

Box 17

Folder 33

Norbert Uri, "Inorganic Free Radicals in Solution." Typescript (carbon) with corrections in an unidentified hand, 37 leaves, numbered 1-37

Box 17

Folder 34

Paul Weiss, "Memorandum Concerning the Biophysical Analysis of Structure and Development of Organisms." Typescript (carbon), 6 leaves, numbered 1-6

Box 17

Folder 35

W. Wiessner and Hans Gaffron, "Acetate Assimilation in Chlamydomonas." Typescript (carbon), 1 leaf

Box 17

Folder 36

[Author unidentified], "Ueberfuehrungswahrscheinlichkeiten von Edelgasen in Joddampf." Typescript with corrections in an unidentified hand, 10 leaves, numbered 1-10

Box 17

Folder 37

[Author unidentified], "Sittliche Weltansicht als Grundlage vernuenftiger politischer Gesinnung und ihre Begrueendung." Typescript (carbon) 37 leaves, numbered 1-37

Box 17

Folder 38

- [Author unidentified], Untitled paper in German. Typescript (carbon) 37 leaves, numbered 1-37
- Criticisms of the above paper by James Franck. Holograph, 1 leaf

Subseries 8: Notes, memoranda and fragments

Box 17

Folder 39

Hubbard, Franck, and Pfund, Final Examination questions for Physics 101, Common Physics. Mimeograph copy, 1 leaf

Box 17

Folder 40

Tables of Physical Constants and Periodic Charts. Mimeograph copy, 4 leaves, numbered 413-416. Printed graphs, 5 leaves

Box 17

Folder 41

Bond energy tables. Typescript, 4 leaves

Box 17

Folder 42

Unidentified fragments. Typescript, 2 leaves; typescript (carbon), 8 leaves

Box 17

Folder 43

Unidentified fragments. Holograph, in two unidentified hands, 2 leaves; holograph in the hand of James Franck, 17 leaves

Box 17

Folder 44

Miscellaneous graphs and figures. Photocopy, 29 leaves; holograph on graph paper, 4 leaves

Box 17

Folder 45

Miscellaneous negatives of graphs, figures, and other illustrations. 45 negatives

Box 18

Folder 1

Samuel S. Fels Fund. A Report for the Period from Its Inception to December 31, 1951. Printed report, 43 leaves, numbered 1-75

Box 18

Folder 2

Samuel S. Fels Fund. A Report for the Two-Year Period Ended December 31, 1963. Printed report, 34 leaves, numbered 1-54

Box 18

Folder 3

Samuel S. Fels Fund. A Report for the Two-Year Period Ended December 31, 1967. Printed report, 52 leaves, numbered 1-91

Box 18

Folder 4

Samuel S. Fels Fund. A Report for the Two-Year Period Ended December 31, 1973. Printed report, 16 leaves, numbered 1-30

Subseries 9: Atomic Scientists' Movement, 1944-1953

Box 18

Folder 5

Jeffries Committee, Zay Jeffries to Arthur H. Compton, July 13, 1944. Mimeograph copy, 9 leaves, numbered 1-9

Box 18**Folder 6**

Jeffries Committee, M. C. Leverett, "Some Remarks on Nucleonics," August 8, 1944. Mimeograph copy, 13 leaves, numbered 1-12

Box 18**Folder 7**

Jeffries Committee, C. M. Cooper to R. S. Mulliken, "Future Possibilities on Nucleonics," August 12, 1944. Memorandum. Mimeograph copy, 7 leaves, numbered 1-7

Box 18**Folder 8**

Jeffries Committee, L. W. Nordheim to R. S. Mulliken, "Remarks on the Future Development of Project and Nucleonics," September 25, 1944. Memorandum. Mimeograph copy, 7 leaves, numbered 1-6

Box 18**Folder 9**

Jeffries Committee, H. Froula, "Findings of Use of Term 'Nucleon.'" Mimeograph copy, 1 leaf

Box 18**Folder 10**

Jeffries Committee, "Piles of the Future Review. Dr. Tolman's Committee," October 9, 10, 11, 1944. Mimeograph copy, 15 leaves, numbered 1-15

Box 18**Folder 11**

Jeffries Committee, "Prospectus on Nucleonics," November 18, 1944. Mimeograph copy, 66 leaves, numbered 1-65

Box 18**Folder 12**

Jeffries Committee, "IV. The Dawn of Nucleonics Ages." Typescript (carbon) with corrections in an unidentified hand, 35 leaves, numbered 1-35; typescript (carbon) with corrections in an unidentified hand, 35 leaves, numbered 1-35

Box 18**Folder 13**

Memorandum for James Franck's trip to Washington, dated April 21, 1945. Typescript (carbon), 7 leaves, numbered 1-7

Box 18**Folder 14**

Notes on the formation of the Metallurgical Laboratory Committees, June, 1945. Notes in the hand of Eugene Rabinowitch. Holograph, 3 leaves

Box 18**Folder 15**

Franck Committee, Notes of meeting in early June, 1945, in the hand of J. J. Nickson. Holograph, 4 leaves, numbered 2-5

Box 18

Folder 16

Franck Committee, J. J. Nickson, "Memos of Committee Meeting of June 4, 1945."
Typescript with corrections in the hand of James Franck, 3 leaves, numbered 1-3

Box 18**Folder 17**

Franck Committee, James Franck, draft of the "Franck Report." Spring, 1945. Holograph,
2 leaves, numbered 1-2

Box 18**Folder 18**

Franck Committee, Eugene Rabinowitch, draft of the "Franck Report." June, 1945.
Holograph in the hand of Eugene Rabinowitch, 50 leaves, numbered 1-44a, 45-50

Box 18**Folder 19**

Franck Committee, "Political and Social Problems. Copy 1." Draft of the "Franck
Report." Typescript with corrections in the hand of Eugene Rabinowitch, 4 leaves,
numbered 7, 7

Box 18**Folder 20**

Franck Committee, "Outline for Social and Political Considerations." Typescript (carbon),
2 leaves, numbered 1-2. "A. Optimistic. II. Conditions Under Which International
Organization is Most Probable, June 5, 1945." Typescript with corrections in an
unidentified hand, 3 leaves, numbered 1-3

Box 18**Folder 21**

Franck Committee, Criticism of the "Franck Report." Notes in the hands of D. J. Hughes,
Glenn T. Seaborg, and Robert S. Mulliken and an unidentifiable hand. Holograph, 4
leaves

Box 18**Folder 22**

Franck Committee, "Political and Social Problems. Copy 2." Draft of the "Franck
Report." Typescript (carbon), 20 leaves, numbered 1-16 and 1-3; with criticisms by Robert
S. Stone and A. J. Dempster, typescript (carbon), 2 leaves, numbered a,1 and a,2

Box 18**Folder 23**

Franck Committee

- "A Report to the Secretary of War. I. Preamble." Typescript, 3 leaves; typescript
(carbon), 3 leaves
- "I. Preamble." "Franck Report" with title page missing. Typescript (carbon), 16 leaves,
numbered 2-17

Box 18**Folder 24**

Franck Committee, "The Undersigned Members of the Metallurgical Project Agree with
the Attached Report on Political and Social Problems Dated June 11, 1945." Attempt to
circulate the "Franck Report" in the Metallurgical Laboratory for signatures. Typescript
with signatures of T. R. Hogness and John P. Howe, 5 leaves

Box 18

Folder 25

Franck Committee, Farrington Daniels, Summary of the "Franck Report" for staff meeting at the Metallurgical Laboratory, August 13, 1945. Typescript (carbon), 2 leaves

Box 18

Folder 26

"An Appeal," dated December 3, 1945. An appeal to the American public for the economic relief of Germany. Typescript, 3 leaves, numbered 1-3; typescript (carbon), 3 leaves, numbered 1-3; typescript (carbon), 3 leaves, numbered 1-3; typescript (carbon), 3 leaves, numbered 1-3; mimeograph copy, 2 leaves, numbered 1-2

Box 18

Folder 27

Speech to the Emergency Committee of Atomic Scientists luncheon, February 8, 1947. Typescript (carbon), 6 leaves, numbered 1-6

Box 18

Folder 28

Statement to the Bulletin of Atomic Scientists, August 12, 1952. Typescript (carbon) with notes in the hand of Norene Mann, 1 leaf

Box 18

Folder 29

Address to Congress on Science and Freedom, Hamburg, Germany, July 24, 1953. Typescript with holograph corrections, 3 leaves, numbered 1-3

Subseries 10: Franck Memorial Symposium, May 12-13, 1966

Box 18

Folder 30

Symposium on Energy Exchange in Molecular Systems in Honor of the Contributions of Professor James Franck, May 12 and 13, 1966. The University of Chicago, Seventy-fifth Anniversary Year. Printed program, 1 leaf

Box 18

Folder 31

"Tentative Program, Symposium on Energy Exchange in Molecular Systems in Honor of the Contributions of Professor James Franck, May 12 and 13, 1966." Photocopy, 2 leaves, numbered 1-2; typescript (carbon), 4 leaves, numbered 1-3

Box 18

Folder 32

Invitation lists and form letters. Holograph, 3 leaves, in the hand of Robert Platzman; typescript (carbon), 3 leaves; photocopy, 22 leaves

Box 18

Folder 33

"Franck Symposium, May 12, 13, 1966. List of Participants (195)." Photocopy, 10 leaves

Box 18

Folder 34

University of Chicago, Office of Public Relations, press release on the Franck Symposium, dated May 7, 1966. Mimeograph copy, 3 leaves

Box 18

Folder 35

"Final Report to the National Science Foundation from the University of Chicago on Advanced Science Seminar Grant No. GZ-256, 'Symposium on Energy Exchange in Molecular Systems,' May 12 and 13, 1966. Norman H. Nachtrieb, Project Director, November 25, 1966." Typescript (carbon), 18 leaves, numbered 1-10, 1-7; typescript (photocopy), 3 leaves, numbered 1-2

Box 18

Folder 36

James Franck, Draft. Photocopy with holograph corrections in an unidentified hand, 12 leaves, numbered 1-12. With cover letter from R. Stephen Berry to Robert Platzman, n.d. Holograph, 1 leaf

Box 18

Folder 37

Signs for Franck Memorial Symposium, 1966. Printed, 3 leaves

Box 18

Folder 38

Notes from Symposium participants to Max Born, Gustav Hertz, Heinrich Kuhn, Lise Meitner, and L. A. Turner. Photocopies, 6 leaves

Box 18

Folder 38a

Hans Gaffron, "Dinner Talk, University of Chicago." May 12, 1966. Reminiscences of Franck and an evaluation of his work in photosynthesis. Typescript (photocopy), 16 leaves, numbered 1-16

Box 18

Folder 39

Transcript of tape recording of talk by James Franck, October 19, 1960. Photocopy, 9 leaves, numbered 1-7, 1-2

Series III: Tape Recordings and Photographs

Subseries 1: Tape recordings

Reel 1

Tape recording of talk given by James Franck on his memories of the early history of quantum physics. Chicago, October 19, 1960. Five-inch reel, Sides 1-2

Reel 2-5

Tape recordings of talks at the Symposium (see Program, Box 18, folder 31) 4 seven-inch reels

Reel 6

Tape recording of talk by Friedrich Hund, "Paths to Quantum Theory, Historically Viewed." University of Chicago, May 14, 1966. Seven-inch reel, Side 1 only

Subseries 2: Hertha Spöner's photograph album, Göttingen, 1920-1933

Box 19

Folder 1

The Physics Institute Göttingen, 1926 (with first annex)

Box 19

Folder 2

Workshop, March 1926

Box 19

Folder 3

Celebration held upon completion of the framework of the P. I [Physics Institute], 1924

Box 19

Folder 4

Franck celebration upon declining a call to Berlin, November 1923. [(Left to right) Reich, Born, Franck, Pohl in front of Physics Institute, Göttingen]

Box 19

Folder 5

Cario, Kornicke, Mannkopff, Hanle, Holland, Stuart, Ramsauer, Rupp, Oldenburg, Franck, Schmidt, Kopfermann, Donat

Box 19

Folder 6

Institute Christmas party, 1923

Box 19

Folder 7

Heisenberg's inaugural lectures. P. I., 1924

Box 19

Folder 8

Born lectures before the district association meeting. P. I., 1924

Box 19

Folder 9

P. I., 1924, photographs of [Cario]

Box 19

Folder 10

P. I., 1924, photographs of [Franck]

Box 19

Folder 11

P. I., 1924, photographs of [Sponer]

Box 19

Folder 12

District association conference in Göttingen, Febr. 1925

Box 19

Folder 13

[David Hilbert with Franck; no caption]

Box 19

Folder 14

Sommerfeld, Aug, 1925

Box 19

Folder 15

Hanle, Cario, I, in laboratory course. 1925

Box 19

Folder 16

Miss Fesefeldt, Hund, I, in front of the "Deutschen Garten," 1925

Box 19

Folder 17

Sommer, Heisenberg, Franck, Cario. P. I. 1925

Box 19

Folder 18

Ehrenfest's visit with Galinka [his daughter] at the Francks' house. P. I., 1925

Box 19

Folder 19

Ehrenfest's visit with Galinka at Francks'. P. I., 1925 [No caption]

Box 19

Folder 20

Ehrenfest's visit with Galinka at Francks'. P. I., 1925 [No caption]

Box 19

Folder 21

My nitrogen apparatus, 1925

Box 19

Folder 22

Runge at a course of lectures

Box 19

Folder 23

After the Nobel prize. Nov. 1926. Kuhn, Oldenberg, I, Franck, Mrs. Franck, Cario, Mrs. Born, Fesefeldt

Box 19

Folder 24

Evening invitation from Francks to Nikolausberg. P. I., 1927. [Village inn, 45 minutes walk from Göttingen, where Francks held their student parties]

Box 19

Folder 25

Evening invitation from Francks to Nikolausberg. P. I., 1927 [No caption]

Box 19

Folder 26

Hogness's farewell 6/23/27. Mrs. Kemble with child, Mrs. Mueller, Francks, Miss Riefenstahl, Houtermanns, Lochte, Mrs. Hogness, I, Ritschl, Kuhn, Oldenberg, Oppenheimer, Cario, Mueller, Atkinson, Kirschstein

Box 19

Folder 27

Stobbe, Atkinson, Born, Hund, Mrs. Born, Westphal, Hilsch, Fesefeldt

Box 19

Folder 28

Hund's farewell party at Rohns, 1927 [Born, Hund, Mrs. Born]

Box 19

Folder 29

Flechsigs, Mannkopff, Sugiura, Franck, I, Courant, Mrs. Franck, Mayer. Pictures from the Christmas part, 1928

Box 19

Folder 30

Hirschstein, Flechsigs, Mannkopff, I, Kuhn

Box 19

Folder 31

Miss Richter [Franck's secretary]

Box 19

Folder 32

Mannkopff talk shop with Kyropoulos [and Bernhard Kirschstein]

Box 19

Folder 33

The way home. [(Left to right) Kyropoulos, Cario, Franck, Sponer, Born, Oldenburg]

Box 19

Folder 34

1927. [Sponer, Oldenburg]

Box 19

Folder 35

1930. [(Left to right) Dolly Landau (mathematician's daughter), Krobel, unidentified, Franck]

Box 19

Folder 36

1931. [(Left to right) Mannkopff, Franck, Cario, Kuhn. (standing) Hans Jaffe]

Box 19

Folder 37

Excursion to the Weser, 1929 [Oldenburg]

Box 19

Folder 38

Excursion to the Weser, 1929. [Franck, Oldenburg (with back turned), Sponer]

Box 19

Folder 39

Excursion to the Weser, 1929. [No caption]

Box 19

Folder 40

Excursion to the Weser, 1929 [No caption]

Box 19

Folder 41

Excursion to the Weser, 1929 [No caption]

Box 19

Folder 42

Excursion to the Weser, 1929. [No caption]

Box 19

Folder 43

Mannkopff, 1929

Box 19

Folder 44

In Reich's lecture hall, 1931. [(Far left, hand on chin) Eugene Rabinowitch, (under window) Pohl, Born]

Box 19

Folder 45

Institute's excursion, 1932. [Arthur von Hippel, Hertha Sponer]

Box 19

Folder 46

Workshop, 1931

Box 19

Folder 47

My vacuumspectrograph, 1932

Box 19

Folder 48

Condenser battery

Box 19

Folder 49

Small lecture room, 1931

Box 19

Folder 50

Mechanics laboratory course, 1931

Box 19

Folder 51

Maier-Leibnitz, Oeser, Kroebel, Lotmar, v. Hippel, Leppert, Wulf, Jaffe, Seiler, Rathenau, unidentified, Roessler, Welsh, I, Kuhn, Rabinowitsch, Stille, Duhm, 1933

Box 19

Folder 52

Mrs. Paquin, 1932

Box 19

Folder 53

1933

Box 19

Folder 54

Farewell party at Mrs. Paquin's house

Box 19

Folder 55

Facsimile of Hertha Sponer's album

Box 20

Folder 1

Berlin, ca. 1905. (Left to right) Louis B. Tuckerman, James Franck, Paul Cermak, Robert Pohl. Tuckerman was at the Bureau of Standards, Washington, D. C.; Cermak was an Austrian, later a professor at the University of Giessen, Germany

Box 20

Folder 2

Berlin, 1920. Printed photograph entitled "Das bonzenfreie Kolloquium." (Left to right) Otto Stern, Wilhelm Lenz, James Franck, Rudolf Ladenburg, Paul Knipping, Niels Bohr, E. Wagner, Otto von Baeyer, Otto Hahn, George de Hevesy, Lise Meitner, Wilhelm Westphal, Hans Geiger, Gustav Hertz, Peter Pringsheim

Box 20

Folder 3

Berlin-Dahlem, ca. 1920? Kaiser-Wilhelm Institute. (Seated, left to right) Paul Knipping, James Franck, Hertha Sponer. (Standing, left) Wilhelm Hanle. (Standing, right) Walter Grotrian. With other unidentified persons

Box 20

Folder 4

Berlin-Dahlem, 1920. Kaiser Wilhelm Institute. Party for the Francks on the occasion of their departure for Göttingen. (Seated, left to right) Hertha Sponer, Albert Einstein, Ingrid Franck, James Franck, Lise Meitner, Fritz Haber, Otto Hahn. (Standing, left to right) Walter Grotrian, Wilhelm Westphal, Otto von Baeyer, Peter Pringsheim, Gustav Hertz

Box 20

Folder 5

Copenhagen, 1921. (Seated, left to right) James Franck, H. A. Kramers, B. Schultz, (secretary). (Standing, left to right) J. C. Jacobsen, S. Rosseland, George de Hevesy, H. M. Hansen, Niels Bohr

Box 20

Folder 6

Göttingen in the 1920's. Franck's assistants and Ph.D. students. Gunther, Cario, Wilhelm Hanle, Otto Oldenberg, Reinhold Mannkopff, Hertha Sponer, James Franck, Hans Kopfermann. With other unidentified persons

Box 20

Folder 7

Stockholm, December 10, 1926. Nobel prize-winners in physics and chemistry for 1925 and 1926. (Seated, left to right) James Franck and Gustav Hertz (physics, 1925), Jean Baptiste Perrin (physics, 1926), Richard Zsigmondy (chemistry 1925), and Theodor Svedberg (chemistry, 1926)

Box 20

Folder 8

Stockholm, December 10, 1926. Stage and audience at Nobel Prize presentation

Box 20

Folder 9

Stockholm, December 10, 1926. Stage and audience at Nobel Prize presentation

Box 20

Folder 10

Stockholm, December 10, 1926. Audience at Nobel Prize presentation

Box 20

Folder 11

Stockholm, December 10, 1926. Audience at Nobel Prize presentation

Box 20

Folder 12

Grave of Alfred Nobel

Box 20

Folder 13

Stockholm, December 1926. (Left to right) Gustav Hertz, James Franck, Richard Zsigmondy

Box 20

Folder 14

Stockholm, December, 1926. James Franck, Ingrid Franck, Ellen Hertz, and Gustav Hertz departing Stockholm after receipt of the Nobel Prize

Box 20

Folder 15

Göttingen, 1929. Franck's Christmas present—a ruler shaped like the potential curve of a diatomic molecule

Box 20

Folder 16

Göttingen, 1931. Rounds. (Left to right) Werner Kroebel, Heinrich Kuhn, Hertha Spöner, Gunther Cario, James Franck

Box 20

Folder 17

Göttingen, 1933 or 1934. Bernhard Duhm in laboratory at the Physics Institute. Inscribed; "So ungefähr sieht's bei mir aus." Duhm was completing his doctorate at the time of Franck's departure from Göttingen in 1933

Box 20

Folder 18

Göttingen, 1933 or 1934. Bernhard Duhm's laboratory apparatus at the Physics Institute. Inscribed; "Genauer ist nicht zu sehen. Xylolbad mit Thermostaten und Thomsonbrücke."

Box 20

Folder 19

Copenhagen, 1934. James Franck with bicycle

Box 20

Folder 20

Tisvilde, Denmark, 1935. James Franck with cigar at Niels Bohr's summer place

Box 20

Folder 21

Copenhagen, 1935. Institute for Theoretical Physics. Pauli, Jordan, Heisenberg, Born, Meitner, Stern, Franck, David, Oliphant, Saha, Weizsacker, Hund, Reiche, Opechowski, Jensen, London, Heitler, Frisch, Dunning, Bohr, Rosenfeld, Amaldi, Kopfermann, Richardson, Fano, Kahn, Waller, Peierls, Crowther, Teller, Weisskopf, Euler, Levi, Bhabha, Delbruck, Jehle, Fierz, Thomas, Nordsieck, Arley, Kramers, McKay, Bjerger, Casimir, Kalckar, Plesset, Rabinowitch, Buch Andersen, Boggild, Wilck, von Hippel, Paul Ehrenfest, Koch, Ebbe Rasmussen, Placzek, Moller, Mannebak, Jacobsen, Brostrom, R. E. H. Rasmussen, Ambrosen, Hoffer Jensen, Strauss. Negative and glass slide

Box 20

Folder 22

Early 1940's. Wife of Otto Oldenberg with her son from her previous marriage, Dieter Koestler

Box 20

Folder 23

James Franck

Box 20

Folder 24

Argonne National Laboratory, Illinois, 1956. Dinner on the occasion of Peter Pringsheim's seventy-fifth birthday. (Left to right) Norman Hillberry, unidentified, Frederick Seitz, Mrs. Peter Pringsheim, James Franck, Oliver Simpson, Peter Pringsheim, two unidentified persons, Mrs. Norman Hillberry, I. Esterman

Box 20

Folder 25

Washington, D. C., October 31-November 2, 1946. Ninth Washington Conference on Theoretical Physics. R. B. Roberts, B. Von Evera, R. J., Seeger, E. A. Johnson, W. Duryee, N. P. Heydenburg, U. Fano, M. Delbrueck, J. Franck, C. Critchfield, G. Gamow, M. A. Tuve, D. B. Cowie, S. Hendricks, A. Hollaender, P. H. Abelson, M. Demerc, S. E. Forbush, F. O. Schmitt, D. Hawkins, S. Karrer, J. W. Beams, H. Weyl, L. Szilard, S. Spiegelmann, F. W. London, J. Von Neumann, E. Teller, N. Bohr, G. W. Beadle, W. M. Standley, C. F. Cori, J. T. Edsall, J. G. Kirkwood, W. J. Kauzman

Box 20

Folder 26

Philadelphia, February 16, 1950. Samuel S. Fels's ninetieth birthday luncheon. (Seated, left to right) Earl G. Harrison, Dr. L. W. Sontag, Mr. Fels, Jerome J. Rothschild, Dr. James Franck. (Standing, left to right) Dale Phalen, Iso Briselli, Dr. E. J. Farris, Dr. Stephen B. Sweeney, Frederick P. Gruenberg, Lionell Friedman, Louis Magaziner, Cyril G. Fox, Dr. Harry Shay, Dr. Gershon-Cohen

Box 20

Folder 27

Hannover, Germany, October 7, 1950. Otto Warburg. Inscribed; "Buying the new horse from the famous rider Burkner"

- Berlin-Dahlem, November [1950]. KWICP [Kaiser Wilhelm Institute for Cell Physiology; later Max Planck Institute for Cell Physiology]
- June, 1950. Harnack House

Box 20

Folder 28

1952. Photograph of James Franck for printed card sent to acknowledge greetings for his seventieth birthday

Box 20

Folder 30

1953. Otto Hahn at age seventy-four

Box 20

Folder 31

Copenhagen, May 15, 1953. James Franck. Inscribed; "James Franck I Botan. Audit., Kovenhavn, d. 15. maj 1953."

Box 20

Folder 32

February 13, 1955. Order of the Faucet Medal

Box 20

Folder 33

Gatlinburg, Tennessee, October, 1952. James Franck at dinner table at the Meeting on Photobiology. (At right, in profile) William Arnold

Box 20

Folder 34

Gatlinburg, Tennessee, October 1952. Participants in Meeting on Photobiology. (Front row, kneeling, left to right) Rufus Lumry, Jerome L. Rosenberg, Eugene Rabinowitch, Farrington Daniels, Leo Vernon, Martin Kamen, Henry Linschitz, Sam Granick, three unidentified persons, Wolf Vishniac, Howard Gest, unidentified, L. R. Blinks, unidentified. (Standing, left to right) Two unidentified persons, Bernar L. Strehler, Albert W. Frenkel, Andrew Benson, unidentified, Sam Aronoff, J. A. Bassham?, unidentified, Allen Mehler, two unidentified persons, Hans Gaffron, unidentified, Allan H. Brown, two unidentified persons, Melvin Calvin, L. N. M. Duysens, Robert Emerson, Jack Myers, unidentified, Norbert Uri, C. S. Frnech, unidentified, E. W. Fager, unidentified, Barry Commoner, three unidentified persons, James H. C. Smith, two unidentified persons, Martin Gibbs, Earl Jacobs, N. E. Tolbert, A. A. Holt, four unidentified persons, Leonard Horwitz?, Norman Good, two unidentified persons, William Arnold, William McElroy, Bessel Kok, Daniel Arnon, Alex Hollander, E. C. Wassink

Box 20**Folder 35**

Chicago. James Franck in discussion. Color photograph

Box 20**Folder 36**

Durham, North Carolina, August, 1957. Hertha Sponer-Franck's house. Seven color slides, consisting of two views of the house, two views of James Franck in the garden, and three views of a garden tea party (James Franck, Peter Pringsheim, and other unidentified persons)

Box 20**Folder 37**

Bad Toelz, Bavaria, August 26, 1960. James Franck and Robert Pohl

Box 20**Folder 38**

Washington, D. C., ca. 1960. James Franck giving a lecture at Howard University

Box 20**Folder 39**

Rockefeller University, New York, June 5, 1962. Niels Bohr and Richard Courant on the occasion of the presentation of an honorary degree to Bohr

Box 20**Folder 40**

Lindau am Bodensee [Lake of Constance], Germany, 1962. James Franck talking to Gustav Hertz at Nobel-Conference

Box 20**Folder 41**

Warrenton, Virginia, October 14-18, 1963. Participants in Airlie House Conference. (Seated in front, left to right) Unidentified, Andre Jagendorf, Norman Bishop, Eiji Fujimori, unidentified, J. A. Bassham, unidentified, James H. C. Smith, Wolf Vishniac, Lester Packer, Giorgio Forti, unidentified, Jerome A. Schiff, Marcia Brody, George Hoch, Eugene I. Rabinowitch, Thomas Punnett, unidentified, Bacon Ke, Francis Haxo, John Olson, three unidentified persons, Martin Gibbs, unidentified, Howard Gest, Mary B. Allen, Lawrence Bogorad, unidentified, Mordhag Arron, A. Stanley Holt, S. Aronoff.

(Standing, left to right) Barger Mayne, Two unidentified persons, James Franck, two unidentified persons, Helmut Beinert, unidentified, A. A. Benson, three unidentified persons, N. E. Tolbert, Bessel Kok, two unidentified persons, Jack Myers, Ellen C. Weaver, two unidentified persons, S. S. Brody, Roderick K. Clayton, four unidentified persons, Daniel Arnon, four unidentified persons, Rodney A. Olson, L. N. M. Duysens, Paul Latimer, H. T. Witt, unidentified, John Spikes, Anothny San Pietro, unidentified, L. R. Blinks, unidentified, Leo P. Vernon, Jerome L. Wolken, Jerome L. Rosenberg, John Bergeron, C. S. French, William A. Arnold, Paul Levine, unidentified, Shimon Klein, Gordon Tollin, tow unidentified persons, Lotte Schwinck, three unidentified persons, Norman Good, four unidentified persons, Birgit Vennesland, six unidentified persons, Joseph Neumann, four unidentified persons, Rufus Lumry, Govindjee, Albert W. Frenkel. (Standing far to the rear, left) Three unidentified persons, Olga Owens, Warren Butler

Box 20

Folder 42

London, 1964. James Franck shortly before his death. Photograph by Lotte Meitner-Graf, niece of Lise Meitner

Box 20

Folder 43

East Berlin, May 1964. Lise Meitner and James Franck at Gustav Hertz's house

Box 20

Folder 44

Göttingen, 1962 or 1964. Lise Meitner and James Franck at Gustav Hertz's house

Box 20

Folder 45

Göttingen, May 1964. James Franck and Max Born

Box 20

Folder 46

- Robert Platzman's lists of photographs collected for Franck Memorial Symposium, University of Chicago, 1966
- Notes in the hand of Robert Platzman and in an unidentified hand. Holograph, 3 leaves

Box 20

Folder 47

Chicago, 1966. Martin Kamen and Eugene Rabinowitch at the Franck Memorial Symposium

Box 20

Folder 48

Chicago, 1966. Robert S. Mulliken at the Franck Memorial Symposium

Box 20

Folder 49

Chicago, 1966. William Klemperer at the Franck Memorial Symposium

Box 20

Folder 50

Chicago, 1966. Franck Memorial Symposium. (Left, standing) Hermann Lisco. (Seated, left to right) Gerhard Herzberg, Edward Teller

Box 20

Folder 51

Chicago, 1966. Lewis M. Branscomb lecturing that the Franck Memorial Symposium

Box 20

Folder 52

Chicago, 1966. Franck Memorial Symposium. (Left to right) Lewis M. Branscomb, Norman Nachtrieb, unidentified, Edward Teller, William Evers, unidentified, Harold Friedman?, Harold Feder, two unidentified persons

Box 20

Folder 53

Chicago, 1966. Franck Memorial Symposium. (First row, left to right) Lewis Branscomb, Carter J. Harrar, Robert Platzman, Hertha Sponer-Franck, Robert Mulliken, Friedrich Hund, William Klemperer, George Hammond, Edward Teller, Gerhard Herzberg, Arthur von Hippel. (Second row, left to right) Martin Kamen, Gerhardt Rathenau, R. Stephen Berry, Norman Nachtrieb, Dagmar von Hippel, Hilde Levi, unidentified, Sol Weller, Peter von Hippel, Franck von Hippel, Mark Inghram. (Third row, left to right) Three unidentified persons, Alfred Kastler, Hermann Lisco, Thomas Lisco, Elisabeth Lisco, Heinz Maier-Leibniz, Lothar Meyer. (Standing, left in white shirt) James Mooney. (Standing, right) Henry Taube, Theodore J. Neubert, unidentified

Box 20

Folder 54

Chicago, 1966. Franck Memorial Symposium. (First row, left to right) Karl F. Herzfeld, George Hammond, two unidentified persons, Friedrich Hund, unidentified, Eugene Rabinowitch, Gerhard Herzberg, Dagmar von Hippel, Arthur von Hippel, Peter von Hippel? (Second row, left to right) Unidentified, Robert Platzman, Martin Kamen, Joseph E. Mayer, Edward Teller, Maria Goeppert-Mayer, Robert Livingston, Sol Weller, unidentified, Elisabeth Lisco, Lothar Nordheim?, unidentified. (Third row, left to right) Two unidentified persons, Juergen Hinz, Charles Herzfeld (nephew of Karl) or Harold Friedman?, Lewis Branscomb, two unidentified persons, Franck von Hippel, Hermann Lisco, Thomas Lisco, Ugo Fano, unidentified, Heinz Maier-Leibniz. (Fourth row, left to right) Unidentified, Bernard Friedman

Box 20

Folder 55

Max Planck. Printed photograph

Box 20

Folder 56

Niels Bohr

Box 20

Folder 57

Robert von Hippel holding grandson Arndt von Hippel and James Franck holding grandson Peter von Hippel, ca. 1935

Box 20

Volume 1

St. Peter, Minnesota, May 4, 1963. Photograph album of the Nobel Science Hall dedication at Gustavus Adolphus Colege. 35 photographs with identifying captions

Series IV: Personal Documents and Memorabilia

Subseries 1: Documents

Box 20

Folder 58

"Stammbaum Franck-Drucker," ca. 1928. Typescript (photocopy), 35 leaves, numbered 1-2, 1-10a, 11-19

Box 21

Folder 1

Autobiographical data compiled by Mrs. Norene Mann, Franck's secretary at the University of Chicago

Box 21

Folder 2

Birth certificate, 1882, and duplicates issued 1935, 1940

Box 21

Folder 3

Secondary school diploma, Wilhelm-Gymnasium, Hamburg, February 3, 1902

Box 21

Folder 4

Award from the Police Commissioner of Berlin for rescuing two children from drowning in the Spree River, July 28, 1904

Box 21

Folder 5

Marriage certificate for James Franck and Ingrid Josephson, Goteborg, Sweden, December 23, 1907

Box 21

Folder 6

Certificate of Ingrid Josephson Franck's change of residence from Goteborg to Berlin, Goteborg, Sweden, December 26, 1907

Box 21

Folder 7

Certificate of origin, Hamburg, November 23, 1907

Box 21

Folder 8

Vaccination certificates, Hamburg, June 27, 1883, December 3, 1894, October 8, 1895, and October 11, 1896

Box 21

Folder 9

X-ray of James Franck's forearm, Hamburg, April 7, 1896. With correspondence and papers about this, the first X-ray taken in Hamburg. (See p. 97; Franck's account of this X-ray is included in the tape recording dated October 19, 1960.)

Box 21

Folder 10

Army enlistment instructions, n. d.

Box 21

Folder 11

Soldier's pay book, 1914-1915

Box 21

Folder 12

Physician's statement of Franck's prospects for returning to active military service after his illness, January 4, 1916

Box 21

Folder 13

Hanseatic Cross, awarded by the Senate of the City of Hamburg, January 11, 1916

Box 21

Folder 14

Iron Cross, Second Class award, February 23, 1916. Presented March 30, 1915

Box 21

Folder 15

Iron Cross, First Class award, February 23, 1918

Box 21

Folder 16

Discharge papers, November 25, 1918 and January 10, 1919

Box 21

Folder 17

Record of war service for widow's pension fund, Göttingen, August 20, 1928

Box 21

Folder 18

Appointment as professor at Friedrich Wilhelm University in Berlin, September 19, 1916

Box 21

Folder 19

Contract with Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry, Berlin, January 10, 1919

Box 21

Folder 20

Notices of appointment as professor in the Philosophical Faculty, Göttingen. Berlin, November 15, 1920

Box 21

Folder 21

Copy of birth certificate for Ingrid Josephson, Goteborg, Sweden, May 6, 1935

Box 21

Folder 22

Police registration of residence, Göttingen, May 17, 1934 and May 6, 1925

Box 21

Folder 23

German passport, Göttingen, August 19, 1922

Box 21

Folder 24

Household insurance policy, Berlin, December 20, 1921

Box 21

Folder 25

Instructions for emigration from Germany, September 4, 1933

Box 21

Folder 26

United States naturalization papers, 1937. Typescript (photocopy), 3 leaves

Box 21

Folder 27

Pass for admission to G. H. Jones Laboratory, University of Chicago, November 19, 1942

Box 21

Folder 28

Marriage certificate of James Franck and Hertha Sponer, Durham, North Carolina, June 29, 1946. Photocopy

Box 21

Folder 29

United States of America passport, March 11, 1958

Box 21

Folder 30

Forms and memoranda relating to Franck's appointment at the University of Chicago, 1938, 1957, 1960-1964. Photocopies, 8 leaves

Subseries 2: Clippings

Box 21

Folder 31

"Making Sugar Out of Light, A Plant Secret; Hopkins Physicist Seeks to Unveil the Manufacturing Mystery of Nature," The Baltimore Sun, March 27, 1938

Box 21

Folder 32

"Nobel Prize Winner Franck Joins Department of Physical Chemistry," The Daily Maroon, May 13, 1938. University of Chicago student newspaper

Box 21

Folder 33

Clippings on the Congress for Science and Freedom in Hamburg. Hamburger Abendblatt, July 24, 1953. Die Neue Zeitung, July 25/26, 1953. Welt am Sonntag, July 26, 1953

Box 21

Folder 34

"Science Future, Topic of Dreamer and Doer," The Milwaukee Journal, February 10, 1955

Box 21

Folder 35

"...Und Fuehre Uns Nicht in Versuchung," Der Spiegel, May 22, 1957

Box 21

Folder 36

Clippings on award of Dannie-Heineman Prize to James Franck. Gottinger Presse, February 12, 1962

Box 21

Folder 37

"Beruhmter 'eiserner' Abiturient," [unidentified source, 1962]

Box 21

Folder 38

Clippings on award of doctorate honoris causa by Justus-Liebig University, Giessen, Germany. Giessener Hochschulblaetter, July 23, 1962. Anzeiger, July 3, 1962. Freie Presse, July 3, 1962

Box 21

Folder 39

Clippings on James Franck's eightieth birthday, August 26, 1962. Nature, no. 25 [1962]. Physikalische Blaetter, Heft 8, 1962. Freie Presse, June 30 and July 1, 1962. Die Welt, August 25, 1962. Aufbau, August 21, 1962

Box 21

Folder 40

Clippings on the Lindau Conference of Nobel Prize Winners. Frankfurter Allgemeine Zeitung, July 3, 1962

- E. Brucke, "Gipfeltreffen der Physiker," Physikalische Blaetter, Heft 9, 1962

Box 21

Folder 41

Clippings on the Dedication of the Nobel Science Hall, Gustavus Adolphus College, St. Peter, Minnesota.. Minneapolis Morning Tribune, May 4, 1963. Mankato Free Press, May 6, 1963

Box 21

Folder 42

"Radiation Chemistry N. D. Topic," The South Bend Tribune, September 3, 1963

Box 21

Folder 43

Miscellaneous clippings

Subseries 3: Biographies and Obituaries

Box 21

Folder 44

James Franck and Robert Pohl, "Emil Warburg zum 85. Geburtstag," Vossische Zeitung, March 10, 1931

Box 21

Folder 45

James Franck, "Ein Geburtstagsgruss an Max Born!" Physikalische Blaetter, Heft 12, 1962

Box 21

Folder 46

- James Franck, "Niels Bohrs Personlichkeit," Die Naturwissenschaften 9 (1963)
- James Franck, Drafts. Holograph, 32 leaves; holograph, 7 leaves, numbered 1-7; typescript, 7 leaves, numbered 1-7

Box 21

Folder 47

James Franck, Notes for Einstein obituary. Holograph, 1 leaf

Box 21

Folder 48

James Franck, "Max von Laue, 1879-1960," Yearbook of the American Philosophical Society, 1960

Box 21

Folder 49

Werner Kroebel, "Zum 70. Geburtstag von James Franck," Die Naturwissenschaften, Heft 17, (1952)

Box 21**Folder 50**

Peter Pringsheim, "James Franck (In Honor of His 70th Birthday, August 26, 1952)," Reviews of Modern Physics 24 (July 1952) 117-119

Box 21**Folder 51**

- W. Kroebel, "Zum Tode von James Franck," Die Naturwissenschaften Heft 18 (1964)
- Otto Warburg, "Bemerkung zu dem Nachruf von W. Kroebel auf James Franck," Die Naturwissenschaften Heft 23 (1964)

Box 21**Folder 52**

Gustav Hertz, "James Franck 21.5.1964," Annalen der Physik Band 15, Heft 1-2 (1965)

Box 21**Folder 53**

Jerome L. Rosenberg, "In memoriam Professor James Franck," Journal of Theoretical Biology 7 (1964)

Box 21**Folder 54**

- H. G. Kuhn, "James Franck, 1882-1964," Biographical Memoirs of Fellows of the Royal Society 11 (November 1965)
- H. G. Kuhn, Typescript (photocopy) with holograph corrections, 24 leaves)

Box 21**Folder 55**

"In Memoriam James Franck, May 21, 1964. Göttingen, Germany," The University of Chicago Calendar; June 1-14, 1964

Box 21**Folder 56**

Notices of Franck's death. Chicago Tribune and Chicago Sun-Times, May 22, 1964

Box 21**Folder 57**

Akademie der Wissenschaften in Göttingen, "Nachruf auf James Franck vom 25 Mai 1964." Typescript, 2 leaves, numbered 1-3. With postcard of hall in which Göttingen memorial was held

Box 21**Folder 58**

Max Born and Wilhelm Westphal, "James Franck, Hamburg 26 August 1882-Göttingen 21 Mai 1964," Physikalische Blätter 7 (1964)

Box 21**Folder 59**

Lise Meitner, "Prof. James Franck, For. Mem. R. S.," Nature 203 (August 29, 1964) 916

Box 21**Folder 60**

D. Walther Zimmerli, Rector of Georg-August University, Dr. phil. James Franck. Printed death notice, 2 leaves

Box 21

Folder 61

E[ugene] R[abinowitch], "[James Franck] 1882-1964, [Leo Szilard] 1898-1964," Bulletin of the Atomic Scientists October, 1964. Photocopy

Box 21

Folder 62

Robert Franck, Die Rechtstellung des mittelbaren Besitzers (Hamburg, 1910). Doctoral dissertation inscribed "Sept. 1910. s[einem] l[ieben] Bruder, in Liebe der Verfasser."

Box 21

Folder 63

Otto Oldenburg, "James Franck in Göttingen," American Journal of Physics 39 (January 1971) 41-43

Box 21

Folder 64

Miscellaneous personal notes

Box 21

Folder 65

Occasional poem for Franck's departure from the Kaiser Wilhelm Institute, Berlin-Dahlem, 1920. Holograph in the hand of Lise Meitner, 4 leaves

Box 22

Alessandro Volta medal, 1927. Bronze? 6 cm. In diameter

Box 22

National Academy of Sciences Centennial medals, 1963. Bronze. 7 and ½ cm. in diameter

Box 22

Benjamin Count Rumford medal, 1955. American Academy of Arts and Sciences. Gold. 6 and ½ in diameter

Box 22

Max Planck medal, 1951. Deutsche Physikalische Gesellschaft. Bronze. 8 cm. in diameter

Box 22

Max Planck medal, 1958. Deutsch Akademie der Wissenschaften zu Berlin. Copper. 6 cm. in diameter

Box 22

Nobel Prize medal, 1925. Recast 1951. Gold. 6 and ½ cm. in diameter

Subseries 4: Memorabilia; Scrolls, Certificates, Medals, Mementos

Box 23

James Franck, August 26, 1952. Seventieth birthday book containing letters of congratulations and photographs

Box 23

Folder 1

Correspondence related to the planning of the Seventieth birthday book and related commemorations from the following persons;

Box 23

Folder 2

Seventieth birthday book; manuscript and lists

Box 23

Folder 3

Seventieth birthday book; cover letters from contributors whose names are marked with asterisks in the list above

Box 23

Folder 3a

Georg August-Universität zu Göttingen, Amtliches namenverzeichnis, Winterhalbjahr, 1927/28. Verzeichnis der Vorlesungen, Sommerhalbjahr, 1928. Göttingen; Dieterichsche Universitäts-Buchdruckerei, W. Fr. Kaestner, 1928). Printed program, pp. I-XII, 1-43

Box 23

Folder 4

Certificates

- Public announcement of James Franck's inaugural lecture marking his appointment to the *venia legendi* (university lectureship), Friedrich Wilhelm University, Berlin, Germany. May 20, 1911
- Certificate of membership, Regia Societas Scientiarum Upsaliensis, Upsala. May 7, 1926
- Certificate of membership, Academy of Sciences of the Union of Soviet Socialist Republics, Moscow. February 2, 1927. With cover letter and German translation
- Certificate of membership, California Chapter of the Society of Sigma Xi. May 24, 1928
- Certificate of Foreign Honorary Membership, American Academy of Arts and Sciences, Boston, Massachusetts. May 8, 1929
- Announcement of the appointment of James Franck as secretary, Academia Scientiarum Borussica, Berlin, Germany. October 31, 1929. Signed by Max Rubner and Max Planck
- Certificate of membership, American Physical Society. November 29, 1929
- Certificate of fellowship, American Physical Society. September 10, 1931
- Certificate of membership, Royal Academy of Sciences of Copenhagen. April 6, 1934
- Certificate of honorary membership, La Societe de Physique et d'Histoire Naturelle de Geneve. July 5, 1934
- Letter notifying James Franck of his election to the American Philosophical Society, Philadelphia, Pennsylvania. April 23, 1937
- Certificate of participation in the Manhattan District Project, August 6, 1945
- Certificate of membership, the New York Academy of Sciences, New York, New York. March 23, 1961
- Certificate, Dannie-Heineman Prize for work in photosynthesis. Die Akademie der Wissenschaften zu Göttingen. January 19, 1962

Box 23

Folder 5

Certificates in original containers

- Certificate, Nobel Prize for Physics, 1925. Kungliga Svenska Vetenskaps-Akademien, Stockholm. December 10, 1926. In a blue box
- "Hochansehnliche Versammlung!" text of acceptance speech for Nobel Prize

- Certificate of honorary citizenship, City of Göttingen. June 28, 1953. In a beige box with attached seal in a leather case
- Certificate of fellowship, The Royal Society, London. April 22, 1964. In a red cylinder

Box 23

Folder 6

Diplomas;

- Doctorate of laws honoris causa, University of California, Berkeley, California. March 23, 1928
- Doctorate to commemorate Franck's 50th doctorate jubilee, Humboldt University, Berlin. June 30, 1956
- Doctorate honoris causa, Christian Albert University, Kiel. May 10, 1961
- Doctorate honoris causa, Justus Liebig University, Giessen. July 2, 1962
- Doctorate honoris causa, University of Notre Dame du Lac, South Bend, Indiana. September 1, 1963

Box 23

Folder 7

Diploma in original container;

- Doctorate honoris causa, Ruprecht-Karl University, Heidelberg. August 26, 1957. In a tan cylinder

Box 24

Folder 1

- Doctorate, Gustavus Adolphus College, St. Peter, Minnesota. May 4, 1963
- Dedication Program, The Nobel Hall of Science. Printed program

Box 24

Folder 2

Doctorate, Duke University, Durham, North Carolina. June 1, 1964

Series V: Robert Platzman's Editorial Papers for the "Selected Works of James Franck"

Box 24

Folder 3

Correspondence

- Blakett, P. M. S
- Born, Max
- Burton, Milton
- Fano, Ugo
- Gaffron, Hans
- Gunning, Harry E.
- Hahn, Otto
- Hanle, W.
- Hertz, Gustav
- Hertz, Helmut
- Herzberg, Gerhard
- Kuhn, Heinrich
- Levi, Hilde
- Lisco, Hermann

- Livingston, Robert.
- Loomis, F. W.

Box 24

Folder 4

Correspondence

- Meitner, Lise
- Meyer, Lothar
- Nachtrieb, Norman
- Oldenberg, Otto
- Pohl, Robert
- Rabinowitch, Eugene
- Reiche, Fritz
- Rosenberg, Jerome L
- Scheibe, G
- Spomer-Franck, Hertha
- Sugarman, Nathan
- Taube, Henry
- Teller, Edward
- Turner, Louis A.
- University of Chicago Press
- Von Hippel, Arthur, with correspondence from Dagmar von Hippel
- West, W.

Box 24

Folder 5

Minutes of the Franck Symposium Committee

Box 24

Folder 6

R. F. Barrow and H. G. Kuhn, "Comments on the papers by Franck, Kuhn, and Rollefson." Typescript with corrections in an unidentified hand, 6 leaves, numbered 1-4

Box 24

Folder 7

Patrick M. S. Blackett, "James Franck Memorial Volume." Typescript, 6 leaves, numbered 1-6

Box 24

Folder 8

Max Born, "Remarks to the paper; M. Born and J. Franck 'Quantentheorie und Molekelbildung,' Zeitschrift fur Physik 31 (1925) p. 411." Typescript with corrections in the author's hand, 2 leaves, numbered 1-2

Box 24

Folder 9

Harry E. Gunning, "'Über die Ausloschung der Resonanzfluoreszenz des Quecksilbers durch Gaszusatz' by G. Cario and J. Franck, Zeitschrift fur Physik 37(1926) pp. 619-624." Photocopy, 7 leaves, numbered 1-7

Box 24

Folder 10

- Wilhelm Hanle, "Essay for J. Franck 'Über Lichtenregung und Ionisation von Atomen und Molekulan durch Stosse langsamer Elektronen,'" *Physikalische Zeitschrift* 22 (1921) pp. 388-391, 409-414, 441-448, 466-471." Typescript, 5 leaves, numbered 1-5.
- English translation of the above. Typescript, 6 leaves, numbered 1-6

Box 24

Folder 11

- Gustav Hertz, "Zur Geschichte unserer Versuche ueber den Energie-austausch zwischen langsamen Elektronen und Atomen." Typescript, with corrections in the author's hand, 11 leaves, numbered 1-11
- Cover letter, Gustav Hertz to Robert Platzman, February 21, 1966

Box 24

Folder 12

Gerhard Herzberg, "notes on Franck's Faraday Society paper; 'Elementary Processes of Photochemical Reactions.'" Typescript, 4 leaves, numbered 1-4

Box 24

Folder 13

Hilde Levi, Untitled manuscript beginning "In retrospect, it seems justified to say that James Franck's stay in Copenhagen (1934-1935)...." Typescript, 3 leaves, numbered 1-3

Box 24

Folder 14

Robert Livingston, Untitled manuscript beginning "Twenty-five years ago, when this paper was written, the study of the spectroscopy and photochemistry of polyatomic molecules..." Typescript with corrections in the author's hand, 1 leaf

Box 24

Folder 15

- F. W. Loomis, "Comments for possible inclusion with reprints of a paper by R. W. Wood and J. Franck entitled "Transformation of a Resonance Spectrum Into a Band Spectrum by Presence of Helium.'" Typescript, 2 leaves, numbered 1-2
- Cover letter, F. W. Loomis to Robert Platzman, March 18, 1966
- Second draft of the above. Typescript, 3 leaves, numbered 1-3
- Cover letter, F. W. Loomis to Robert Platzman, April 1, 1966

Box 24

Folder 16

Otto Oldenberg, "Collisions of the Second Kind." Typescript with corrections in the author's hand, 3 leaves

Box 24

Folder 17

Otto Oldenberg, "Excitation of Molecular Vibration by Electron Impact." Typescript with corrections in the author's hand, 2 leaves

Box 24

Folder 18

- Robert W. Pohl, "Erinnerungen an das physikalische Institut der Berliner Universitaet waehrend der Studien-und Assistenten-jahre J. Francks." Typescript with corrections in the author's hand, 5 leaves, numbered 1-5
- English translation of the above. Typescript with corrections in Lothar Meyer's hand, 5 leaves, numbered 1-5

Box 24**Folder 19**

- Robert W. Pohl, "Zur Einfuehrung in J. Francks Arbeit; 'Ueber die Ionenbeweglichkeit in Argon und den Einfluss geringer Mengen Sauerstoffs auf diese Groesse,' Verhandlungen der Deutschen Physikalischen Gesellschaft 12 (1910) p. 219." Typescript with corrections in the author's hand, 4 leaves, numbered 1-4
- English translation of the above. Typescript with corrections in Lothar Meyer's hand, 5 leaves, numbered 1-5

Box 24**Folder 20**

Eugene Rabinowitch, "James Franck-1882-1964." Typescript (photocopy) with corrections in the author's hand, 26 leaves, numbered 1-12

Box 24**Folder 21**

Eugene Rabinowitch, "Notes to F[ranck]/R[abinowitch] Paper." Typescript, 1 leaf

Box 24**Folder 22**

- Gunther Scheibe, "Zur Entstehung der Arbeit; Über Absorptions-spektren negativer Haolgenionen in Losung,' von J. Franck und G. Scheibe, Zeitschrift fur physikalische Chemie A139" (1928) p. 22. Typescript with corrections in the author's hand, 6 leaves, numbered 1-6
- English translation of the above. Typescript with corrections in the hand of Lothar Meyer, 5 leaves, numbered 1-5

Box 24**Folder 23**

Edward Teller, Untitled manuscript beginning "One third of a centry ago I arrived in Göttingen as a quite newly-baked physicist." Typescript, 2 leaves

Box 24**Folder 24**

Louis A. Turner, "Comments on the Paper by G. Cario and J. Franck entitled 'Über Zerlegung von Wasserstoffmolekulen durch Angeregte Quecksilberatome,' Zeitschrift fur Physik 11 (1922) p. 161." Typescript with corrections in the author's hand, 6 leaves, numbered 1-6

Box 24**Folder 25**

Arthur von Hippel, "A. von Hippel and J. Franck; 'The Electric Breakdown and Townsend's Theory,' Zeitschrift fur Physik 57 (1929) p. 626." Typescript, 1 leaf

Box 24**Folder 26**

"Possible Content of 'Selected Papers of James Franck," RLP June 26, 1965." Typescript, 2 leaves Typescript (photocopy) with holograph corrections, 2 leaves

Box 25**Folder 1**

- Robert Platzman's Bibliography of the Publications of James Franck. Typescript, 13 leaves, numbered 1-13

- Comments on the Bibliography by Robert Platzman. Typescript, 4 leaves, numbered I-iv

Box 25

Folder 2

"Franck; Bibliography I (ca. 1959)." Typescript (mimeograph copy), 9 leaves, numbered SA 1-SA 5 and CA 1-CA 4

Box 25

Folder 3

"Franck; BibliographII (April, 1965), (incomplete)." Typescript (photocopy), 6 leaves, numbered 1-6

Box 25

Folder 4

"Franck; Bibliography III (Master Copy)." Typescript (photocopy) with corrections in the author's hand, 15 leaves, numbered 1-13

Box 25

Folder 5

"Comments on the Bibliography." Typescript (photocopy) with corrections in the author's hand, 4 leaves, numbered I-iv

Box 25

Folder 6

"Private Commentary on Bibliography. Remarks on Style (plus questions)." Typescript, 1 leaf

Box 25

Folder 7

- "Some Comments by von Hippel and Oldenberg (RLP visit to Cambridge, 7-13-65)." Typescript, 2 leaves, numbered 1-2
- Photocopy of above, with holograph corrections, 2 leaves, numbered 1-2

Box 25

Folder 8

Robert L. Platzman's notes on his bibliography of James Franck. Holograph, 8 leaves

Box 25

Folder 9

- Robert L. Platzman's notes on possible additions to Franck bibliography, May 21, 1973. Holograph, 1 leaf
- Six offprints of James Franck articles considered for addition to the Franck bibliography

Box 25

Folder 10

Offprints of James Franck publications. Platzman numbers 1-15. Photocopies

Box 25

Folder 11

Offprints of James Franck publications. Platzman numbers 16-30. Photocopies

Box 25

Folder 12

Offprints of James Franck publications. Platzman numbers 31-45. Photocopies

Box 25

Folder 13

Offprints of James Franck publications. Platzman numbers 46-60. Photocopies

Box 25

Folder 14

Offprints of James Franck publications. Platzman numbers 61-75. Photocopies

Box 25

Folder 15

Offprints of James Franck publications. Platzman numbers 76-90

Box 25

Folder 16

Offprints of James Franck publications. Platzman numbered 91-105

Box 25

Folder 17

Offprints of James Franck publications. Platzman numbers 106-120

Box 26

Folder 1

Offprints of James Franck publications. Platzman numbers 121-135

Box 26

Folder 2

Offprints of James Franck publications. Platzman numbers 136-150

Box 26

Folder 3

Offprints of James Franck publications. Platzman numbers 151-159

Box 26

Folder 4

"Franck III; Miscellaneous Publications." Offprints numbered a-j

Box 26

Folder 5

- University of Chicago, Office of Radio and Television, content-summary of two tape recordings (described below), distributed to radio stations as two one-hour programs, March 1976. Typescript (printed), 2 leaves
- Recording of Center for Policy Study symposium honoring James Franck, "The Socially Responsible Scientist and Public Policy." The University of Chicago, December 9, 1975. Morning session; "Historical Perspective from the Atomic Scientists." 2 seven-inch reels

Box 26

Folder 6

Recording of Center for Policy Study symposium honoring James Franck, Afternoon session; "Social Responsibility; Genetic Intervention and Human Experimentation." 2 seven-inch reels

Box 26

Folder 7

James Franck, "Medical Benefits from Atomic Research." Radio Talk recorded WBBM, Chicago. Tape recording of transcription disk dated 2:45 p.m., December 16, 1945. Seven-inch reel

Series VI: Addenda

Subseries 1: Correspondence between James Franck and his nephew and Dr. Heinz Kallman

Box 27

Folder 1

Jan 1932-Dec 1938

Box 27

Folder 2

Correspondence between James Franck and Dr. Heinz Kallman and other relatives, 1939

Box 27

Folder 3

1940-1942

Box 27

Folder 4

Correspondence between James Franck (Onkel) and Dr. Heinz Kallman, copies of "The Appeal," 1943-1949

Box 27

Folder 5

1950-1954

Box 27

Folder 6

1955-1958

Box 27

Folder 7

1959-1961

Box 27

Folder 8

- Copy of holograph (and typed translation) from Franck daughter, "Daggie" to her grandparents describing the "Torch Parade" given to Franck by his students on the reception of his Nobel prize, 27 Nov 1926
- Letter from Franck's daughter bequeathing her sister's "Torch Parade" letter to the SCRC at the University of Chicago
- photograph of students with torches
- Franck's certification of Naturalization, 21 July 1941, the backside bears the stamp indicating that a passport was applied for 2 Mar 1950
- Letter from Robert Lowenthal to Mr. and Mrs. Herman Lisco regarding the exhibition of Franck's items

Box 27

Folder 9

Drafts by Franck

- "Meine hochverehrten Anwesenden!"
- "Flureszenz un Phosphoreszenz"

Box 27

Folder 10

Publications

- N. Bohr, Atomernes Bygning og Stoffernes fysiske og kemiske Egenskaber, 1922

- On the Quantum Theory of Line-Spectra (Parts I and 2), 1918

Box 27

Folder 11

Max Born, Untersuchungen über die Stabilität der elastischen Linie in Ebene und Raum, unter verschiedenen Grenzbedingungen

Box 27

Folder 12

Book, Dr. J. Franck and Dr. P Jordan, Anregung von Quantensprüngen durch Stöße, 1926, signed by Franck on 19 April 1926

Subseries 2: Oversize

Box 28

Folder 1

Curve diagrams

Box 28

Folder 2

Certificates and Diplomas

Box 29

University banner

Box 29

Benjamin Count Rumford Award