

# Guide to the Lars Onsager Papers

MS 794



by Susan Grigg

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## Collection Overview

**REPOSITORY:** Manuscripts and Archives  
Yale University Library  
P.O. Box 208240  
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**CALL NUMBER:** MS 794

**CREATOR:** Onsager, Lars, 1903-1976

**TITLE:** Lars Onsager papers

**DATES:** 1926-1977

**PHYSICAL DESCRIPTION:** 16 linear feet (16,000 frames)

**LANGUAGE:** English

**SUMMARY:** The papers consist of correspondence, research materials for articles and lectures, teaching materials related to Yale University and the University of Miami, and citations for awards received by Lars Onsager, notably the Nobel Prize in 1968.

**ONLINE FINDING AID:** To cite or bookmark this finding aid, please use the following link: <https://hdl.handle.net/10079/fa/mssa.ms.0794>

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## Requesting Instructions

To request items from this collection for use in the Manuscripts and Archives reading room, please use the request links in the HTML version of this finding aid, available at <https://hdl.handle.net/10079/fa/mssa.ms.0794>.

To order reproductions from this collection, please go to [http://www.library.yale.edu/mssa/ifr\\_copy\\_order.html](http://www.library.yale.edu/mssa/ifr_copy_order.html). The information you will need to submit an order includes: the collection call number, collection title, series or accession number, box number, and folder number or name.

Key to the container abbreviations used in the PDF finding aid:

b.      box  
f.      folder

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## Administrative Information

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### Immediate Source of Acquisition

Originals deposited by Margarete Adleter Onsager, 1977 and 1979. Originals removed by family in 1982 and placed in the Norwegian University of Science and Technology.

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## Conditions Governing Access

Original audiovisual materials, as well as preservation and duplicating masters, may not be played. Researchers must consult use copies, or if none exist must pay for a use copy, which is retained by the repository. Researchers wishing to obtain an additional copy for their personal use should consult Copying Services information on the Manuscripts and Archives web site.

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## Conditions Governing Use

The entire collection, with the exception of Restricted Material, is available on microfilm. Patrons must use FILM HM122 instead of the originals.

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## Preferred Citation

Lars Onsager Papers (MS 794). Manuscripts and Archives, Yale University Library.

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## Existence and Location of Originals

The originals are held by the Norwegian University of Science and Technology.

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## Biographical / Historical

Lars Onsager was a chemist and university professor. He taught at Johns Hopkins University in 1928; at Brown University, 1928-1933; and at Yale University, 1933-1972. Onsager was the winner of the Nobel Prize in chemistry in 1968. He was the recipient of numerous awards and honorary degrees, and the author of many articles.

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## Scope and Contents

Lars Onsager was Yale University's first resident Nobel Laureate, receiving the prize in chemistry in 1968 for his discovery of the Onsager reciprocal relations in the thermodynamics of irreversible processes. His papers are almost entirely related to his professional career and contain research materials, descriptions of his scientific projects, writings and speeches. While the range of materials coincides almost exactly with his long tenure at Yale University, the bulk of the papers are concentrated in the 1960s and 1970s. The personal materials are confined to Series VII (BIOGRAPHICAL MATERIAL) which contains memoirs, interviews, photographs and family history. The papers are arranged in eight series.

Series I, CORRESPONDENCE, contains only a small fraction of the letters that Onsager must have received and sent in his career. (Additional correspondence will be found in Series II-VI, filed topically as Onsager left it.) Most are from the mid-1960s or later. The incoming letters far outnumber the copies of the outgoing, and the latter are particularly concentrated in the last few years of Onsager's life. A few letters contain substantive scientific discussion, but most are routine.

Series II, RESEARCH MATERIAL, consists of scientific notes arranged by topic together with related manuscripts, correspondence and printed matter. Folders in this series are grouped in the following thirteen categories, each representing an area of Onsager's research: *Dielectrics, Electrolytes, Ice, Irreversible Processes, Thermal Diffusion, Ising Model, Metals and Semiconductors, Liquid Helium, Hydrodynamics, Surface Tension, Origin of Life, Mathematics, and Unclassified*. The contents of each

folder remain exactly as Onsager left them; no reorganizing of the research material was done in any of the folders.

Series III, WRITINGS, consists of three sections: *Publications*, *Pre-Publication Material* and *Lecture Series*. The first two sections are keyed to the bibliography of Onsager's works published by the Royal Society in 1978. Also included in the papers are several titles not listed in the bibliography. *Pre-Publication Material* contains manuscripts and editorial matter preliminary to publication for about half of Onsager's publications, as well as several unpublished manuscripts. *Lecture Series* consists of edited transcripts of Onsager's classroom lectures at Yale University and the University of Miami. (Series II and IV also contain some texts of Onsager lectures.)

Series IV, CONFERENCES, contains correspondence, programs, abstracts, transcripts of papers and other documentation of scientific meetings. These papers are arranged in two sections: *Onsager Text* and *No Onsager Text*. In the first category the researcher will find either a text or abstract of a paper delivered by Onsager at the conference.

Series V, PROJECTS & INSTITUTIONS, consists of correspondence, financial records and memoranda of meetings connected with Onsager's activities as the principal investigator in numerous research projects. The sponsoring government agencies which awarded grants to Onsager include: the Air Force Office of Scientific Research, the Atomic Energy Commission, the National Institute of Health, the National Science Foundation and the Office of Naval Research. In addition to the records of his work at Yale University and the University of Miami, this series contains correspondence and other papers showing his participation in projects at other institutions: viz: the Neurosciences Research Program at MIT, as Fulbright Scholar at Cambridge University, Gauss Professor at the University of Göttingen and Lorentz Professor at the University of Leiden. His projects at Yale University are documented only from 1961.

Series VI, AWARDS & HONORS, consists of correspondence, programs, congratulatory letters and texts of presentations related to Onsager's receipt of the Nobel Prize and several other awards, as well as conferences arranged in his honor. Included here are also the texts of Onsager's lectures or remarks on these occasions.

Series VII, BIOGRAPHICAL MATERIAL, consists of clippings, photographs, and biographical sketches.

Series VIII, WRITINGS OF OTHERS, contains preprints, reprints and other writings by scientists other than Lars Onsager. Some of the items carry a few words of greeting or dedication from the author. (Similar material is kept, as Onsager filed it, in Series I-II and IV-VI.)

The Lars Onsager Papers were deposited in the Yale University Library by his widow, Margarete Arledter Onsager in 1977 and 1979. Stefan Machlup of Case Western Reserve University and Philip A. Lyons, William W. Watson, Raymond M. Fuoss, Andrew Patterson, Jr. and Derek Leaist of Yale University kindly helped arrange the research material in Series II.

A tape recording of an interview with Onsager made after a Conference on the Theory of Irreversible Thermodynamics [1955?], made by Manuscripts and Archives from a copy in the possession of Stefan Machlup, has been transferred to Historical Sound Recordings.

The microfilm of the Lars Onsager Papers was produced by the Yale University Library Photographic Services Department during the summer of 1981 with funding provided by the Yale University Department of Chemistry. The film consists of material selected from the Lars Onsager Papers on deposit in Manuscripts and Archives and a few items loaned by the Kline Science Library. The papers were filmed in the order in which they are arranged as Manuscript Group Number 794. [1] A copy of the register, annotated with reel numbers, appears on the first reel of the film and serves as a guide to the film. [2]

In choosing material to be filmed the following criteria were used:

[1] Though all oversize material is stored in a folio at the end of the collection, on the film it appears in context with other related material

[2] After the filming a small amount of reprocessing took place; therefore a careful researcher may notice occasional discrepancies between the register and the film.

## **Arrangement**

The collection is arranged in eight series and includes restricted and oversize material: I. Correspondence, 1930-1976, n.d. II. Research Material, [pre-1930?]-1976. III. Writings, 1926-1977. IV. Conferences, 1935-1977. V. Projects and Institutions, 1946-1976. VI. Awards and Honors, 1952-1976. VII. Biographical Material, 1938, 1953-1978. VIII. Writings of Others, 1931-(1961-1976).

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## Collection Contents

### Series I: CORRESPONDENCE, 1930-1976, undated

1.5 linear feet (4 boxes)

The arrangement is alphabetical by correspondent except that a few folders with topical headings are at the end of the series. Folders marked with an asterisk contain ten or more items from the denoted correspondent.

b. 1, f. 1, reel 1reel 1U	Abramson, Harold A.(*)	1930-1933, undated
b. 1, f. 2, reel 1reel 1U	<i>Advances in Chemistry</i> English	1975
b. 1, f. 2, reel 1reel 1U	Allen, George R.	1973-1974
b. 1, f. 3, reel 1reel 1U	Alpha Chi Sigma Fraternity	1972-1974
b. 1, f. 3, reel 1reel 1U	Altschuler, Aubrey P.	1949
b. 1, f. 4, reel 1reel 1U	American Academy of Achievement	1971-1972
b. 1, f. 4, reel 1reel 1U	American Academy of Arts and Sciences	1949, 1973
b. 1, f. 5, reel 1reel 1U	<i>American Journal of Physics</i> English	1972-1975
b. 1, f. 6, reel 1reel 1U	American Philosophical Society	1960
b. 1, f. 6, reel 1reel 1U	American Physical Society	1975
b. 1, f. 7, reel 1reel 1U	<i>American Scientist</i> English	1975
b. 1, f. 7, reel 1reel 1U	Arledter, Hanns	1952
b. 1, f. 8, reel 1reel 1U	Asakawa, Junko	1976
b. 1, f. 8, reel 1reel 1U	Auslander, M. Arthur	1970, 1974
b. 1, f. 9, reel 1reel 1U	Bauer, E.	1945

Baxter, Glen

See: [box 13, folder 181](#)

b. 1, f. 9, reel 1 1U	Becker, R.	1952
b. 1, f. 10, reel 1 1U	Berman, Abraham S.	1972
b. 1, f. 10, reel 1 1U	Bernstein, Uri	1974
b. 1, f. 10, reel 1 1U	Best, Charley	1974
b. 1, f. 11, reel 1 1U	<i>BioSystems</i> (*) English	1974-1976
b. 1, f. 12, reel 1 1U	Blanch, Gertrude	1960
b. 1, f. 12, reel 1 1U	Blood, Frank A.	1974
b. 1, f. 13, reel 1 1U	Blüh, Otto	1949
b. 1, f. 14, reel 1 1U	Blumenthal, Robert	1972
b. 1, f. 14, reel 1 1U	Bose Institute	1975
b. 1, f. 14, reel 1 1U	Braun, Charles L.	1973
b. 1, f. 15, reel 1 1U	Brookhaven National Laboratory	1974
	Brooks, Jack E. See: <a href="#">box 9, folder 96</a>	
b. 1, f. 15, reel 1 1U	Brun, Thorvald S.	1947
b. 1, f. 16, reel 1 1U	Bullemer, Bernhard	1972
b. 1, f. 16, reel 1 1U	Burton, W.K.	1949
b. 1, f. 17, reel 1 1U	Careri, Giorgio	1972, 1974
b. 1, f. 17, reel 1 1U	Carlin, Richard L.	1972
b. 1, f. 18, reel 1 1U	Chandrasekaran, T.	1972
b. 1, f. 18, reel 1 1U	Chen, Mou-Shan	1974



b. 1, f. 19, reel 1reel 1U	Cole, Kenneth S. See: <a href="#">box 11, folder 144</a>	1970-1971
b. 1, f. 20, reel 1reel 1U	Cole, Robert H.	1975-1976
b. 1, f. 21, reel 1reel 1U	<i>Collective Phenomena</i> English	1972
b. 1, f. 21, reel 1reel 1U	Committee of Concerned Scientists	1975
b. 1, f. 22, reel 1reel 1U	Committee on Scholarly Communication with the People's Republic of China	1975
b. 1, f. 22, reel 1reel 1U	<i>Conceptual Physics</i> English	1970
b. 1, f. 23, reel 1reel 1U	Connecticut Academy of Arts and Sciences	1940
b. 1, f. 23, reel 1reel 1U	Connecticut Academy of Science and Engineering	1968
b. 1, f. 24, reel 1reel 1U	Coolidge, Albert Sprague	1944-1948, undated
b. 1, f. 25, reel 1reel 1U	Creekmore, Stephen	1963
b. 1, f. 25, reel 1reel 1U	Czerlinski, George	1969, 1975
b. 1, f. 25, reel 1reel 1U	Debye, Peter	1942
b. 1, f. 26, reel 1reel 1U	De Maeyer, L.	1973
b. 1, f. 26, reel 1reel 1U	Deutsch, Daniel H.	1972
b. 1, f. 26, reel 1reel 1U	Devreese, J.T.	1976
b. 1, f. 27, reel 1reel 1U	Doering, W. von E.	1955
b. 1, f. 27, reel 1reel 1U	Dole, Malcolm	1938
b. 1, f. 27, reel 1reel 1U	Domb, C.	1974
b. 1, f. 28, reel 1reel 1U	Donnelly, Russell J.	1973
b. 1, f. 28, reel 1reel 1U	Dresden, Max	1976

b. 1, f. 29, reel 1reel 1U	Drost-Hansen, Walter See: <a href="#">box 8, folder 69</a>	1968-1976
b. 1, f. 30, reel 1reel 1U	Drauglis, Edmund	1961
	Ducker, W.L. See: <a href="#">box 9, folder 92</a>	
b. 1, f. 30, reel 1reel 1U	Dunker, A. Keith	1976
b. 1, f. 31, reel 1reel 1U	Dunlop, Peter	post-1968
b. 1, f. 32, reel 1reel 1U	<i>Encyclopedia of Physics</i> English	1975
b. 1, f. 32, reel 1reel 1U	Fajans, Kasimir	1941
b. 1, f. 33, reel 1reel 1U	Falkenhagen, Hans(*)	1931-1933, 1947, 1954, 1964-1965
b. 1, f. 34, reel 1reel 1U	Federation of American Scientists	1975
b. 1, f. 34, reel 1reel 1U	Ferguson, Esmond S.	1974
b. 1, f. 34, reel 1reel 1U	Fernandez-Moran, H.	1969
b. 1, f. 35, reel 1reel 1U	Ferrer, Olga	1968
b. 1, f. 35, reel 1reel 1U	<i>Ferroelectrics</i> English	1969
b. 1, f. 36, reel 1reel 1U	Finkelstein, B.N.	1935
b. 1, f. 37, reel 1reel 1U	Fisher, Frederick H.	1975
b. 1, f. 37, reel 1reel 1U	Fisher, Michael E.	1970
b. 1, f. 38, reel 1reel 1U	Flaig, Julian V.	1947-1948
b. 1, f. 38, reel 1reel 1U	Flood, E. Alison	undated
b. 1, f. 38, reel 1reel 1U	Florida State University	1973

b. 1, f. 39, reel 1reel 1U	<i>Foundations of Physics</i> English	1969-1976
b. 1, f. 40, reel 1reel 1U	Fox, Sidney	1972
b. 1, f. 41, reel 1reel 1U	Franklin Institute	1973
b. 1, f. 41, reel 1reel 1U	Frauenfelder, Hans	1974
b. 1, f. 42, reel 1reel 1U	Free University of Berlin	1963
b. 1, f. 43, reel 1reel 1U	Friedman, Harold L.	1973
b. 1, f. 43, reel 1reel 1U	Friel, Edward	1975
b. 1, f. 43, reel 1reel 1U	Fuoss, Raymond M.	1934, 1937, 1961
	Furry, Wendell R. See: <a href="#">box 9, folder 78</a> See: <a href="#">box 9, folder 81</a>	
b. 1, f. 44, reel 1reel 1U	Gakken Co., Ltd.	1969
b. 1, f. 44, reel 1reel 1U	Garfield, Eugene	1970
b. 1, f. 45, reel 1reel 1U	Gemant, Andrew	1933
b. 1, f. 46, reel 1reel 1U	General Electric Company	1935
b. 1, f. 46, reel 1reel 1U	Gibbs, J.H.	1972
b. 1, f. 47, reel 1reel 1U	Glass, Leon	1975
b. 1, f. 47, reel 1reel 1U	Greathouse, Glenn A.	1935
b. 1, f. 48, reel 1reel 1U	Gross, Eugene P.	1953
	Gunter, Roy C., Jr. See: <a href="#">box 6, folder 36</a>	
b. 1, f. 48, reel 1reel 1U	Gutmann, Felix	1974

b. 2, f. 49, reel 1reel 1U	Hartman, Hyman	[1976?]
b. 2, f. 50, reel 1reel 1U	Hassel, Odd	1957, 1969
b. 2, f. 50, reel 1reel 1U	[Haupten?], K. English	1955
b. 2, f. 51, reel 1reel 1U	Hedvall, J.A.	1940
b. 2, f. 51, reel 1reel 1U	Hepp, Klaus	undated
b. 2, f. 52, reel 1reel 1U	Herzfeld, Karl F.	1973-1974
b. 2, f. 52, reel 1reel 1U	Hill, Terrell	[1976?]
	Hirschman, I.I., Jr. See: <a href="#">box 12, folder 161</a>	
b. 2, f. 53, reel 1reel 1U	Ho, Ren-jye	1976
b. 2, f. 54, reel 1reel 1U	Houston Memorial Lectureship Committee	1972
b. 2, f. 54, reel 1reel 1U	Hubbard, Joseph	1976
b. 2, f. 54, reel 1reel 1U	Huberman, Bernardo A.	1971
b. 2, f. 55, reel 1reel 1U	Hubmann, M.	1976
b. 2, f. 55, reel 1reel 1U	Hückel, Erich	1936, 1951-1952, 1975-76
b. 2, f. 56, reel 1reel 1U	Hui, Chui Shuen	1973-1976
b. 2, f. 56, reel 1reel 1U	Hyman, Edward S.	1969
b. 2, f. 56, reel 1reel 1U	Institute for Fundamental Studies Association	undated
b. 2, f. 57, reel 1reel 1U	Institute of History of Medicine & Medical Research	1972
b. 2, f. 57, reel 1reel 1U	Institute of Physics	1974-1975
b. 2, f. 58, reel 1reel 1U	International Center for Theoretical and Solid State Physics	1974

b. 2, f. 59, reel 1reel 1U	International Society for the Study of the Origin of Life	1974-1976
b. 2, f. 59, reel 1reel 1U	International Society of Quantum Biology	undated
b. 2, f. 60, reel 1reel 1U	International Union of Pure and Applied Chemistry	1970
b. 2, f. 60, reel 1reel 1U	Isihara, Akira See: <a href="#">box 7, folder 53</a>	1971-1974
b. 2, f. 61, reel 1reel 1U	Jebsen, Jens	1974
b. 2, f. 61, reel 1reel 1U	Jordan, Peter	1961
b. 2, f. 62, reel 1reel 1U	<i>Journal of Applied Polymer Science</i> English	1975
b. 2, f. 63, reel 1reel 1U	<i>Journal of Chemical Physics</i> (*) English	1936, 1959-1973
b. 2, f. 64, reel 1reel 1U	<i>Journal of Colloid Science</i> English	1948-1972
b. 2, f. 64, reel 1reel 1U	<i>Journal of Mathematical Physics</i> English	1971
b. 2, f. 65, reel 1reel 1U	<i>Journal of Membrane Biology</i> (*) English	1969-1976
b. 2, f. 66, reel 1reel 1U	<i>Journal of Physical Chemistry</i> (*) English	1935, 1949, 1955- 1975, undated
b. 2, f. 67, reel 1reel 1U	<i>Journal of the American Chemical Society</i> English	1942, 1949, 1964-1974
b. 2, f. 68, reel 1reel 1U	<i>Journal of the Electrochemical Society</i> English	1964-1967
b. 2, f. 68, reel 1reel 1U	<i>Journal of Theoretical Biology</i> English	1970-1974
b. 2, f. 69, reel 1reel 1U	Kakiuchi, Yoshinobu	1950
b. 2, f. 69, reel 1reel 1U	Kallenbach, Neville	1964
b. 2, f. 70, reel 1reel 1U	Mascarenhas, Sérgio	1947
b. 2, f. 70, reel 1reel 1U	Kegeles, Gerson	1967
b. 2, f. 70, reel 1reel 1U	Kerker, Milton	1976

b. 2, f. 71, reel 1reel 1U	Kirkwood, James G.	1937-1959
	Knopf, Adolph See: <a href="#">box 13, folder 183</a>	
b. 2, f. 72, reel 1reel 1U	Kraemer, Elmer O.	1935
b. 2, f. 72, reel 1reel 1U	Kramers, V.A.	1975
b. 2, f. 72, reel 1reel 1U	Kratky, O.	1968
b. 2, f. 73, reel 1reel 1U	Kraus, Charles A.	1938-1940
b. 2, f. 74, reel 1reel 1U	Kron, Oskar	1952
b. 2, f. 74, reel 1reel 1U	Kursunoglu, Behram	1973
b. 2, f. 75, reel 1reel 1U	Lahoz, D.G.	1975
b. 2, f. 76, reel 1reel 1U	La Mer, Victor K.	1932-1953
b. 2, f. 76, reel 1reel 1U	Lamm, Ole	1946-1956
b. 2, f. 77, reel 1reel 1U	Landsberger Publishing Corporation	1968
b. 2, f. 77, reel 1reel 1U	Langmuir, [ <u>underline</u> ]	1938
b. 2, f. 78, reel 1reel 1U	Lavenda, Bernhard	1970
b. 3, f. 79, reel 2reel 2U	Leibowitz, Leonard	1975-1976
b. 3, f. 80, reel 2reel 2U	Lichtman, I.A.	1957
b. 3, f. 81, reel 2reel 2U	Lieb, Elliott	1970
b. 3, f. 81, reel 2reel 2U	Lindemann, B.	1973
b. 3, f. 82, reel 2reel 2U	Lipmann, Fritz	1975
b. 3, f. 82, reel 2reel 2U	Lobo e Silva, Roberto L.	1975

b. 3, f. 83, reel 2reel 2U	Lorentzen, Hans Ludwig	1976
b. 3, f. 84, reel 2reel 2U	Lowe, I.J.	1976
b. 3, f. 84, reel 2reel 2U	Lundgren, T.S.	1972
b. 3, f. 85, reel 2reel 2U	McCauley, Joseph	1973-1975
b. 3, f. 86, reel 2reel 2U	Machlup, Stefan	1951
b. 3, f. 86, reel 2reel 2U	McKeehan, Lewis	1957
b. 3, f. 87, reel 2reel 2U	MacRae, Duncan	1973
b. 3, f. 87, reel 2reel 2U	Malerba, Joseph F.	1973, undated
b. 3, f. 88, reel 2reel 2U	Mandel, M.(*) See: <a href="#">box 7, folder 51</a>	1974-1975
b. 3, f. 88, reel 2reel 2U	Margenau, Henry See: <a href="#">box 2, folder 51</a>	1950
b. 3, f. 88, reel 2reel 2U	Mark Twain Society	1975
b. 3, f. 89, reel 2reel 2U	Quatrième Conférence Internationale "de la Physique Théorique à la Biologie": transcript	1976
	Mazo, R.M. See: <a href="#">box 10, folder 105</a>	
b. 3, f. 89, reel 2reel 2U	Mehl, Wolfgang	1970
b. 3, f. 90, reel 2reel 2U	Mehra, Jagdish	1969
b. 3, f. 90, reel 2reel 2U	Mehta, M.L.	1975
b. 3, f. 91, reel 2reel 2U	Meijering, J.L.	1957
b. 3, f. 91, reel 2reel 2U	Melehy, M.A.	1970
b. 3, f. 92, reel 2reel 2U	Miller, Donald G.	1975

	Minagawa, Isao See: <a href="#">box 8, folder 70</a>	
b. 3, f. 92, reel 2reel 2U	Morowitz, Harold J.	1976
b. 3, f. 93, reel 2reel 2U	Mott, N.F.	1952
b. 3, f. 93, reel 2reel 2U	Murphy, Thomas J.	1969-1970
b. 3, f. 93, reel 2reel 2U	Mysels, Karol J.	1956
b. 3, f. 94, reel 2reel 2U	Nagle, John F.	1973
b. 3, f. 95, reel 2reel 2U	National Academy of Sciences(*)	1947-1975
b. 3, f. 96, reel 2reel 2U	National Defense Research Committee	1942-1945
b. 3, f. 97, reel 2reel 2U	<i>Nature</i> English	1976
b. 3, f. 97, reel 2reel 2U	<i>Nederlands Tijdschrift voor Naturkunde</i> English	1972
b. 3, f. 98, reel 2reel 2U	<i>Neuro Science</i> English	1969
b. 3, f. 98, reel 2reel 2U	New York Academy of Sciences	1938, 1942, 1955
b. 3, f. 99, reel 2reel 2U	Nishina Memorial Foundation	1935
	Novak, I.J. See: <a href="#">box 13, folder 183</a>	
b. 3, f. 100, reel 2reel 2U	Odijk, T.	undated
b. 3, f. 100, reel 2reel 2U	O'Reilly, Donald E.	1975
	Oster, Gerald See: <a href="#">box 5, folder 4</a>	
b. 3, f. 101, reel 2reel 2U	Parker, Peter	1972
b. 3, f. 101, reel 2reel 2U	Patterson, Andrew, Jr.	1968



b. 3, f. 102, reel 2reel 2U	Pauling, Linus	1974-1976
b. 3, f. 102, reel 2reel 2U	Pawlak, Zenon	1972
b. 3, f. 102, reel 2reel 2U	<i>Physica</i>	1972
b. 3, f. 103, reel 2reel 2U	<i>Physical Review</i>	1969
b. 3, f. 103, reel 2reel 2U	Physical Society of Japan	1954-1955, 1970
b. 3, f. 104, reel 2reel 2U	Pippard, A.B.	1974
b. 3, f. 104, reel 2reel 2U	Polish Radio and Television	1972
b. 3, f. 104, reel 2reel 2U	Polytechnic Institute of New York	1975
b. 3, f. 105, reel 2reel 2U	Potts, R.B.	1955
b. 3, f. 105, reel 2reel 2U	Price, Derek J. de Solla	1971
b. 3, f. 106, reel 2reel 2U	Price, P.J.	1953
b. 3, f. 106, reel 2reel 2U	Prince, Jack	1964
b. 3, f. 106, reel 2reel 2U	Procter & Gamble Company	1953
b. 3, f. 107, reel 2reel 2U	Rasetti, Mario	1975
b. 3, f. 108, reel 2reel 2U	Rensselaer Polytechnic Institute	1952
b. 3, f. 108, reel 2reel 2U	Research Corporation	1974-1976
b. 3, f. 109, reel 2reel 2U	Reutter, F.	1961-1962
b. 4, f. 110, reel 2reel 2U	<i>Reviews of Modern Physics</i>	1969-1974
b. 4, f. 110, reel 2reel 2U	Robertson, Harry S.	1971
b. 4, f. 111, reel 2reel 2U	Rockefeller Institute(*)	1930-1955

b. 4, f. 111, reel 2reel 2U	Rockefeller University	1967-1968
b. 4, f. 112, reel 2reel 2U	Rockstein, Morris	1973
b. 4, f. 112, reel 2reel 2U	Rothschild, K.J.	1976
b. 4, f. 112, reel 2reel 2U	Roy, R.N.	1974
b. 4, f. 113, reel 2reel 2U	Royal Society (London)	1975
b. 4, f. 113, reel 2reel 2U	Royal Society of Sciences of Uppsala	1963
b. 4, f. 114, reel 2reel 2U	Saar, Robert	1971
b. 4, f. 114, reel 2reel 2U	Samaras, Nicholas T.	1964
b. 4, f. 114, reel 2reel 2U	Scheider, Walter	1971
b. 4, f. 115, reel 2reel 2U	Scherrer, P.	1937, 1940
b. 4, f. 115, reel 2reel 2U	Schindler, Dali	1974
b. 4, f. 116, reel 2reel 2U	Schmelzer, C. Christoph	1936
b. 4, f. 116, reel 2reel 2U	Schmitt, Francis	1975
b. 4, f. 116, reel 2reel 2U	Schnakenberg, Jurgen	1971
b. 4, f. 117, reel 2reel 2U	Schruben, Dale. L.	undated
b. 4, f. 117, reel 2reel 2U	<i>Science</i>	1972
b. 4, f. 118, reel 2reel 2U	Selegny, Eric	1973
b. 4, f. 118, reel 2reel 2U	Senatra, Donatella	1972
b. 4, f. 119, reel 2reel 2U	Shamoo, Adil E.	1972
	Sherman, Seymour See: <a href="#">box 13, folder 181</a>	

b. 4, f. 119, reel 2reel 2U	Shin, Ernest	1970
b. 4, f. 120, reel 2reel 2U	Sigma Xi	1974
b. 4, f. 120, reel 2reel 2U	Siim, J. Chr.	1970, 1972
b. 4, f. 121, reel 2reel 2U	Sion, Albert	1970
b. 4, f. 121, reel 2reel 2U	Society for Neuroscience	1969
b. 4, f. 122, reel 2reel 2U	Spicer, W.M.	1944
b. 4, f. 122, reel 2reel 2U	Staebler, David L.	1975-1976
b. 4, f. 123, reel 2reel 2U	Starzak, Michael E.	1974
b. 4, f. 123, reel 2reel 2U	State University of New York at Albany	1973
b. 4, f. 124, reel 2reel 2U	Stewart, Andrew M.	1973-1974
b. 4, f. 125, reel 2reel 2U	Stey, G.C.	1974
b. 4, f. 126, reel 2reel 2U	Stigter, D.	1975
b. 4, f. 126, reel 2reel 2U	Stommed, H.	1948
b. 4, f. 127, reel 2reel 2U	Suzuki, Masuo	1970
b. 4, f. 127, reel 2reel 2U	Sveriges Radio	undated
b. 4, f. 127, reel 2reel 2U	Syozi, I.	1951
b. 4, f. 128, reel 2reel 2U	Technion-Israel Institute of Technology	1976
b. 4, f. 128, reel 2reel 2U	Temperley, H.N.V.	1973
b. 4, f. 129, reel 2reel 2U	Texas Instruments Foundation	1976
b. 4, f. 129, reel 2reel 2U	Theodorsen, Theodore	1972

b. 4, f. 130, reel 2reel 2U	Thomas, Henry C.	1973
b. 4, f. 130, reel 2reel 2U	Thomas, John M.	1970
b. 4, f. 131, reel 2reel 2U	Thompson, James C.	undated
b. 4, f. 132, reel 2reel 2U	Ting, Shin-Fan	1974
b. 4, f. 132, reel 2reel 2U	Tulinsky, Alexander	1965
b. 4, f. 133, reel 2reel 2U	United Nations University	1975
b. 4, f. 133, reel 2reel 2U	University of California, San Diego	1967
b. 4, f. 133, reel 2reel 2U	University of Oslo	1957
b. 4, f. 134, reel 2reel 2U	University of Southern California	1975
b. 4, f. 134, reel 2reel 2U	University of Texas at Austin	1967-1974
b. 4, f. 135, reel 2reel 2U	University of Wyoming	1974
b. 4, f. 135, reel 2reel 2U	Upsala College	1970
b. 4, f. 136, reel 2reel 2U	Van Vleck, John H.	1974
b. 4, f. 136, reel 2reel 2U	Vasilescu, Dane	1972
	Verwey, E.J.W. See: <a href="#">box 6, folder 41</a>	
b. 4, f. 137, reel 2reel 2U	Wallace, Stephen C.	1974
b. 4, f. 137, reel 2reel 2U	Wannier, G.H.	1942-1975
b. 4, f. 137, reel 2reel 2U	Weizmann Institute of Science	1972, 1974
b. 4, f. 138, reel 2reel 2U	Wells, A.F.	1974
b. 4, f. 138, reel 2reel 2U	Wergeland, Harald	1968, 1971

b. 4, f. 138, reel 2reel 2U	Wigner, Eugene P.	1975
b. 4, f. 139, reel 2reel 2U	Wiley (John) & Sons	1957
b. 4, f. 139, reel 2reel 2U	Wilson, William S.	1972
b. 4, f. 139, reel 2reel 2U	World Federation of Scientific Workers	1975
b. 4, f. 140, reel 2reel 2U	Unidentified	1967
b. 4, f. 141, reel 2reel 2U	Norwegian and Swedish scientific societies	1938-1971
b. 4, f. 142, reel 2reel 2U	Requests for reprints(*)	1940, 1960-1975, undated
b. 4, f. 143, reel 2reel 2U	Requests for information for biographical, directories	1960, 1970-1975
b. 4, f. 144, reel 2reel 2U	Christmas cards	1972, 1975, undated
b. 4, f. 145, reel 2reel 2U	Mailing addresses	undated
b. 4, f. 146, reel 2reel 2U	Requests for autographs(*)	1969-1976, undated
b. 4, f. 147, reel 2reel 2U	Letters from eccentrics(*)	1940-1976

**Series II: RESEARCH MATERIAL, [pre-1930?]-1976***4 linear feet (10 boxes)*

The sections are in this order: *Dielectrics, Electrolytes, Ice, Irreversible Processes, Thermal Diffusion, Ising Model, Metals and Semi-Conductors, Liquid Helium, Hydrodynamics, Surface Tension, Origin of Life, Mathematics, Unclassified*. There is no overall order within the sections, but folders on the same subject that were found together have been kept together.

The folder headings in Series II are combinations of Onsager's own words with descriptions provided by the scientists who examined the material as an aid to the arrangement. They are not comprehensive, but suggestive. All of Onsager's words are in quotation marks, and all quotations and citations are his own unless otherwise attributed. Descriptions by the scientists who helped identify the research material are marked with their initials: SM for Stefan Machlup, PAL for Philip A. Lyons, AP for Andrew Patterson, Jr., RMF for Raymond M. Fuoss, JN for John Nagle. If Onsager put a heading on his original folder, it appears in quotation marks as the first item in the heading of the archival folder. Other Onsager quotations are taken from the contents of the folder.

Dielectrics

b. 5, f. 1, reel 3reel 3U	Dielectric constant of hydrogen fluoride;1972?-SM
b. 5, f. 2, reel 3reel 3U	"Lattices, Numerical"/TS/"Electrets"/"Potential of plane lattice with charges [and] dipoles" English
b. 5, f. 3, reel 3reel 3U	"f[ace]-c[entered] c[ubic] structure: Elastic Spectrum" English
b. 5, f. 4, reel 3reel 3U	"Reaction Field, DK"/polymers, infinite chain-SM/von Arkel and Snoek English
b. 5, f. 5, reel 3reel 3U	"Dipoles: Green's Theorem"/probably background information for theory of liquid dielectric constants-PAL English
b. 5, f. 6, reel 3reel 3U	"Seignette-Electrics Below Curie Point" English
b. 5, f. 7, reel 3reel 3U	"Ice-like Seignette-Electrics"/Curie point, NO-SM English
b. 5, f. 7, reel 3reel 3U	<i>Dielectrics</i> English See: <a href="#">Box 5, folders 31-34</a> See: <a href="#">Box 6, folder 37</a> See: <a href="#">Box 6, folder 41</a> See: <a href="#">Box 7, folder 52-53</a> See: <a href="#">Box 7, folder 55</a> See: <a href="#">Box 7, folder 61</a> See: <a href="#">Box 8, folder 74</a> See: <a href="#">Box 10, folder 115</a> See: <a href="#">Box 12, folder 147</a>

Electrolytes

b. 5, f. 8, reel 3reel 3U	Wien effect, 1971-SM/MS fragment/"nothing new-a historical review, then takeoff on electrons in liquid helium"-AP
b. 5, f. 9, reel 3reel 3U	Wien effect, active transport, late 1969?-SM/1971
b. 5, f. 10, reel 3reel 3U	"Random Coil"/electrostatics of polyelectrolyte chain-PAL English

## Electrolytes (continued)

b. 5, f. 11, reel 3reel 3U	"Electrode Polarization" English
b. 5, f. 12, reel 3reel 3U	"Self-avoiding chain"/I English
b. 5, f. 13, reel 3reel 3U	"Self-avoiding chain"/2/M.E. Fisher and D.S. Gaunt, "Ising Model and Self-Avoiding Walks on Hypercubical Lattices and 'High-Density' Expansions," Phys. Rev. 133, No. 1A, A 224-A 239 (1964) English
b. 5, f. 14, reel 3reel 3U	"Electrophoresis 'exact' "/"has historical interest; part was published in Onsager and Fuoss, 'The Conductance of Symmetrical Electrolytes. III. Electrophoresis' (no. 55)"-RMF English
b. 5, f. 15, reel 3reel 3U	Concentrated Electrolytes /MS, "Theories of Concentrated Electrolytes" (no. 10)/related calculations labeled "Gürtelberg Principle," "Approach to Debye-Hückel K.," "Distribution function. Attempt for binary electrolyte," "Error in Grunwall approximation," "Miscellaneous," " # , " and unlabeled
b. 5, f. 16, reel 3reel 3U	"Electrolytes C-C"/"much is a preliminary to articles in J. Phys. Chem. (nos. 51, 54, 55, 59, 63)"-RMF English
b. 5, f. 17, reel 3reel 3U	"Poisson-Boltzmann"/TS, "Theory of the Electric Double Layer"/TS, "The Poisson-Boltzmann Equation in Cylindrical Coordinates"/1950/"probably related to Onsager and Kim, 'The Relaxation Effect in Mixed Strong Electrolytes' (no. 41)"-AP English
b. 5, f. 18, reel 3reel 3U	"Poisson-Boltzmann" English
b. 5, f. 19, reel 3reel 3U	"Recomb[ination]-Relaxation"/"I cannot date this exactly but the ideas entered largely into his Wien effect papers"-AP English
b. 5, f. 20, reel 3reel 3U	"Recomb[ination]-Relax[ation]"/"these ideas entered into his Wien effect papers"-AP/ Langevin diffusion-SM English
b. 5, f. 21, reel 3reel 3U	"'Polarization' in Wien effect cells"/"estimates of relaxation times, apparently"-AP English
b. 5, f. 22, reel 3reel 3U	"Freezing Potentials"/Poisson equation?-SM English
b. 5, f. 23, reel 3reel 3U	"Relax[ation]-Electrophoresis"/1968 English
b. 5, f. 24, reel 3reel 3U	"Water Relaxation"/"Force on oscillating sphere"/"Wyman"/ Lamb, p. 633+ English
b. 5, f. 25, reel 3reel 3U	"Problems"/diffusion in electrolytes-SM/"thoughts, no obvious conclusions"-AP English
b. 5, f. 26, reel 3reel 3U	"Wien effect, Strong Electrolytes"/TL, Onsager to [underline] Eckstrom, 1938 English

## Electrolytes (continued)

b. 5, f. 27, reel 3reel 3U	"Bijl"/kinetic theory-SM/"Momentum quantized in resting frame of reference" English
b. 5, f. 28, reel 3reel 3U	"Cataphoresis" English
b. 5, f. 29, reel 3reel 3U	"Dissociation Constants and Sundry"/"The variation of ionic mobilities with the field for HCl and for HAc at 25°" English
b. 5, f. 30, reel 3reel 3U	"Ionic at[mosphere]s, 2 [frequencies]" English
b. 5, f. 31, reel 3reel 3U	"Data"/"CoCl <sub>2</sub> in Acetone"/Gemant, <i>Liquid Dielectrics</i> (1933) English
b. 5, f. 32, reel 3reel 3U	"Data on Conduction in Strong Fields"/Gemant, p. 89/ H. Schiller, <i>Ann. Physik</i> [4], 81, 32 (1926) English
b. 5, f. 33, reel 3reel 3U	"Velocities in Ion Pairs"/Wien effect-RMF English
b. 5, f. 34, reel 3reel 3U	"DK of Gemant's benzene solutions"/"I think these are preliminary calculations on theory of relaxation field in dielectrics-published about 1934"-RMF/ "Falkenhagen theory" English
b. 5, f. 35, reel 3reel 3U	Electrolytes?-SM/1973-1974
b. 6, f. 36, reel 3reel 3U	"Electrolytes"/"The Relaxation Effects in Mixed Strong Electrolytes" (no. 41)/ALS, Roy C. Gunter, Jr., to Onsager, 1973/MS, "Transport Processes in Strong Electrolytes"; 1973?-SM/"A Correction to the Poisson-Boltzmann Equation for Unsymmetrical Electrolytes" (no. 58) English
b. 6, f. 37, reel 3reel 3U	"Auxiliary to Dev[iation from] Ohm's Law. "/Gemant, pp. 78-79/"Acetone" English
b. 6, f. 38, reel 3reel 3U	"Diffusion of Electrophoretic Boundary" English
b. 6, f. 39, reel 3reel 3U	"[Joseph F.] Malerba"/freezing potential/Malerba MS/ALS (copy), John F. Nagle to Max Hubman, 1976/ALS, Joseph Hubbard to Onsager, 1976 English
b. 6, f. 40, reel 4reel 4U	"Freezing Potentials"/"His interest was protonic jumping in ice"-AP/1962 English
b. 6, f. 41, reel 4reel 4U	"Tactoids"/"Effects of Shape on the Interaction of Colloidal Particles" (no. 28)/TS, "Anisotropic Solutions of Colloids" (no. 21)/TS, "Crystal Statistics" (no. 22) English
b. 6, f. 42, reel 4reel 4U	Unidentified
b. 6, f. 43, reel 4reel 4U	T.H. Einwohner, "Alternating Current Conductance of Mixed Electrolytes," Yale Ph.D., 1963
b. 6, f. 44, reel 4reel 4U	Publication nos. 38, 40, 42, 58/M.-S. Chen, "The Conductance of Mixed Strong Electrolytes at Finite Concentrations," Yale Ph.D., 1969



## Electrolytes (continued)

b. 6, f. 45, reel 4reel 4U	Onsager and A.M. Stewart, "Asymptotic Forms for Luminescent Intensity Due to Donor-Acceptor Pair Recombination," research supported by Air Force Office of Scientific Research Grant Number AFOSR-72-2298
b. 6, f. 46, reel 4reel 4U	"University of Miami"/Chia-tsun Liu, "The Effect of Screening of the Ionic Atmosphere on the Theory of Wien Effect in Weak Electrolytes," Yale Ph.D., 1965/1973? English
b. 6, f. 47, reel 4reel 4U	Neville R. Kallenbach, "The Microviscosity of Electrolyte Solutions," Yale Ph.D., 1961
b. 6, f. 48, reel 4reel 4U	Unidentified/1972-1973
b. 6, f. 49, reel 4reel 4U	MS, "Kinetic Depolarization of Solvents by Ion Migration"/ partial MS, "Hopping of Ions on Ice" (no. 78)/MS, "Dielectric Dispersion in Ionic Conductors"
b. 7, f. 50, reel 4reel 4U	Unidentified/1973?
b. 7, f. 51, reel 4reel 4U	"Mostly electrolytes, etc. Should be examined by Hubbard and Chen. Perhaps some mathematical tricks of interest"-JN(1)/TS(copy), "We should bear in mind that purely electrical measurements do not distinguish between different kinds of current..."/1967-1976? English
b. 7, f. 52, reel 4reel 4U	"Mostly electrolytes..."-JN(2)/MS, "The Dielectric Dispersion of Electrolyte Solutions" English
b. 7, f. 53, reel 4reel 4U	"Mostly electrolytes..."-JN(3)/MS, "Reduction of Dielectric Polarization by the Migration of Ions" English
b. 7, f. 54, reel 4reel 4U	Mostly electrolytes...-JN(4)/M. Born, "Über die Beweglichkeit der Electrolytischen Ionen"/MS(copy), TS, "We should bear in mind that purely electrical measurements do not distinguish between different kinds of current..."
b. 7, f. 55, reel 4reel 4U	MS, "We, should bear in mind..."/Malerba, 1976/MS, "Freezing Potentials"
b. 7, f. 56, reel 4reel 4U	Conductance?-SM
b. 7, f. 57, reel 4reel 4U	"Joseph B. Hubbard"/MS, "For a few years now we have suspected that in good liquid ionic conductors a kinetic coupling between the ion migration and the dielectric relaxation generally entails a reduction of the 'static' dielectrical constant..." English See: <a href="#">Folio</a>
b. 7, f. 58, reel 4reel 4U	"Electrode effects: notes, very sketchy, 1976?"-SM English
b. 7, f. 58, reel 4reel 4U	<i>Electrolytes</i> English See: <a href="#">Box 9, folder 92</a> See: <a href="#">Box 10, folder 115</a> See: <a href="#">Box 11, folder 123-124</a> See: <a href="#">Box 11, folder 137</a> See: <a href="#">Box 11, folder 139</a> See: <a href="#">Box 12, folder 147</a> See: <a href="#">Box 12, folder 162</a>

Ice

## Ice (continued)

b. 7, f. 59, reel 4reel 4U	"C log C"/Ice, Bjerrum fault, ion transport in crystals-SM English
b. 7, f. 60, reel 4reel 4U	"KD <sub>2</sub> PO <sub>4</sub> -# D"/relaxation and polarization-PAL/ KD <sub>2</sub> PO <sub>4</sub> -R.M. Mill and S.K. Ichiki, Phys. Rev. 130, 150/ triglycine sulphate-Phys. Rev. 128, 1140 English
b. 7, f. 61, reel 4reel 4U	"Ice, etc."/temperature coefficients of dielectric constant-SM/MS fragment, "Chain Association in Polar Liquids"/E.W. Montroll, "Statistical Mechanics of Nearest Neighbor Systems" English
b. 7, f. 62, reel 4reel 4U	"Ice, Miscell.)/number of chains of at least two molecules-SM English
b. 7, f. 63, reel 4reel 4U	"KH <sub>2</sub> PO <sub>4</sub> Dipoles Ice"/F. London and M. Polanyi, J. Phys. Chem. 11B, 222 (1930)/M. Polanyi, Trans. Far. Soc. 28, 316 (1932)/Lennard-Jones, Trans. Far. Soc. 28, 333 (1932)/S.C. Wang, Physik. Z. 28, 663 (1927) English
b. 7, f. 64, reel 4reel 4U	"Div[ergence] Clusters" English
b. 7, f. 65, reel 4reel 4U	"Protonics"/notes for talk English
b. 8, f. 66, reel 5reel 5U	"Ice"/"Dihedral subgroup"/1959/A. Einstein, Ann. d. Physik. 17, 549 (1905) English
b. 8, f. 67, reel 5reel 5U	"H+ Motion"/TS abstract, "Ion Motion and Dielectric Relaxation"/"Dr. R.S. Freund, Bell Telephone Labs" English
b. 8, f. 68, reel 5reel 5U	"Lorentzen"/MS, "Introductory Lecture" / "proton migration on Bethe lattice"; calculations only-SM English
b. 8, f. 69, reel 5reel 5U	W. Drost-Hansen, proposal for "Studies of Amorphous Ice," 1974
b. 8, f. 70, reel 5reel 5U	Isao Minagawa, "A Theory of the Mobility of (H <sub>3</sub> O) <sup>+</sup> Defects in Ice Crystals"/2 ALS, Minagawa to Onsager, 1973
b. 8, f. 71, reel 5reel 5U	"Hopping of Ions on Ice" (no. 78) English
b. 8, f. 72, reel 5reel 5U	"Ice (Zurich)" English See: <a href="#">Folio</a>
b. 8, f. 73, reel 5reel 5U	"Ice"/J.A. Sussman, "The Theory of Proton Transfer in Hydrogen Bonded Solids"/J.H. Schmitt, "Dynamical Effects of Deuteron Intrabond in KD <sub>2</sub> PO <sub>4</sub> " English
b. 8, f. 74, reel 5reel 5U	J.F. Nagle, "Dielectric Constant of Ice," J. Chem. Phys. 61, 883-888 (1974)

## Ice (continued)

b. 8, f. 74, reel  
5reel 5U*Ice*  
EnglishSee: [Box 5, folder 7](#) See: [Box 6, folder 40](#) See: [Box 6, folder 49](#)Irreversible Processesb. 8, f. 75, reel  
5reel 5U

Unidentified

b. 8, f. 75, reel  
5reel 5U*Irreversible Processes*  
EnglishSee: [Box 12, folder 147](#)Thermal Diffusionb. 8, f. 76, reel  
5reel 5U"He[lium] Therm[al] Diffusion"/ He-<sup>3</sup> He-<sup>4</sup> isotope separation-SM  
Englishb. 8, f. 77, reel  
5reel 5U*"Thermal Diffusion"*  
Englishb. 8, f. 78, reel  
5reel 5U*"Isotopes by Soret Effect"/"On the Theory of Isotope Separation by Thermal Diffusion" (no. 17)/ correspondence between Onsager and W.R. Furry, 1939*  
Englishb. 8, f. 79, reel  
5reel 5U*"He[lium] + Ne[on]"*  
Englishb. 8, f. 80, reel  
5reel 5UMS, *"Transient Phenomena in Diffusion Column"*b. 9, f. 81, reel  
5reel 5U*"Isotopes by Thermal Diffusion"/TS, "On the Theory of Isotope Separation by Thermal Diffusion" (no. 17)*  
Englishb. 9, f. 82, reel  
5reel 5U*"Entropy Efficiency"/"Thermal Diffusion"/ordinary diffusion-SM/efficiency of isotope separation-SM*  
Englishb. 9, f. 83, reel  
5reel 5U*"H<sup>2</sup> by Migration"/"Mobilities of H<sup>1</sup> and H<sup>2</sup> at 0°/TS, "Flow due to diffusion"*  
Englishb. 9, f. 84, reel  
5reel 5U*"O<sub>2</sub> + e<sup>-</sup>"/"O<sub>2</sub> electron transport"-Schultz and Dowell, Phys. Rev. 128, 174, and Schultz, Phys. Rev. 128, 178/"e<sup>-</sup> + O<sub>2</sub> attachment"-Conway, J. Chem. Phys. 36, 2549 (1962)*  
Englishb. 9, f. 85, reel  
5reel 5U*"Dissipation"/gas transport in the centrifuge-SM/ entropy source density-SM*  
Englishb. 9, f. 86, reel  
5reel 5U*"v[an] d[er] Waals-Collision"*  
English

## Thermal Diffusion (continued)

b. 9, f. 87, reel 5reel 5U	"Fringe Method"/Onsager and L.J. Gosting, "General Theory for the Gouy Diffusion Method" (no. 33) English
b. 9, f. 88, reel 5reel 5U	"Collisions in gases"/kinetic theory, collision integral-SM English
b. 9, f. 89, reel 5reel 5U	"Gas Theory" English
b. 9, f. 90, reel 5reel 5U	"Clouds"/"supersaturation factor, equilibrium rate of evap[oratio]n" English
b. 9, f. 91, reel 5reel 5U	"Zeeman Effect of Free Paths" English
b. 9, f. 92, reel 5reel 5U	"Thermal Diffusion"/Mou-Shan Chen, "The Conductance of Mixed Strong Electrolytes at Finite Concentrations," Yale Ph.D., 1969/P.K. Gupta and A.R. Cooper, Jr., "The [D] Matrix for Multicomponent Diffusion" English
b. 9, f. 93, reel 5reel 5U	"Isotopes by Thermal Diffusion, Numerical"/"On the Theory of Isotope Separation by Thermal Diffusion" (no. 17) English
b. 9, f. 93, reel 5reel 5U	<i>Thermal Diffusion</i> See: <a href="#">Box 5, folder 27</a> See: <a href="#">Box 7, folder 64</a> See: <a href="#">Box 13, folder 182</a>
<u>Ising Model</u>	
b. 9, f. 94, reel 5reel 5U	"(C[rystal] S[tatistics] I.) Ising Model" English
b. 9, f. 95, reel 5reel 5U	"Bruria Kaufman" (1)/untitled TS of B. Kaufman, "Crystal Statistics. II"/correspondence between Kaufman and Onsager, 1945-1947 English
b. 9, f. 96, reel 6reel 6U	"Bruria Kaufman" (2)/untitled TS of B. Kaufman, "Crystal Statistics. II"/untitled TS of B. Kaufman and Onsager, "Crystal Statistics. III" (no. 29)/correspondence between Kaufman and Onsager, 1947-1950 English
b. 9, f. 97, reel 6reel 6U	"C[rystal] S[tatistics] II, III"/TS(copy), B. Kaufman, "Crystal Statistics. II"/TS(copy), B. Kaufman and Onsager, "Crystal Statistics. III" (no. 29)/correspondence between Kaufman and Onsager, 1946 and 1950/TS, "Solution of the Differential Equation" English
b. 9, f. 98, reel 6reel 6U	"Crystal pseudo potentials" English
b. 9, f. 99, reel 6reel 6U	"Lattices, Formulas"/numerical computations-SM English
b. 9, f. 100, reel 6reel 6U	"Neighborhood in Polymer"/Berlin and Montroll, J. Chem. Phys. (1952) English
b. 10, f. 101, reel 6reel 6U	"Rectangular Lattice II-V"/TS, "We first define the two sets of operators..."/"Wannier Transformation"/TS, "Bloch-type operators and characteristic vectors" English

## Ising Model (continued)

b. 10, f. 102, reel 6reel 6U	Bloch-type operators-SM
b. 10, f. 103, reel 6reel 6U	C.J. Thompson and M.J. Wardrop, "Critical Points of Two-Dimensional Ising Models," J. Phys. A: Math., Nucl. Gen. 7, L65-69 (1974)
b. 10, f. 104, reel 6reel 6U	"Lecture notes"/"#-Transitions"/resistivity-SM English

Metals and Semiconductors

b. 10, f. 105, reel 6reel 6U	"Low T[emperature] Sp[ecific] Heat: Crystals"/TLS, R.M. Mazo to Onsager, 1959 English
b. 10, f. 106, reel 6reel 6U	"Sp[ecific] Heat of Crystals at Low Temp[erature]s" English
b. 10, f. 107, reel 6reel 6U	"de Haas-van. Alphen Effect"/"Interpretation of the de Haas-van Alphen Effect," Phil. Mag. 43, 1006 (1951) English
b. 10, f. 108, reel 6reel 6U	Graph, "Specific heat curve for n-hexdecylalcohol"
b. 10, f. 108, reel 6reel 6U	<i>Metals and Semiconductors</i> See: <a href="#">Box 5, folder 3</a> See: <a href="#">Box 6, folder 45</a> See: <a href="#">Box 10, folder 104</a> See: <a href="#">Box 12, folder 147</a> See: <a href="#">Box 12, folder 152</a> See: <a href="#">Box 12, folder 154</a>

Liquid Helium

b. 10, f. 109, reel 6reel 6U	(Stevens) He lecture/"Bogoliubov"/"roton. Feynman & Cohen. Frôlich & Kuper"/proof, "Helium II" (no. 57) English
b. 10, f. 110, reel 6reel 6U	"He Film" English
b. 10, f. 111, reel 6reel 6U	"He: $\frac{1}{4}h\nu$ " $\frac{1}{2}$ /MS, "1) Gradual consumption of det[ergent] indic[ates] that same coats fibers... English
b. 10, f. 112, reel 6reel 6U	"Liq[uid] He[lium]"/"Quantization of sound" English
b. 10, f. 113, reel 6reel 6U	"He: Surface Tension" English
b. 10, f. 114, reel 6reel 6U	"He (mostly Landau)"/"Heat Flow relative to Matter" English
b. 10, f. 115, reel 6reel 6U	"He DK" English
b. 10, f. 116, reel 6reel 6U	"Low Temp[erature]s"/1946 English
b. 10, f. 117, reel 6reel 6U	"Ions in He[lium] liq[uid]"/C. Kuper, Phys. Rev. 122, 1007 (1961) English

## Liquid Helium (continued)

b. 10, f. 118, reel 6reel 6U	"He[lium]-Order for T[emperature]>0"/second-quantized-SM English
b. 10, f. 119, reel 6reel 6U	- "e in He"/Kuper, Phys. Rev. 122, 1007 (1967)/ Atkins, Phys. Rev. 116, 1339 (1959) English
b. 10, f. 120, reel 6reel 6U	"He Rotation, etc."/monolamellar; bilamellar; rotons, vortex rings-SM/Bogoliubov and Zubarev, J. Exper. Theor. Phys. USSR 28, 129-39 (1955)/1951-1952? English
b. 10, f. 121, reel 6reel 6U	"He: $\frac{1}{2}h\#$ ; $\#l\#$ /quantum of circulation-SM English
b. 10, f. 122, reel 6reel 6U	"Proton Structure"/Bogoliubov and Zubarev, J. Exper. Theor. Phys. USSR 28, 129 (1955)/ excitations of the system of interacting Bose particles-SM English
b. 10, f. 122, reel 6reel 6U	<i>Liquid Helium</i> English See: <a href="#">Box 10, folders 120-122</a> See: <a href="#">Box 11, folder 137</a> See: <a href="#">Box 13, folder 183</a>
<u>Hydrodynamics</u>	
b. 11, f. 123, reel 7reel 7U	"Ion-vortex interaction"/also re: electrolytes-SM English
b. 11, f. 124, reel 7reel 7U	"Electrochemical Oscillations" English
b. 11, f. 125, reel 7reel 7U	"Viscosity"/TS, "Viscosity in particle shape in colloid solutions" (no.9)/"Evaluation of integrals"/ "Viscosity of ellipsoids in solution. Jeffery's solution"/"Force-pair. Relaxation-time. Kinetic energy. Average of # over directions. Numerical calculations" English
b. 11, f. 126, reel 7reel 7U	"Jeffery" English
b. 11, f. 127, reel 7reel 7U	"Boundary Layer" English
b. 11, f. 128, reel 7reel 7U	"Reynolds Number" English
b. 11, f. 129, reel 7reel 7U	Hydrodynamics/Taylor, Proc. Roy. Soc. (1935-1938)/ V. Kármán and Howarth, Proc. Roy. Soc. (1938)/J.M. Burgers, 1929/Oseen, 1931
b. 11, f. 130, reel 7reel 7U	"Boundary conditions. Flow from origin prescribed" English
b. 11, f. 131, reel 7reel 7U	"BK Wave, free boundary, etc." English
b. 11, f. 132, reel 7reel 7U	"Turbulence"/"Hydrodynamics (Turbulence)-Kinetic Energy and Dissipation function to sums of squares"/ "Turbulence cascade"/1975?-SM English
b. 11, f. 133, reel 7reel 7U	MS(copy), "Detailed Properties of Cylindrical Boundary Layers"

## Hydrodynamics (continued)

b. 11, f. 134, reel 7reel 7U	"Hydrodynamics? 1970, 1974?"-SM English
b. 11, f. 135, reel 7reel 7U	"Turbulence" English
b. 11, f. 135, reel 7reel 7U	<i>Hydrodynamics</i> English See: <a href="#">Box 5, folder 24</a> See: <a href="#">Box 6, folder 39</a> See: <a href="#">Box 10, folder 112</a> See: <a href="#">Box 10, folder 119</a> See: <a href="#">Box 12, folder 162</a>

Surface Tension

b. 11, f. 136, reel 7reel 7U	"Surface Tension"/related to thesis of N Samaras ["Medium Charges in Homogeneous Catalysis and Their Theoretical Interpretation," 1931]?-RMF English
b. 11, f. 137, reel 7reel 7U	"Bubble"/surface tension-PAL/energy of formation-SM English
b. 11, f. 138, reel 7reel 7U	"123 Gouy Layer"/surface tension-PAL English
b. 11, f. 139, reel 7reel 7U	"Landau, Jones-Ray effect"/viscosity of electrolyte solutions, surface tension of liquids in capillaries-PAL/MS, "Wetting of Electrokinetically Active Surfaces. I. Thickness of the Wetting Film"/TS, "General". Adsorption of ions on the walls of the capillary causes the wall to acquire an electrostatic potential.... <i>Computation for a Binary Electrolyte ...</i> "/ MS, "Effect of Wall Charge on Capillary Rise" English
b. 11, f. 140, reel 7reel 7U	"Adsorption & Capillary"/surface tension in capillaries, elliptic substitution-SM/MS/"Lander transformations" English See: <a href="#">Folio</a>
b. 11, f. 141, reel 7reel 7U	"Electrostatic Adsorption"/surface tension in capillaries-SM/"Drauglis"/"G. Jones" English
b. 11, f. 141, reel 7reel 7U	<i>Surface Tension</i> See: <a href="#">Box 10, folder 113</a>

Origin of Life

b. 11, f. 142, reel 7reel 7U	Voltage clamp-ion pump-SM
b. 11, f. 143, reel 7reel 7U	"Early Days" English
b. 11, f. 144, reel 7reel 7U	Conference on Current Flow in Nerve Membranes, 1971 Apr 5-9
b. 11, f. 145, reel 7reel 7U	"Neurosci: Meet & Org"/1962-1963 English
b. 11, f. 146, reel 7reel 7U	Unidentified

Mathematics

b. 12, f. 147, reel 8reel 8U	Notebook/TS, "Solutions of the Mathieu Equation, of Period 4#, and Certain Related Functions" (abstract of no. 13)/MS, "Error in the Asymptomatic Expansion of Bessel Functions of Imaginary Argument"/MS, "Generalization of the Euler-Maclaurin Sum Formula"/ TS, "Dissociation of Electrolytes in Strong Electric Fields"/MS, "Eigenwerte by Numerical Integration"/ MS, "Consider a dipole of electric moment $\frac{1}{4}...$ "/TS, "Theories of Concentrated Electrolytes" (not identical with no. 10)/"Vibr. galvanometer"
b. 12, f. 148, reel 8reel 8U	"Kriegspiel Theory"/chess-PAL English
b. 12, f. 149, reel 8reel 8U	"Zeta Functions" English
b. 12, f. 150, reel 8reel 8U	"Flog F"/partition functions-SM English
b. 12, f. 151, reel 8reel 8U	"Integral Transformations" English
b. 12, f. 152, reel 8reel 8U	"The Exchange Correlation Integral" English
b. 12, f. 153, reel 8reel 8U	$f(H_0 + V), (H_0 + V)^{1/2}$ /quantum mechanics; Lippman-Schwimmer?-SM
b. 12, f. 154, reel 8reel 8U	"Electron Compliance"/branch cuts (complex plane)-SM English
b. 12, f. 155, reel 8reel 8U	"Consistency"/self-consistent field partition function?-SM English
b. 12, f. 156, reel 8reel 8U	"B F[ermions]"/creation-destruction operator formalism-SM English
b. 12, f. 157, reel 8reel 8U	"Fermion Interaction"/mimeo, "Many-Electron Wave Function" (no. 45) English
b. 12, f. 158, reel 8reel 8U	H $e^{-x^{1/2}}$ /group theory, one-dimensional representation-SM
b. 12, f. 159, reel 8reel 8U	"Elliptic" English
b. 12, f. 160, reel 8reel 8U	"Elliptic on spheres" English
b. 12, f. 161, reel 8reel 8U	"Recurrent Determinants, 1940s?"-SM/correspondence with I.I. Hirschman, Jr., 1964 English
b. 12, f. 162, reel 8reel 8U	"Laplace +"/TS, "Note on the Product Expansion of Theta Functions"/TS, "The Distribution of Energy in Turbulence" (no. 25)/MS, "Asymptotic Formula for $\#_0(x, y)$ "/MS, "Relaxation Matrices" English
b. 12, f. 163, reel 8reel 8U	"Info[rmation] Cascade"/canonical distribution with two-body forces; combinatorics; $\#f \log f$ -SM English



## Mathematics (continued)

b. 12, f. 164, reel 8reel 8U	"Multiple Electron Scattering" English
b. 12, f. 165, reel 8reel 8U	Notebook/eigenvalue problems-SM/eigenvalue problem by continued fractions-SM/Mathieu functions of index $\frac{1}{2}$ -SM/"Two-dimensional Green function"
b. 12, f. 166, reel 8reel 8U	"Reflex Waves" English
b. 12, f. 167, reel 8reel 8U	"Milne Problem (2 dimensional) Example of # scattering" English
b. 12, f. 168, reel 8reel 8U	"Spectroscopy. Information and Article Abstract"/ "Literature review, by whom?"-PAL/"Slater's directed bonding theory"/"electron configuration of CH <sub>2</sub> " English
b. 12, f. 169, reel 8reel 8U	"Bounds for  F#/F "/f# <sup>3</sup> (x)=p(x)f(x) English
b. 12, f. 170, reel 8reel 8U	"Fragment re Waves"/wave equation with absorption-SM English
b. 12, f. 171, reel 8reel 8U	"Waves"/Jeans/MS, "A. Conditions of existence. Let a physical phenomenon be described by a wave of amplitude n(x,t) propagating in the x direction.... B. Condition of Reality.... C. Condition of Causation.... D. Definition of $\sigma(v)$ for complex #.... E. Interpretation of $\sigma(\mu)$ ...." English
b. 12, f. 172, reel 8reel 8U	"Lagrange Interpretation-Multiple Points"/MS, "Given function f(z) and analytic in domain. Approximate by polynomial p(z) such that p(z)=f(z); $z=\frac{3}{4} 1, \dots, \frac{3}{4} n, \dots$ " English
b. 12, f. 173, reel 8reel 8U	"Spheroidal Harmonics" English
b. 12, f. 174, reel 8reel 8U	"Population"/ $y_1 + Y_2 + Y_3 = P; Y_1 Y_2 + Y_2 Y_3 + Y_3 Y_1 = g; Y_1 Y_2 Y_3 = r$ English
b. 13, f. 175, reel 8reel 8U	"Orthogonal Op[erator]s" English
b. 13, f. 176, reel 9reel 9U	"Yang" English
b. 13, f. 177, reel 9reel 9U	"Elliptic"/contour integration-SM English
b. 13, f. 178, reel 9reel 9U	" $\hat{q}(\hat{1}')/\hat{1}, 3(2 \hat{1},) = (-i\hat{1},) - \hat{A}^{1/2} e^{(z^2/\hat{1} \in \hat{1},)}$ $\hat{1}, 3(-2/\hat{1},   -1/\hat{1},)$ " English
b. 13, f. 179, reel 9reel 9U	s "se =#" English
b. 13, f. 180, reel 9reel 9U	" $\hat{q}^{\hat{a} \hat{z}}$ " (infinite determinants) English

## Mathematics (continued)

b. 13, f. 181, reel 9reel 9U	"Toplitz Matrices" English
b. 13, f. 182, reel 9reel 9U	"Kubo + heat exch[an]ge function $\mu(x;y)$ "/MS English
b. 13, f. 183, reel 9reel 9U	"Serpentine"/antigorite, chrysotile/"L.O. wanted to use it for superleaks for liquid He"-SM/ memo, "The Structure of Chrysotile Asbestos," 1953 English
b. 13, f. 184, reel 9reel 9U	"S.C. Green's Functions"/"Singularities of Joyce's f.c.c. solution" English
b. 13, f. 185, reel 9reel 9U	" $d_n^{2k/3}$ " English
b. 13, f. 186, reel 9reel 9U	" $I_3$ "/contour integrations; body-centered cubic; errors in lifetime computations-SM English
b. 13, f. 187, reel 9reel 9U	Unidentified
b. 13, f. 188, reel 9reel 9U	"Asymptotic Expansions of Whitaker Functions"/MS, "Improved Asymptotic Expansions" English
<u>Unclassified</u>	
b. 13, f. 189, reel 9reel 9U	Unidentified/ca. 1963-1972? See: <a href="#">Folio</a>
b. 13, f. 190, reel 9reel 9U	"Wood Porosity" English See: <a href="#">Folio</a>
b. 13, f. 191, reel 9reel 9U	Unidentified/1970 See: <a href="#">Folio</a>
b. 13, f. 192-193, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 13, f. 194, reel 9reel 9U	M. Brown and E.G. Murphy, "Measurements of the Self-Diffusion Coefficient of Uranium Hexafluoride" See: <a href="#">Folio</a>
b. 13, f. 195, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 13, f. 196, reel 9reel 9U	Conference on "Basic Mechanisms in Radiobiology" at Brookhaven National Laboratory, 1953 May 7-9/MS, "For that matter, recent kinetic studies have revealed (Eigen, 1967) that replacements in the innermost shell of solvent molecules and anions around a cation may be fairly infrequent...." See: <a href="#">Folio</a>

## Unclassified (continued)

b. 13, f. 197, reel 9reel 9U	Unidentified/C. Jaccard, "Thermodynamics of Irreversible Processes Applied to Ice," Physik der Kondensierten Materie 3, 99-118 (1964) See: <a href="#">Folio</a>
b. 13, f. 198, reel 9reel 9U	Unidentified/1976 See: <a href="#">Folio</a>
b. 13, f. 199, reel 9reel 9U	Unidentified/1975 Dec See: <a href="#">Folio</a>
b. 13, f. 200, reel 9reel 9U	Unidentified/post-1970 Jan See: <a href="#">Folio</a>
b. 13, f. 201, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 13, f. 202, reel 9reel 9U	Unidentified/1974? See: <a href="#">Folio</a>
b. 14, f. 203, reel 9reel 9U	Unidentified/"Image Force"/1973? See: <a href="#">Folio</a>
b. 14, f. 204, reel 9reel 9U	"Protons, Miscell."/A. Draegert English See: <a href="#">Folio</a>
b. 14, f. 205-207, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 14, f. 208, reel 9reel 9U	Unidentified/1976 See: <a href="#">Folio</a>
b. 14, f. 209, reel 9reel 9U	Unidentified/post-1972? See: <a href="#">Folio</a>
b. 14, f. 210-213, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 14, f. 214, reel 9reel 9U	"Computations" English See: <a href="#">Folio</a>
b. 14, f. 215-216, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 14, f. 217, reel 9reel 9U	Unidentified transparencies See: <a href="#">Folio</a>
b. 14, f. 218, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 14, f. 219, reel 9reel 9U	Unidentified/S.N. Bagchi, 1976 See: <a href="#">Folio</a>

## Unclassified (continued)

b. 14, f. 220, reel 9reel 9U	Unidentified/1967-1971 See: <a href="#">Folio</a>
b. 14, f. 221, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 14, f. 222, reel 9reel 9U	"H <sub>3</sub> O <sub>6</sub> "-SM English See: <a href="#">Folio</a>
b. 14, f. 223, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>
b. 14, f. 224, reel 9reel 9U	Unidentified/1951, 1954 See: <a href="#">Folio</a>
b. 14, f. 225, reel 9reel 9U	Unidentified/J.L. Lebowitz and E.H. Lieb, "Existence of Thermodynamics for Real Matter with Coulomb Forces" See: <a href="#">Folio</a>
b. 14, f. 226, reel 9reel 9U	"Figures (MS)" English See: <a href="#">Folio</a>
b. 14, f. 227, reel 9reel 9U	Unidentified See: <a href="#">Folio</a>

**Series III: WRITINGS, 1926-1977***1.25 linear feet (3 boxes)*

This series is divided into three sections: *Publications*, *Pre-Publication Material*, and *Lecture Series*. In the first two sections, the titles are arranged and numbered to follow the bibliography published by the Royal Society, a copy of which is in folder 1. Items not in the bibliography appear at the end of the appropriate section. *Lecture Series* is in chronological order.

Publications

b. 15, f. 1, reel 10reel 10U	Published bibliography ( <i>Biographical Memoirs of Fellows of the Royal Society</i> , 24 [1978], 467-70)
b. 15, f. 2, reel 10reel 10U	Manuscript bibliographies, 1962-1966
b. 15, f. 3, reel 10reel 10U	1. Zur Theorie der Electrolyte, I
b. 15, f. 4, reel 10reel 10U	2. Zur Theorie der Electrolyte, II
b. 15, f. 5, reel 10reel 10U	3. Report on a revision of the conductivity theory
b. 15, f. 6, reel 10reel 10U	4. Activity coefficients and mass-action law in electrolytes
b. 15, f. 7, reel 10reel 10U	5. Simultane irreversible Processer
b. 15, f. 8, reel 10reel 10U	6. Reciprocal relations in irreversible processes. I
b. 15, f. 9, reel 10reel 10U	7. Reciprocal relations in irreversible processes. II
b. 15, f. 10, reel 10reel 10U	8. Irreversible processes in electrolytes
b. 15, f. 11, reel 10reel 10U	9. Viscosity and particle shape in colloid solutions
b. 15, f. 12, reel 10reel 10U	10. Theories of concentrated electrolytes
b. 15, f. 13, reel 10reel 10U	11. The surface tension of Debye-Hückel electrolytes
b. 15, f. 14, reel 10reel 10U	12. Deviations from Ohm's law in weak electrolytes
b. 15, f. 15, reel 10reel 10U	14. Electric moments of molecules in liquids
b. 15, f. 16, reel 10reel 10U	15. Initial recombination of ions

## Publications (continued)

b. 15, f. 17, reel 10reel 10U	16. Electrostatic interaction of molecules
b. 15, f. 18, reel 10reel 10U	17. On the theory of isotope separation by thermal diffusion
b. 15, f. 19, reel 10reel 10U	18. Separation of gas (isotope) mixtures by irreversible processes
b. 15, f. 20, reel 10reel 10U	19. Turbulence in convection gases between concentric vertical cylinders
b. 15, f. 21, reel 10reel 10U	20. Separation of isotopes by thermal diffusion
b. 15, f. 22, reel 10reel 10U	21. Anisotropic solutions of colloids
b. 15, f. 23, reel 10reel 10U	22. Crystal statistics
b. 15, f. 24, reel 10reel 10U	23. Crystal statistics. I. A two-dimensional model with an order-disorder transition
b. 15, f. 25, reel 10reel 10U	24. Theories and problems of liquid diffusion
b. 15, f. 26, reel 10reel 10U	25. The distribution of energy in turbulence
b. 15, f. 27, reel 10reel 10U	26. Transition points
b. 15, f. 28, reel 10reel 10U	27. De Haas-van Alphen effect in zinc
b. 15, f. 29, reel 10reel 10U	28. Effects of shape on the interaction of colloidal particles
b. 15, f. 30, reel 10reel 10U	29. Crystal statistics. III. Short-range order in a binary Ising lattice (also B. Kaufman. Crystal statistics. II)
b. 15, f. 31, reel 10reel 10U	30. Statistical hydrodynamics
b. 15, f. 32, reel 10reel 10U	31. Apparatus for isotope separation by thermal diffusion
b. 15, f. 33, reel 10reel 10U	32. Interpretation of the de Haas-van Alphen effect
b. 15, f. 34, reel 10reel 10U	33. General theory for the Guoy diffusion method
b. 15, f. 35, reel 10reel 10U	34. Fluctuations and irreversible processes
b. 15, f. 36, reel 10reel 10U	35. Fluctuations and irreversible process. II. Systems with kinetic energy

## Publications (continued)

b. 15, f. 37, reel 10reel 10U	36. Diamagnetism in metals
b. 15, f. 38, reel 10reel 10U	37. Introductory talk (on liquid helium)
b. 15, f. 39, reel 10reel 10U	38. Conductance of strong electrolytes at finite dilutions
b. 15, f. 40, reel 10reel 10U	39. Bose-Einstein condensation and liquid helium
b. 15, f. 41, reel 10reel 10U	40. Wien effect in simple strong electrolytes
b. 15, f. 42, reel 10reel 10U	41. The relaxation effects in mixed strong electrolytes
b. 15, f. 43, reel 10reel 10U	42. Conductance of unassociated electrolytes
b. 15, f. 44, reel 10reel 10U	43. The kinetic term in electrolytic conductance
b. 15, f. 45, reel 10reel 10U	44. Low temperature fluctuations
b. 15, f. 46, reel 10reel 10U	45. Many-electron wave function
b. 15, f. 47, reel 10reel 10U	46. Surface specific heat of an isotropic solid at low temperatures
b. 15, f. 48, reel 10reel 10U	47. Proton magnetic resonance spectrum of propane
b. 15, f. 49, reel 10reel 10U	48. Electrical properties of ice
b. 15, f. 50, reel 10reel 10U	49. Magnetic flux through a superconducting ring
b. 15, f. 51, reel 10reel 10U	50. Thermodynamic potentials of symmetrical electrolytes
b. 15, f. 52, reel 10reel 10U	51. The conductance of symmetrical electrolytes. I. Potential of total force
b. 15, f. 53, reel 10reel 10U	52. The electrical properties of ice
b. 15, f. 54, reel 10reel 10U	53. The electrical properties of ice
b. 15, f. 55, reel 10reel 10U	54. The conductance of symmetrical electrolytes. II. The relaxation field
b. 15, f. 56, reel 10reel 10U	55. The conductance of symmetrical electrolytes. III. Electrophoresis

## Publications (continued)

b. 15, f. 57, reel 10reel 10U	56. Mechanism for self-diffusion in ice
b. 15, f. 58, reel 10reel 10U	57. Helium II
b. 15, f. 59, reel 10reel 10U	58. A correction to the Poisson-Boltzmann equation for unsymmetrical electrolytes
b. 15, f. 60, reel 10reel 10U	59. The conductance of symmetrical electrolytes. IV. Hydrodynamic and osmotic terms in the relaxation field
b. 15, f. 61, reel 10reel 10U	60. Electrons in liquids
b. 15, f. 62, reel 10reel 10U	61. Electrons in metals
b. 15, f. 63, reel 10reel 10U	62. Zur Theorie des Wieneffekts in schwachen Elektrolyten
b. 15, f. 64, reel 10reel 10U	63. The conductance of symmetrical electrolytes. V. The conductance equation
b. 15, f. 65, reel 10reel 10U	64. Integrals in the theory of electron correlations
b. 15, f. 66, reel 10reel 10U	65. Ferroelectricity of ice?
b. 15, f. 67, reel 10reel 10U	66. Thermodynamics and some molecular aspects of biology
b. 15, f. 71, reel 10reel 10U	70. Protonic semiconductors
b. 15, f. 68, reel 10reel 10U	67. Relaxation effects in associating electrolytes
b. 15, f. 69, reel 10reel 10U	68. The motion of ions: principles and concepts
b. 15, f. 70, reel 10reel 10U	69. Diffusion and relaxation phenomena in ice
b. 15, f. 72, reel 10reel 10U	71. Possible mechanisms of ion transit
b. 15, f. 73, reel 10reel 10U	72. The Ising model in two dimensions
b. 15, f. 74, reel 10reel 10U	73. Life in the early days
b. 15, f. 75, reel 10reel 10U	74. The effect of wall charge on the capillary rise of electrolytes
b. 15, f. 76, reel 10reel 10U	75. Surface specific heat of crystals



## Publications (continued)

b. 15, f. 77, reel 10reel 10U	76. Interpretation of kinetic and equilibrium properties (of water)
b. 15, f. 78, reel 10reel 10U	79. Electrons and vortex lines in He II, I. Brownian motion theory of capture and escape
b. 15, f. 79, reel 10reel 10U	80. Electrons and vortex lines in He II, II. Theoretical analysis of capture and release experiments
b. 15, f. 80, reel 10reel 10U	"Zur Statistik Irreversibler Prozesse" (with S. Machlup), <i>Phys. Verhdlg.</i> 3(1952), 84 English
b. 15, f. 81, reel 10reel 10U	"Introductory Lecture," in E. Whalley et al., eds., <i>Physics and Chemistry of Ice</i> (1973) English
b. 15, f. 82, reel 10reel 10U	Posthumous joint publications
<u>Pre-Publication Material</u>	
b. 16, f. 83, reel 10reel 10U	6-7. Reciprocal relations in irreversible processes: edited Ts
	10. Theories of concentrated electrolytes See: <a href="#">box 5, folder 15</a>
b. 16, f. 84, reel 10reel 10U	12. Deviations from Ohm's law in weak electrolytes: figures
b. 16, f. 85, reel 10reel 10U	13. Solutions of the Mathieu equation of period 4. and certain related functions: letter from prospective publisher
b. 16, f. 86, reel 10reel 10U	16. Electrostatic interaction of molecules: Ts
	17. On the theory of isotope separation by thermal diffusion See: <a href="#">box 9, folder 81</a> See: <a href="#">box 9, folder 93</a>
	21. Anisotropic solutions of colloids See: <a href="#">box 6, folder 41</a>
	22. Crystal statistics. I See: <a href="#">box 6, folder 41</a>
b. 16, f. 87, reel 10reel 10U	26. Transition points: Ts edited for printer
b. 16, f. 88, reel 10reel 10U	28. Effects of shape on the interaction of colloidal particles: Ms
	29. Crystal statistics. III See: <a href="#">box 9, folders 96-97</a>
b. 16, f. 89, reel 10reel 10U	30. Statistical hydrodynamics: Ts See: <a href="#">box 18, folder 1</a>

## Pre-Publication Material (continued)

	33. General theory for the Gouy diffusion method See: <a href="#">box 9, folder 87</a>
b. 16, f. 90, reel 10reel 10U	34. Fluctuations and irreversible processes: Ts
b. 16, f. 91, reel 10reel 10U	35. Fluctuations and irreversible process. II: Ts
b. 16, f. 92, reel 10reel 10U	41. The relaxation effects in mixed strong electrolytes: notes, Ts See: <a href="#">box 5, folder 17</a> See: <a href="#">box 6, folder 36</a>
b. 16, f. 93, reel 11reel 11U	46. Surface specific heat of an isotopic solid at low temperatures: editorial correspondence, partial Ts, figures
b. 16, f. 94, reel 11reel 11U	49. Magnetic flux through a superconducting ring: Ts
b. 16, f. 95, reel 11reel 11U	51. Conductance of symmetrical electrolytes. I. Potential of total force: notes See: <a href="#">box 5, folder 16</a>
b. 16, f. 96, reel 11reel 11U	53. The electrical properties of ice: figures
	55. The conductance of symmetrical electrolytes. III. Electrophoresis See: <a href="#">box 5, folder 16</a>
	57. Helium II See: <a href="#">box 10, folder 109</a> See: <a href="#">box 18, folder 2</a>
	58. A correction to the Poisson-Boltzmann equation for unsymmetrical electrolytes See: <a href="#">box 6, folder 36</a>
b. 16, f. 97, reel 11reel 11U	62. Zur Theorie des Wieneffekts in schwachen Electrolyten: Ms, Ts
b. 16, f. 98, reel 11reel 11U	60. Electrons in liquids: Ts (copy)
b. 16, f. 99, reel 11reel 11U	61. Electrons in metals: Ts
	65. Integrals in the theory of electron correlations See: <a href="#">box 18, folder 8</a>
b. 16, f. 100, reel 11reel 11U	66. Thermodynamics and some molecular aspects of biology: partial Ms, Ts
b. 16, f. 101, reel 11reel 11U	70. Protonic semiconductors: edited preprint, also Ts abstract in German? See: <a href="#">box 18, folders 10</a>
b. 16, f. 102, reel 11reel 11U	71. Possible mechanisms of ion transit: partial Ms, Ts (copy)
b. 16, f. 103, reel 11reel 11U	72. The Ising model in two dimensions: Ts (copy) See: <a href="#">box 18, folder 12</a>

## Pre-Publication Material (continued)

b. 16, f. 104, reel 11reel 11U	73. Life in the early days: Ts, list of recipients
b. 16, f. 105, reel 11reel 11U	75. Surface specific heat of crystals: Ts, letters from co-author T.Y. Moon
b. 16, f. 106, reel 11reel 11U	76. Interpretation of kinetic and equilibrium properties: Ts (copy)
b. 16, f. 107, reel 11reel 11U	77. Asymptotic forms for luminescent intensity due to donor-acceptor pair recombinations: edited Ts (copy)
b. 16, f. 108, reel 11reel 11U	78. Hopping of ions in ice: Ts (copy), preprint
b. 17, f. 109, reel 11reel 11U	78. Hopping of ions in ice: Ts and Ts (copy) drafts
b. 17, f. 110, reel 11reel 11U	79. Electrons and vortex lines in He II, I: Brownian motion theory of capture and escape: Ts (copy)
b. 17, f. 111, reel 11reel 11U	80. Electrons and vortex lines in He II, II: theoretical analysis of capture and release experiments: Ts (copy)
b. 17, f. 112, reel 11reel 11U	82. The generalized conductance equation: partial Ms, Ts (copy), correspondence with co- author M.S. Chen
b. 17, f. 113, reel 11reel 11U	"Introductory Lecture," in E. Whalley et. al., eds., <i>Physics and Chemistry of Ice</i> (1973): Ts English See: <a href="#">Folio</a>
b. 17, f. 114, reel 11reel 11U	"Partial Free Energies of Ions" (unpublished): comments of referees, 1928 English
b. 17, f. 115, reel 11reel 11U	"Ion Passages in Lipid Bilayers": Ts English
b. 17, f. 116, reel 11reel 11U	"Vortex Fluctuations and the Negative Ion Trapping Lifetime: Quantum Theory of the Vortex 'Core" (with J. McCauley, Jr.): Ts (copy) English
b. 17, f. 117, reel 11reel 11U	"Primordial Membranes": MS English
b. 17, f. 118, reel 11reel 11U	"Dielectric Dispersion and Dielectric Friction in Electrolyte Solutions. I" (with J. Hubbard): partial Ts, ALS (copy) to R. Zwanzig, 1976 English
b. 17, f. 119, reel 11reel 11U	"Quantization of Magnetic Flux": Ts abstract English
b. 17, f. 120, reel 11reel 11U	"The Theory of the Wien Effect for Binary Electrolytes" (with W.S. Wilson): Ts, ca. 1936 English
b. 17, f. 121, reel 11reel 11U	"Crystal Statistics. IV. Long Range Order in a Binary Crystal" (with B. Kaufman): Ts, TL (copy), Onsager to B. Kaufman, 1950 English

## Pre-Publication Material (continued)

b. 17, f. 122, reel  
11reel 11U      Zur Statistik Irreversibler Vorgänge (with S. Machlup): correspondence, 1952, edited proof

b. 17, f. 123, reel  
11reel 11U      Essay on the origin of life: Ms in german

b. 17, f. 124, reel  
11reel 11U      Essays on electrolytes: Ts, Ts abstract ("The material or its equivalent has been published"-  
Raymond M. Fuoss)

b. 17, f. 125, reel  
11reel 11U      Review of J. Frenkel, *The Kinetic Theory of Liquids*: Ts

b. 17, f. 126, reel  
11reel 11U      Review of "Lectures on Nuclear Physics at Zurich, May 1931," Physik. Z. 32(1931): Ts

"Asymptotic Forms for Luminescent Intensity Due to Donor-Acceptor Pair  
Recombination" (with A.M. Stewart)

English

See: [box 6, folder 45](#)

Lecture Series

b. 17, f. 127, reel  
11reel 11U      "Methods of Statistical Mechanics," 1948  
English

b. 17, f. 128, reel  
11reel 11U      "Kinetic Theory and Statistical Mechanics," compiled by Don E. Harrison, Jr., 1952  
English

b. 17, f. 129, reel  
11reel 11U      "Lectures on Protonic Semiconductors," Center for Theoretical Studies, University of Miami,  
CTS-LN-68-2, 1968  
English

**Series IV: CONFERENCES, 1935-1977***1.5 linear feet (4 boxes)*

This series has two sections, *Onsager Text* and *No Onsager Text*, each of which is in chronological order. The folder headings in *Onsager Text* specify the names and dates of the conferences and the types of Onsager texts included in the papers, but they do not describe whatever other kinds of material may be present. The numbers in parentheses after the specifications of certain texts (e.g., "(no. 30)" in folder 1) correspond to the numbering of Onsager publications in the Royal Society bibliography, as shown in Series III, folders 3-79. The folder list for *No Onsager Text* is a simple sequence of dates, with no naming of the conferences and no description of the papers.

Onsager Text

b. 18, f. 1, reel 12reel 12U	International Symposium on Statistical Mechanics: transcript, edited proofs (no. 30)	1949 May 17-20
b. 18, f. 2, reel 12reel 12U	Conference on Irreversible Processes: bibliographic note	1955 March 31- April 2
b. 18, f. 3, reel 12reel 12U	Symposium on the Many-Body Problem: edited transcript, proof (no. 57)	1957 January 28-29
b. 18, f. 3, reel 12reel 12U	Symposium on the Structure of Electrolytic Solutions: transcript	1957 May 12-16
b. 18, f. 4, reel 12reel 12U	International Symposium on Electrolytes: notes, abstract, report to the funding agency	1959 June 4-8
b. 18, f. 5, reel 12reel 12U	Conference on Basic Mechanisms in the Radiation Chemistry of Aqueous Media: program notes, transcript	1963 May 8-10
b. 18, f. 6, reel 12reel 12U	Gibbs Lecture, American Mathematical Society: abstract, transparencies	1964 January 24
b. 18, f. 7, reel 12reel 12U	Symposium on Non-Equilibrium Thermodynamics and Variational Techniques and Stability: program notes	1965 May 17-19
b. 18, f. 8, reel 12reel 12U	Symposium on Ferroelectricity: post-symposium text (no. 65)	1966 September
b. 18, f. 9, reel 12reel 12U	San Francisco Conference on Metal-Nonmetal Transition: transcript	1968 pre-April 8
b. 18, f. 10, reel 12reel 12U	International Symposium on Physics of Ice: drafts (no. 70)	1968 September 9-14
b. 18, f. 11, reel 12reel 12U	University of Texas, Advanced School of Statistical Mechanics and Thermodynamics: notes on liquid ammonia	1969 March 17-28
b. 18, f. 12, reel 12reel 12U	Battelle Colloquium on Critical Phenomena: draft, edited proof (no. 72)	1970 September 7-12
b. 18, f. 13, reel 12reel 12U	H.S. Harned Memorial Symposium: abstract	1970 September 14-15
b. 19, f. 14, reel 12reel 12U	Cinquième Conférence Internationale "de la Physique Théorique à la Biologie": notes, transcript	1973 May 28- June 2

## Onsager Text (continued)

b. 19, f. 15, reel 12reel 12U	American Chemical Society, Florida Section: abstract	1975 May 8-10
b. 19, f. 16, reel 12reel 12U	Sixième Conférence Internationale "de la Biologie": critique of tentative program	1975 June 16-21
b. 19, f. 17, reel 12reel 12U	College Park Colloquia on Chemical Evolution, Chemical Evolution of the Early Precambrian: notes, transcript	1975 October 29-November 1
b. 19, f. 18, reel 12reel 12U	Académie Internationale d'Histoire des Sciences	1977 June 20-25
b. 19, f. 19, reel 12reel 12U	Faraday Division of the Chemical Society, General Discussion on "Ion-Ion and Ion-Solvent Interactions": proposal	1977 September 13-15
<u>No Onsager Text</u>		
b. 20, f. 20-39, reel 12reel 12U	1935, 1946-1953, 1957-1967, 1968 September, 1968 December, 1969 May-December, 1970 April-Jul, 1970 September-December, [1970 December-1971 January?], 1971 January-April, 1971 June-December, 1972 January-May	1935, 1946-1953, 1957-1967, 1968 September, 1968 December, 1969 May- December, 1970 April-Jul, 1970 September- December, [1970 December- 1971 January?], 1971 January- April, 1971 June- December, 1972 January-May
b. 21, f. 40-58, reel 12reel 12U	1972 June-December, 1973 January-December, 1974 January-May, 1974 July-December, 1975 March-November, 1975 December-1976 January, 1976 March-Sep, 1976 November-1977 June, undated	1972 June- December, 1973 January- December, 1974 January- May, 1974 July- December, 1975 March- November, 1975 December-1976 January, 1976 March-Sep, 1976 November-1977 June, undated

**Series V: PROJECTS & INSTITUTIONS, 1946-1976***1.5 linear feet (4 boxes)*

This series has twelve sections in alphabetical order: *Air Force Office of Scientific Research, Army Research Office, Atomic Energy Commission, Fulbright Scholarship, Gauss Professorship, Lorentz Professorship, National Institutes of Health, National Science Foundation, Neurosciences Research Program, Office of Naval Research, University of Miami Center for Theoretical Studies, and Yale University*. In general, the papers in each section are arranged by type.

Air Force Office of Scientific Research

b. 22, f. 1, reel 13reel 13U	Correspondence and proposals	1971
b. 22, f. 2, reel 13reel 13U	Correspondence and report	1973
b. 22, f. 3, reel 13reel 13U	Army Research Office: correspondence and report	1974, 1976

Atomic Energy Commission

b. 22, f. 4, reel 13reel 13U	Contracts and related correspondence	1961-1969
b. 22, f. 5-13, reel 13reel 13U	General correspondence	1971-1972, 1973 January-Apr, 1973 June-Dec, 1974 January- Dec, 1975 January-Jul, 1975 August- 1976
b. 22, f. 14, reel 13reel 13U	Research proposal	1973
b. 22, f. 15, reel 13reel 13U	Records of travel	1970-1974, undated
b. 22, f. 16, reel 13reel 13U	Records and correspondence about security procedures	1972-1976
b. 22, f. 17, reel 13reel 13U	Miscellaneous printed matter	1957-1973
b. 22, f. 18, reel 13reel 13U	Notes	undated

Fulbright Scholarship

b. 22, f. 19, reel 13reel 13U	Application and award	[1950?]-1951
b. 22, f. 20, reel 13reel 13U	Correspondence	1967-1968
b. 22, f. 21, reel 13reel 13U	Gauss Professorship: correspondence	1967-1968

## Fulbright Scholarship (continued)

b. 22, f. 22, reel 13reel 13U	Lorentz Professorship: correspondence	1969-1970
<u>National Institutes of Health</u>		
b. 23, f. 23-24, reel 13reel 13U	Research proposals and related correspondence	1965-1976
<u>National Science Foundation</u>		
b. 23, f. 25, reel 13reel 13U	Correspondence and proposal	1955-1966
b. 23, f. 26, reel 13reel 13U	Correspondence and proposals	1971-1976
<u>Neurosciences Research Program</u>		
b. 24, f. 27, reel 13reel 13U	General correspondence	1969
b. 24, f. 28, reel 13reel 13U	Brochures	undated
b. 24, f. 29, reel 13reel 13U	Reprints	1967-1973
b. 24, f. 30, reel 13reel 13U	Documentation for the Schmitt Lectureship Committee	1973-1975
b. 24, f. 31, reel 13reel 13U	Documentation for the Intensive Study Program	1969-1976
b. 24, f. 32, reel 13reel 13U	Index to <i>Bulletin</i> , Vol. 1-11	[1973?]
b. 24, f. 33, reel 13reel 13U	<i>Science Notes</i>	1975-1976
b. 24, f. 34, reel 13reel 13U	Documentation for work sessions in which Onsager participated See also: <a href="#">box 28, folder 10</a>	1965-1974
b. 24, f. 35, reel 13reel 13U	Documentation for work sessions in which Onsager did not participate	1969-1975
b. 24, f. 36-38, reel 13reel 13U	Documentation for stated meetings of associates	1969-1976
b. 24, f. 39, reel 13reel 13U	Proposal for a research program "to make the mathematical tools of nonequilibrium statistical mechanics applicable to a quantitative description of the brain"	undated
<u>Office of Naval Research</u>		
b. 25, f. 40-41, reel 13reel 13U	Conference and program notes	1946-1947, 1949-1950
b. 25, f. 42, reel 13reel 13U	Administrative correspondence	1951-1957



University of Miami Center for Theoretical Studies

b. 25, f. 43, reel 13reel 13U	General correspondence	1967, 1972, 1973, 1975
b. 25, f. 44, reel 13reel 13U	Documentation for meetings of the Scientific Council	1967-1976
b. 25, f. 45, reel 13reel 13U	Administrative correspondence	1973-1975
b. 25, f. 46, reel 13reel 13U	Letters from secretaries	1973-1975
b. 25, f. 47, reel 13reel 13U	<i>Bulletin</i> English	1967-1973
b. 25, f. 48, reel 13reel 13U	Brochures containing general information	undated
b. 25, f. 49, reel 13reel 13U	Brochures describing the conferences on fundamental interactions	1968-1973
b. 25, f. 50, reel 13reel 13U	Photosynthetic energy production proposal by Sidney Fox	1974

Yale University

b. 25, f. 51, reel 13reel 13U	Chemistry Department mailings	1962, 1970-1976
b. 25, f. 52, reel 13reel 13U	Grant and Contract Administration mailings	1961-1971
b. 25, f. 53, reel 13reel 13U	Miscellaneous mailings	1969-1975
b. 25, f. 54, reel 13reel 13U	Correspondence	1968-1975
b. 25, f. 54, reel 13reel 13U	Tribute from the Dean of the Graduate School	1972

**Series VI: AWARDS & HONORS, 1952-1976***.75 linear feet (2 boxes)*

This series begins with papers related to the Nobel Prize. Papers related to other awards follow, in the order those awards were received.

Nobel Prize		
b. 26, f. 1, reel 14reel 14U	List of congratulatory letters	[1968?]
Congratulatory letters		
b. 26, f. 2, reel 14reel 14U	A-B	1968
b. 26, f. 3, reel 14reel 14U	C-D	1968
b. 26, f. 4, reel 14reel 14U	E-F	1968
b. 26, f. 5, reel 14reel 14U	G-H	1968
b. 26, f. 6, reel 14reel 14U	I-L	1968
b. 26, f. 7, reel 14reel 14U	M-N	1968
b. 26, f. 8, reel 14reel 14U	O-R	1968
b. 26, f. 9, reel 14reel 14U	S	1968
b. 26, f. 10, reel 14reel 14U	T-Z	1968
b. 26, f. 11, reel 14reel 14U	Multiple or incompletely identified senders	1968
b. 26, f. 12, reel 14reel 14U	List of congratulatory telegrams	[1968?]
Congratulatory telegrams		
b. 26, f. 13, reel 14reel 14U	A-G	1968
b. 26, f. 14, reel 14reel 14U	H-P	1968
b. 26, f. 15, reel 14reel 14U	R-Z	1968
b. 26, f. 16, reel 14reel 14U	Printed acknowledgement of congratulations	1968

## Nobel Prize (continued)

b. 26, f. 17, reel 14reel 14U	Transcript of reception at Yale	1968
b. 26, f. 18, reel 14reel 14U	Statement of Onsager's achievement	undated
b. 26, f. 19, reel 14reel 14U	Correspondence about arrangements in Sweden	1968-1969, 1972-1976
b. 26, f. 20, reel 14reel 14U	Programs and itineraries	1968
b. 26, f. 21, reel 14reel 14U	Tribute at the banquet	1968
Lecture		
b. 26, f. 22, reel 14reel 14U	Correspondence re: publication	1968-1972
b. 26, f. 23, reel 14reel 14U	Preprints, notes on proofreading	1969
b. 26, f. 24, reel 14reel 14U	Swedish Royal Academy of Sciences: requests for nominations	1969-1976
Meetings at Lindau		
b. 26, f. 25, reel 14reel 14U	Correspondence, documentation, lecture on "Protonic Semiconductors" See: <a href="#">box 28, folder 8</a>	1967-1970
b. 26, f. 26, reel 14reel 14U	Correspondence, programs	1973, 1975
b. 26, f. 27, reel 14reel 14U	Gustavus Adolphus College: correspondence re: convocation of Nobel laureates	1975
b. 27, f. 28, reel 14reel 14U	Rumford Medal: correspondence, program, presentation statement	1952-1953
b. 27, f. 29, reel 14reel 14U	Kirkwood Medal: correspondence, press release	1962
b. 27, f. 30, reel 14reel 14U	Rensselaer Polytechnic Institute: correspondence re: honorary degree	1962
Gibbs Medal		
b. 27, f. 31-32, reel 14reel 14U	Correspondence	1961-1976
b. 27, f. 33, reel 14reel 14U	Congratulatory letters	1962
b. 27, f. 34, reel 14reel 14U	Draft	1962

b. 27, f. 35, reel 14reel 14U	Debye Award: correspondence, tribute	1964-1965
b. 27, f. 35, reel 14reel 14U	Belfer Award: correspondence	1966
b. 27, f. 36, reel 14reel 14U	University of Chicago: letters re: honorary degree	1968
b. 27, f. 37, reel 14reel 14U	National Medal of Science: correspondence	1969-1975
b. 27, f. 38, reel 14reel 14U	University of Cambridge: correspondence and program re: honorary degree	1970
b. 27, f. 39, reel 14reel 14U	Oxford University: correspondence and program re: honorary degree See: <a href="#">box 28, folder 9</a>	1971
	Seventieth birthday	
b. 27, f. 40, reel 14reel 14U	Congratulatory letters	1973
b. 27, f. 41, reel 14reel 14U	Programs, lists of participants	1973
b. 27, f. 42, reel 14reel 14U	Papers presented	1973

**Series VII: BIOGRAPHICAL MATERIAL, 1938, 1953-1978***0.25 linear feet (1 box)*

The papers in this series are arranged in this order: memoirs, interview, clippings, photographs, family history. Each type of material is in chronological order.

b. 28, f. 1, reel 15reel 15U	Memoir by Philip A. Lyons	1978
b. 28, f. 2, reel 15reel 15U	"Lars Onsager," <i>Biographical Memoirs of Fellows of the Royal Society</i> English	1978
b. 28, f. 3, reel 15reel 15U	Transcript of interview with Melvin L. Alexenberg on aesthetic experience in science	1969
b. 28, f. 4, reel 15reel 15U	Clippings	1938, 1953-1978
Photographs		
b. 28, f. 5, reel 15reel 15U	International Conference on Theoretical Physics: group portrait	1953
b. 28, f. 6, reel 15reel 15U	Gordon Research Conferences: group portraits	1955-1956
b. 28, f. 7, reel 15reel 15U	Neurosciences Research Program: group portrait	1965
b. 28, f. 8, reel 15reel 15U	Meeting of Nobel laureates at Lindau: group portrait, candid photographs of Onsager with Dorothy C. Hodgkin and others	1970
b. 28, f. 9, reel 15reel 15U	Oxford University: snapshot	1971
b. 28, f. 9, reel 15reel 15U	France: snapshot	1971
b. 28, f. 10, reel 15reel 15U	Neurosciences Research Program: group portrait	1973
b. 28, f. 11, reel 15reel 15U	Unidentified meetings	[1974?], [1976?]
b. 28, f. 12, reel 15reel 15U	Gordon Research Conference: group portrait	1976
b. 28, f. 13, reel 15reel 15U	Copy of 1911 article about Onsager's [grandfather?]	undated

**Series VIII: WRITINGS OF OTHERS, 1931-(1961-1976)***5 linear feet (12 boxes)*

The arrangement is alphabetical.

b. 29, f. 1, reel 16reel 16U	Ab-Ad
b. 29, f. 2, reel 16reel 16U	Ag-Ah
b. 29, f. 3, reel 16reel 16U	Ai-Al
b. 29, f. 4-5, reel 16reel 16U	American Chemical Society
b. 29, f. 6, reel 16reel 16U	An-Argonne
b. 29, f. 7, reel 16reel 16U	Argonne-Arm
b. 29, f. 8, reel 16reel 16U	Arn-Au
b. 30, f. 9, reel 16reel 16U	Bac-Barb
b. 30, f. 10, reel 16reel 16U	Bard-Bart
b. 30, f. 11, reel 16reel 16U	Bas-Baxter, G.
b. 30, f. 12, reel 16reel 16U	Baxter, R.J.
b. 30, f. 13, reel 16reel 16U	Baxter, R.J.-Ben
b. 30, f. 14, reel 16reel 16U	Ber-Bj
b. 30, f. 15, reel 16reel 16U	Bl-Bo
b. 30, f. 16, reel 16reel 16U	Bra-Bri
b. 30, f. 17, reel 16reel 16U	Bron
b. 31, f. 18, reel 16reel 16U	Broo-Bu
b. 31, f. 19, reel 16reel 16U	Ca

b. 31, f. 20, reel 16reel 16U	Ch-Cr
b. 31, f. 21, reel 16reel 16U	Da-De
b. 31, f. 22, reel 16reel 16U	Dh-Dre
b. 31, f. 23, reel 16reel 16U	Dro
b. 31, f. 24, reel 16reel 16U	Du
b. 31, f. 25, reel 16reel 16U	Ea-Eig
b. 31, f. 26, reel 16reel 16U	Ein-Ey
b. 32, f. 27, reel 16reel 16U	Fa-Fe
b. 32, f. 28, reel 16reel 16U	Fi
b. 32, f. 29, reel 16reel 16U	Fl-Fox, S.
b. 32, f. 30-31, reel 16reel 16U	Fox, S.
b. 32, f. 32, reel 16reel 16U	Fox, S.-Fu
b. 32, f. 33, reel 16reel 16U	Ga
b. 32, f. 34, reel 16reel 16U	Ge-Gi
b. 32, f. 35, reel 16reel 16U	Gl-Gu
b. 33, f. 36, reel 16reel 16U	Haa-Han
b. 33, f. 37, reel 16reel 16U	Har-Hepp, K.
b. 33, f. 38, reel 16reel 16U	Hepp, K.
b. 33, f. 39, reel 16reel 16U	Her
b. 33, f. 40, reel 16reel 16U	Hes-Hill

b. 33, f. 41, reel 16reel 16U	Hille, B.
b. 33, f. 42, reel 16reel 16U	Hille, B.-Hirsch
b. 33, f. 43, reel 16reel 16U	Hirschf-Hs
b. 33, f. 44, reel 16reel 16U	Hu
b. 34, f. 45, reel 16reel 16U	Hw
b. 34, f. 46, reel 16reel 16U	Hy
b. 34, f. 47, reel 16reel 16U	I
b. 34, f. 48, reel 16reel 16U	Ja-Jon
b. 34, f. 49, reel 16reel 16U	Jos-Ju
b. 34, f. 50, reel 16reel 16U	Kac
b. 34, f. 51, reel 16reel 16U	Kad
b. 34, f. 52, reel 16reel 16U	Kag-Kame
b. 34, f. 53, reel 16reel 16U	Kami-Kat
b. 34, f. 54, reel 16reel 16U	Ke-Ko
b. 35, f. 55, reel 16reel 16U	Kra-Krier, T.
b. 35, f. 56, reel 16reel 16U	Krier, T.
b. 35, f. 57, reel 16reel 16U	Krier, T.-Kru
b. 35, f. 58, reel 16reel 16U	Ku
b. 35, f. 59, reel 16reel 16U	La
b. 35, f. 60, reel 16reel 16U	Le



b. 35, f. 61, reel 16reel 16U	Lie-Lind
b. 35, f. 62, reel 16reel 16U	Ling-Liu
b. 35, f. 63, reel 16reel 16U	Lo-Ly
b. 36, f. 64, reel 16reel 16U	Mc
b. 36, f. 65, reel 16reel 16U	Mae-Man
b. 36, f. 66, reel 16reel 16U	Mar-Maz
b. 36, f. 67, reel 16reel 16U	Me-Mu
b. 36, f. 68, reel 16reel 16U	Nag
b. 36, f. 69, reel 16reel 16U	Nak-No
b. 36, f. 70, reel 16reel 16U	O
b. 36, f. 71, reel 16reel 16U	Pa
b. 36, f. 72, reel 16reel 16U	Pe-Ph
b. 37, f. 73, reel 16reel 16U	Pippard, A.B.
b. 37, f. 74, reel 16reel 16U	Pippard, A.B.-Pr
b. 37, f. 75, reel 16reel 16U	Rah-Rasetti, J.
b. 37, f. 76, reel 16reel 16U	Rasetti, M.-Re
b. 37, f. 77, reel 16reel 16U	Ri
b. 37, f. 78, reel 16reel 16U	Rob-Ros
b. 37, f. 79, reel 16reel 16U	Rot-Rue
b. 37, f. 80, reel 16reel 16U	Rum-Ry

b. 37, f. 81, reel 16reel 16U	Sa
b. 38, f. 82, reel 16reel 16U	Sc-Se
b. 38, f. 83, reel 16reel 16U	She-Shi
b. 38, f. 84, reel 16reel 16U	Sho
b. 38, f. 85, reel 16reel 16U	Si-Step
b. 38, f. 86, reel 16reel 16U	Stew-Stillinger, F.
b. 38, f. 87, reel 16reel 16U	Stillinger, F.-Stu
b. 38, f. 88, reel 16reel 16U	Su
b. 38, f. 89, reel 16reel 16U	Ta-Th
b. 38, f. 90, reel 16reel 16U	Ti-Tr
b. 38, f. 91, reel 16reel 16U	Uh-University of Virginia
b. 39, f. 92, reel 16reel 16U	University of Virginia
b. 39, f. 93, reel 16reel 16U	Up-Va
b. 39, f. 94, reel 16reel 16U	Ve-Vi
b. 39, f. 95, reel 16reel 16U	Vo-Vr
b. 39, f. 96, reel 16reel 16U	Wad
b. 39, f. 97, reel 16reel 16U	Wae-Web
b. 39, f. 98, reel 16reel 16U	Weg-Weik
b. 39, f. 99, reel 16reel 16U	Weinhold
b. 39, f. 100, reel 16reel 16U	Weit-Wh

b. 40, f. 101, reel Wic-Wilson, J.  
16reel 16U

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b. 40, f. 102, reel Wilson, K.  
16reel 16U

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b. 40, f. 103, reel Witt  
16reel 16U

---

b. 40, f. 104, reel Wo-Wu, S.  
16reel 16U

---

b. 40, f. 105, reel Wu, T.-Wy  
16reel 16U

---

b. 40, f. 106, reel Y  
16reel 16U

---

b. 40, f. 107, reel Z  
16reel 16U

---

b. 40, f. 108, reel Unidentified  
16reel 16U

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## **RESTRICTED MATERIAL**

These boxes contain grades, letters of recommendation, minutes, grant proposals, and financial material found in the Lars Onsager Papers. This material was segregated prior to filming and is closed subject to review by the Associate Librarian. A list of the folders in these boxes is included in the "Register File". Consult the reference staff.

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**Folio**

Oversize material: Series II, folders 57, 72, 140, and 189-227; Series III, folder 113

## Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

### Subjects

Chemistry  
Dielectrics  
Educators  
Electrolytes  
Hydrodynamics  
Ice  
Irreversible processes  
Ising model  
Liquid helium  
Mathematics  
Nobel Prizes  
Science  
Semiconductors  
Thermal diffusivity

### Occupations

Chemists

### Names

Abramson, Harold A. (Harold Alexander),  
1899-1980  
Coolidge, Albert Sprague, 1894-1977  
Falkenhagen, Hans, 1895-  
Onsager, Lars, 1903-1976

### Corporate Bodies

University of Miami  
Yale University. Department of Chemistry  
Yale University -- Faculty