

Bibliography

- AKERLOF, G. C., and OSHRY, H. I. (1950). *J. Am. chem. Soc.* **72**, 2844.
- ANTONOFF, G., and CONAN, R. J. (1949). *Science* **109**, 255.
- ARRIGHINI, G. P., MAESTRO, M., and MOCCIA, R. (1967). *Chem. Phys. Lett.* **1**, 242.
- AUNG, S., PITZER, R. M., and CHAN, S. I. (1968). *J. chem. Phys.*, in press.
- AUTY, R. P., and COLE, R. H. (1952). *J. chem. Phys.* **20**, 1309.
- BADER, R. F. W. (1964*a*). *J. Am. chem. Soc.* **86**, 5070.
- (1964*b*). *Can. J. Chem.* **42**, 1822.
- and JONES, G. A. (1963). *Can. J. Chem.* **41**, 586.
- BAIN, R. W. (1964). *National Engineering Laboratory Steam Tables 1964*. H.M.S.O., Edinburgh.
- BARNAAL, D. E., and LOWE, I. J. (1967). *J. chem. Phys.* **46**, 4800.
- BARNES, W. H. (1929). *Proc. R. Soc. A* **125**, 670.
- BASS, R., ROSSBERG, D., and ZIEGLER, G. (1957). *Z. Phys.* **149**, 199.
- BAYLY, J. G., KARTHA, V. B., and STEVENS, W. H. (1963). *Infrared Phys.* **3**, 211.
- BEAUMONT, R. H., CHIHARA, H., and MORRISON, J. A. (1961). *J. chem. Phys.* **34**, 1456.
- BELL, S. (1965). *J. molec. Spectrosc.* **16**, 205.
- BEN ARYEH, Y. (1966). *Proc. phys. Soc.* **89**, 1059.
- BENEDICT, W. S., CLAASSEN, H. H., and SHAW, J. H. (1952). *J. Res. natn. Bur. Stand.* **49**, 91.
- GAILAR, N., and PLYLER, E. K. (1953). *J. chem. Phys.* **21**, 1301.
- — — (1956). *J. chem. Phys.* **24**, 1139.
- BERENDSEN, H. J. C. (1967). *Theoretical and experimental biophysics* (ed. A. COLE) **1**, 1.
- BERNAL, J. D. (1937). *Trans. Faraday Soc.* **33**, 27.
- (1964). *Proc. R. Soc. A* **280**, 299.
- and FOWLER, R. H. (1933). *J. chem. Phys.* **1**, 515.
- BERTIE, J. E., CALVERT, L. D., and WHALLEY, E. (1963). *J. chem. Phys.* **38**, 840.
- — — (1964). *Can. J. Chem.* **42**, 1373.
- and WHALLEY, E. (1964*a*). *J. chem. Phys.* **40**, 1637.
- — — (1964*b*). *J. chem. Phys.* **40**, 1646.
- — — (1967). *J. chem. Phys.* **46**, 1271.
- BETT, K. E., and CAPPI, J. B. (1965). *Nature, Lond.* **207**, 620.

- BISHOP, D. M., and RANDIĆ, M. (1966). *Molec. Phys.* **10**, 517.
- BJERRUM, N. (1951). *K. danske Vidensk. Selsk. Skr.* **27**, 1.
- (1952). *Science*, **115**, 385.
- BLACKMAN, M., and LISGARTEN, N. D. (1957). *Proc. R. Soc. A* **239**, 93.
- — (1958). *Adv. Phys.* **7**, 189.
- BLUE, R. W. (1954). *J. chem. Phys.* **22**, 280.
- BLUYSSSEN, H., DYMANUS, A., REUSS, J., and VERHOEVEN, J. (1967). *Phys. Lett.* **25A**, 584.
- BÖTTCHER, C. J. F. (1952). *Theory of electric polarisation*. Elsevier, London.
- BRADY, G. W., and ROMANOW, W. J. (1960). *J. chem. Phys.* **32**, 306.
- BRAGG, W. H. (1922). *Proc. phys. Soc. Lond.* **34**, 98.
- BRAND, J. C. D., and SPEAKMAN, J. C. (1960). *Molecular structure*. Arnold, London.
- BRIDGMAN, P. W. (1912). *Proc. Am. Acad. Arts Sci.* **47**, 441.
- (1931). *The physics of high pressure*. Bell, London.
- (1935). *J. chem. Phys.* **3**, 597.
- (1937). *J. chem. Phys.* **5**, 964.
- BRILL, R. (1962). *Angew. Chem. (Int. edn)* **1**, 563.
- and TIPPE, A. (1967). *Acta crystallogr.* **23**, 343.
- BROWN, A. J., and WHALLEY, E. (1966). *J. chem. Phys.* **45**, 4360.
- BUCKINGHAM, A. D. (1956). *Proc. R. Soc. A* **238**, 235.
- (1959). *Q. Rev. chem. Soc.* **13**, 183.
- BUIJS, K., and CHOPPIN, G. R. (1963). *J. chem. Phys.* **39**, 2035.
- — (1964). *J. chem. Phys.* **40**, 3120.
- BURNELLE, L., and COULSON, C. A. (1957). *Trans. Faraday Soc.* **53**, 403.
- CAMPBELL, E. S. (1952). *J. chem. Phys.* **20**, 1411.
- GELERNTER, G., HEINEN, H., and MOORTI, V. R. G. (1967). *J. chem. Phys.* **46**, 2690.
- CHADWELL, H. M. (1927). *Chem. Rev.* **4**, 375.
- CHAN, R. K., DAVIDSON, D. W., and WHALLEY, E. (1965). *J. chem. Phys.* **43**, 2376.
- CHIDAMBARAM, R. (1961). *Acta crystallogr.* **14**, 467.
- COHAN, N. V., COTTI, M., IRIBARNE, J. V., and WEISSMANN, M. (1962). *Trans. Faraday Soc.* **58**, 490.
- COHEN, G., and EISENBERG, H. (1965). *J. chem. Phys.* **43**, 3881.
- COLLIE, C. H., HASTED, J. B., and RISTON, D. M. (1948). *Proc. phys. Soc.* **60**, 145.
- COLLINS, J. G., and WHITE, G. K. (1964). In *Progress in low temperature physics* (ed. C. J. GROTER), Vol. IV.
- COTTRELL, T. L. (1958). *The strengths of chemical bonds*. Butterworths, London.
- COULSON, C. A. (1951). *Proc. R. Soc. A* **207**, 63.
- (1957). *Research* **10**, 149.

- COULSON, C. A. (1959*a*). *Spectrochim. Acta* **14**, 161.
— (1959*b*). In *Hydrogen bonding* (ed. D. HADZI), Pergamon Press, London.
— (1961). *Valence*, 2nd edn. Clarendon Press, Oxford.
— and DANIELSSON, U. (1954). *Ark. Fys.* **8**, 239, 245.
— and EISENBERG, D. (1966*a*). *Proc. R. Soc. A* **291**, 445.
— — (1966*b*). *Proc. R. Soc. A* **291**, 454.
CROSS, P. C., BURNHAM, J., and LEIGHTON, P. A. (1937). *J. Am. chem. Soc.* **59**, 1134.
CUDDEBACK, R. B., KOELLER, R. C., and DRICKAMER, H. G. (1953). *J. chem. Phys.* **21**, 589.
CUMMINS, H. Z., and GAMMON, R. W. (1966). *J. chem. Phys.* **44**, 2785.
DANFORD, M. D., and LEVY, H. A. (1962). *J. Am. chem. Soc.* **84**, 3965.
DANTL, G. (1962). *Z. Phys.* **166**, 115.
DARLING, B. T., and DENNISON, D. M. (1940). *Phys. Rev.* **57**, 128.
DAVIDSON, D. W. (1966). In *Molecular relaxation processes*. Academic Press, New York.
DAVIS, C. M., Jr., and BRADLEY, D. L. (1966). *J. chem. Phys.* **45**, 2461.
— and JARZYNSKI, J. (1967–8). *Adv. molec. Relaxation Processes*, **1**, 155.
— and LITOVITZ, T. A. (1965). *J. chem. Phys.* **42**, 2563.
DEBYE, P. (1929). *Polar molecules*. Dover, New York.
DENGEL, O., and RIEHL, N. (1963). *Phys. Kondens. Materie*, **1**, 191.
DENNEY, D. J., and COLE, R. H. (1955). *J. chem. Phys.* **23**, 1767.
DENNISON, D. M. (1940). *Rev. mod. Phys.* **12**, 175.
DIMARZIO, E. A., and STILLINGER, F. H., Jr. (1964). *J. chem. Phys.* **40**, 1577.
DORSEY, N. E. (1940). *Properties of ordinary water-substance*. Reinhold, New York.
DOWELL, L. G., and RINFRET, A. P. (1960). *Nature, Lond.* **188**, 1144.
DRAEGERT, D. A., STONE, N. W. B., CURNUTTE, B., and WILLIAMS, D. (1966). *J. opt. Soc. Am.* **56**, 64.
DROST-HANSEN, W. (1965*a*). Scientific Contribution No. 628 from the Marine Laboratory, Institute of Marine Science, University of Miami, Miami, Florida (preprint of paper from the Proceedings of the First International Symposium on Water Desalination).
— (1965*b*). *Ann. N.Y. Acad. Sci.* **125**, 471.
DUNCAN, A. B. F., and POPLÉ, J. A. (1953). *Trans. Faraday Soc.* **49**, 217.
DUNITZ, J. D. (1963). *Nature, Lond.* **197**, 860.
EDSALL, J. T., and WYMAN, J. (1958). *Biophysical chemistry*, Vol. I. Academic Press, New York.
EIGEN, M. (1964). *Angew. Chem. (Int. edn)* **3**, 1.
— and DE MAEYER, L. (1958). *Proc. R. Soc. A* **247**, 505.
— — (1959). In *The structure of electrolyte solutions* (ed. W. J. HAMER). Wiley, New York.
— — and SPATZ, H. Ch. (1964). *Ber. Bunsenges.* **68**, 19.

- EISENBERG, D., and COULSON, C. A. (1963). *Nature, Lond.* **199**, 368.
- POCHAN, J. M., and FLYGARE, W. H. (1965). *J. chem. Phys.* **43**, 4531.
- EISENBERG, H. (1965). *J. chem. Phys.* **43**, 3887.
- ELLISON, F. O., and SHULL, H. (1955). *J. chem. Phys.* **23**, 2348.
- EUCKEN, A. (1946). *Nachr. Akad. Wiss. Göttingen*, p. 38.
- EWELL, R. H., and EYRING, H. (1937). *J. chem. Phys.* **5**, 726.
- FALK, M., and FORD, T. A. (1966). *Can. J. Chem.* **44**, 1699.
- and KELL, G. S. (1966). *Science* **154**, 1013.
- FISHER, I. Z. (1964). *Statistical theory of liquids*. University of Chicago Press, Chicago.
- FLORIN, A. E., and ALEI, M. (1967). *J. chem. Phys.* **47**, 4268.
- FLUBACHER, P., LEADBETTER, A. J., and MORRISON, J. A. (1960). *J. chem. Phys.* **33**, 1751.
- FRANCK, E. U., and ROTH, K. (1967). *Discuss. Faraday Soc.* **43**, 108.
- FRANK, H. S. (1958). *Proc. R. Soc. A* **247**, 481.
- (1963). *Desalination Research Conference Proceedings, National Acad. of Sciences—National Research Council, Publication 942*, p. 141.
- (1965). *Fedn Proc. (Fedn Am. Socs. exp. Biol.)* **24**, Supplement 15, S1.
- and QUIST, A. S. (1961). *J. chem. phys.* **34**, 604.
- and WEN, W. Y. (1957). *Discuss. Faraday Soc.* **24**, 133.
- FRENKEL, J. (1946). *Kinetic theory of liquids*. Clarendon Press, Oxford.
- FRIEDMAN, A. S., and HAAR, L. (1954). *J. chem. Phys.* **22**, 2051.
- GARG, S. K., and SMYTH, C. P. (1965). *J. chem. Phys.* **43**, 2959.
- GHORMLEY, J. A. (1956). *J. chem. Phys.* **25**, 599.
- (1968). *J. chem. Phys.* **48**, 503.
- GIAUQUE, W. F., and ASHLEY, M. (1933). *Phys. Rev.* **43**, 81.
- and STOUT, J. W. (1936). *J. Am. chem. Soc.* **58**, 1144.
- GINNINGS, D. C., and CORRUCINI, R. J. (1947). *J. Res. natn. Bur. Stand.* **38**, 583.
- GLAESER, R. M., and COULSON, C. A. (1965). *Trans. Faraday Soc.* **61**, 389.
- GLARUM, S. H. (1960). *J. chem. Phys.* **33**, 1371.
- GLASEL, J. A. (1966). *Proc. natn. Acad. Sci. U.S.A.* **55**, 479.
- (1967). *Proc. natn. Acad. Sci. U.S.A.* **58**, 27.
- GLASSSTONE, S., LAIDLER, K. J., and EYRING, H. (1941). *The theory of rate processes*. McGraw-Hill, New York.
- GLEN, J. W. (1958). *Adv. Phys.* **7**, 254.
- GRÄNICHER, H. (1958). *Z. Kristallogr. Kristallgeom.* **110**, 432.
- (1963). *Phys. Kondens. Materie*, **1**, 1.
- JACCARD, C., SCHERRER, P., and STEINEMANN, A. (1957). *Discuss. Faraday Soc.* **23**, 50.
- GRANT, E. H. (1957). *J. chem. Phys.* **26**, 1575.

- GRANT, E. H., BUCHANAN, T. J., and COOK, H. F. (1957). *J. chem. Phys.* **26**, 156.
- GRJOTHEIM, K., and KROGH-MOE, J. (1954). *Acta chem. Scand.* **8**, 1193.
- GURIKOV, YU. V. (1965). *J. struct. Chem.* (translation of *Zh. strukt. Khim.*) **6**, 786.
- (1966). *J. struct. Chem.* (translation of *Zh. strukt. Khim.*) **7**, 6.
- HAAS, C. (1960). *Technical Report #5*, Frick Chemical Laboratory, Princeton University, Princeton, N.J.
- (1962). *Phys. Lett.* **3**, 126.
- and HORNIG, D. F. (1960). *J. chem. Phys.* **32**, 1763.
- HAGGIS, G. H., HASTED, J. B., and BUCHANAN, T. J. (1952). *J. chem. Phys.* **20**, 1452.
- HAKE, R. B., and BANYARD, K. E. (1965). *J. chem. Phys.* **43**, 657.
- HALL, L. (1948). *Phys. Rev.* **73**, 775.
- HAMILTON, W. C., and IBERS, J. A. (1968). *Hydrogen bonding in solids*. Benjamin, New York.
- HARNED, H. S., and OWEN, B. B. (1939). *Chem. Rev.* **25**, 31.
- HARRIS, F. E., and O'KONSKI, C. T. (1957). *J. phys. Chem. Ithaca* **61**, 310.
- HARRISON, J. F. (1967). *J. chem. Phys.* **47**, 2990.
- HARTMAN, K. A. (1966). *J. phys. Chem. Ithaca* **70**, 270.
- HASTED, J. B. (1961). *Prog. Dielect.* **3**, 103.
- HEATH, D. F., and LINNETT, J. W. (1948). *Trans. Faraday Soc.* **44**, 556.
- HEEMSKERK, J. (1962). *Recl Trav. chim. Pays-Bas Belg.* **81**, 904.
- HEIKS, J. R., BARNETT, M. K., JONES, L. V., and ORBAN, E. (1954). *J. phys. Chem.* **58**, 488.
- HENDRICKSON, J. B. (1961). *J. Am. chem. Soc.* **83**, 4537.
- HERZBERG, G. (1950). *Molecular spectra and molecular structure*, 2nd edn. Van Nostrand, New York.
- HINDMAN, J. C. (1966). *J. chem. Phys.* **44**, 4582.
- HIRSCHFELDER, J. O., CURTISS, C. F., and BIRD, R. B. (1954). *Molecular theory of gases and liquids*. Wiley, New York.
- HOLLINS, G. T. (1964). *Proc. phys. Soc.* **84**, 1001.
- HOLTON, G., HAGELBERG, M. P., KAO, S., and JOHNSON, W. H. Jr. (1968). *J. Acoust. Soc. Am.* **43**, 102.
- HONJO, G., and SHIMAOKA, K. (1957). *Acta crystallogr.* **10**, 710.
- HORNE, R. A., COURANT, R. A., JOHNSON, D. S., and MARGOSIAN, F. F. (1965). *J. phys. Chem. Ithaca* **69**, 3988.
- and JOHNSON, D. S. (1966). *J. phys. Chem. Ithaca* **70**, 2182.
- HORNIG, D. F. (1950). *Discuss. Faraday Soc.* **9**, 115.
- (1964). *J. chem. Phys.* **40**, 3119.
- WHITE, H. F., and REDING, F. P. (1958). *Spectrochim. Acta*, **12**, 338.
- HUGHES, D. J., PALEVSKY, H., KLEY, W., and TUNKELO, E. (1960). *Phys. Rev.* **119**, 872.
- HUMBEL, F., JONA, F., and SCHERRER, P. (1953). *Helv. phys. Acta*, **26**, 17.

- ITAGAKI, K. (1964). *J. phys. Soc. Japan* **19**, 1081.
- JACCARD, C. (1959). *Helv. phys. Acta* **32**, 89.
- (1965). *Ann. N.Y. Acad. Sci.* **125**, 390.
- JHON, M. S., GROSH, J., REE, T., and EYRING, H. (1966). *J. chem. Phys.* **44**, 1465.
- JONES, J. R., ROWLANDS, D. L. G., and MONK, C. B. (1965). *Trans. Faraday Soc.* **61**, 1384.
- KAMB, B. (1964). *Acta crystallogr.* **17**, 1437.
- (1965*a*). *Science* **150**, 205.
- (1965*b*). *J. chem. Phys.* **43**, 3917.
- (1967). Private communication.
- (1968). In *Structural chemistry and molecular biology* (ed. A. RICH and N. DAVIDSON). Freeman, San Francisco.
- and DATTA, S. K. (1960). *Nature, Lond.* **187**, 140.
- and DAVIS, B. L. (1964). *Proc. natn. Acad. Sci. U.S.A.* **52**, 1433.
- PRAKASH, A., and KNOBLER, C. (1967). *Acta crystallogr.* **22**, 706.
- KATZOFF, S. (1934). *J. chem. Phys.* **2**, 841.
- KAUZMANN, W. (1942). *Rev. mod. Phys.* **14**, 12.
- (1948). *Chem. Rev.* **43**, 219.
- (1957). *Quantum chemistry*. Academic Press, New York.
- (1966). *Kinetic theory of gases*. Benjamin, New York.
- KAVANAU, J. L. (1964). *Water and solute-water interactions*. Holden-Day, San Francisco.
- KELL, G. S. (1967). *J. chem. engng Data* **12**, 66.
- and WHALLEY, E. (1965). *Phil. Trans. R. Soc. A* **258**, 565.
- — (1968). *J. chem. Phys.* **48**, 2359.
- KENNEDY, G. C., KNIGHT, W. L., and HOLSER, W. T. (1958). *Am. J. Sci.* **256**, 590.
- KERN, C. W., and MATCHA, R. L. (1968). *J. chem. Phys.*, in press.
- KETELAAR, J. A. (1953). *Chemical constitution*, p. 90. Elsevier, New York.
- KEYES, F. G. (1949). *J. chem. Phys.* **17**, 923.
- (1958). *Trans. Am. Soc. mech. Engrs*, **78**, 555.
- SMITH, L. B., and GERRY, H. T. (1936). *Proc. Am. Acad. Arts Sci.* **70**, 319.
- KIRKWOOD, J. G. (1939). *J. chem. Phys.* **7**, 911.
- KIRSHENBAUM, I. (1951). *Physical properties and analysis of heavy water*. McGraw-Hill, New York.
- KISLOVSKII, L. D. (1959). *Optics Spectrosc.* **7**, 201.
- KOEFOED, J. (1957). *Discuss. Faraday Soc.* **24**, 216.
- KOPP, M., BARNAAL, D. E., and LOWE, I. J. (1965). *J. chem. Phys.* **43**, 2965.
- KRATOCHVIL, J. P., KERKER, M., and OPPENHEIMER, L. E. (1965). *J. chem. Phys.* **43**, 914.
- KRAUT, J., and DANDLIKER, W. B. (1955). *J. chem. Phys.* **23**, 1544.
- KRYNICKI, K. (1966). *Physica* **32**, 167.
- KUCHITSU, K., and BARTELL, L. S. (1962). *J. chem. Phys.* **36**, 2460.

- KUCHITSU, K., and MORINO, Y. (1965). *Bull. chem. Soc. Japan* **38**, 814.
- KUHN, W., and THÜRKAUF, M. (1958). *Helv. chim. Acta* **41**, 938.
- KUHNS, I. E., and MASON, B. J. (1968). *Proc. R. Soc. A* **302**, 437.
- KUME, K. (1960). *J. phys. Soc. Japan* **15**, 1493.
- KYOGOKU, Y. (1960). *J. chem. Soc. Japan (Pure Chemistry Section)* **81**, 1648 (NCR Technical Translation 953).
- LA PLACA, S., and POST, B. (1960). *Acta crystallogr.* **13**, 503.
- LARSSON, K. E. (1965). In *Thermal neutron scattering* (ed. P. A. EGELSTAFF). Academic Press, New York.
- and DAHLBORG, U. (1962). *J. nucl. Energy* **16**, 81.
- LAVERGNE, M., and DROST-HANSEN, W. (1956). *Naturwissenschaften* **43**, 511.
- LEADBETTER, A. J. (1965). *Proc. R. Soc. A* **287**, 403.
- LENNARD-JONES, J., and POPLE, J. A. (1951). *Proc. R. Soc. A* **205**, 155.
- LEVINE, M. (1966). Undergraduate thesis, Princeton University. Unpublished.
- LIEB, E. H. (1967). *Phys. Rev.* **162**, 162.
- LIPPINCOTT, E. R., and SCHROEDER, R. (1955). *J. chem. Phys.* **23**, 1099.
- LITAN, A. (1968). *J. chem. Phys.* **48**, 1059.
- LITOVITZ, T. A., and CARNEVALE, E. H. (1955). *J. appl. Phys.* **26**, 816.
- and DAVIS, C. M. (1965). In *Physical acoustics* (ed. W. P. MASON). Academic Press, New York.
- LONDON, F. (1937). *Trans. Faraday Soc.* **33**, 8.
- LONG, E. A., and KEMP, J. D. (1936). *J. Am. chem. Soc.* **58**, 1829.
- LONGSWORTH, L. G. (1960). *J. phys. Chem. Ithaca* **64**, 1914.
- LONSDALE, K. (1958). *Proc. R. Soc. A* **247**, 424.
- LUCK, W. (1965). *Ber. Bunsenges.* **69**, 626.
- (1967). *Discuss. Faraday Soc.* **43**, 115.
- MAGAT, M. (1948). *J. Chim. phys.* **45**, 93.
- MALMBERG, C. G. (1958). *J. Res. natn. Bur. Stand.* **60**, 609.
- and MARYOTT, A. A. (1956). *J. Res. natn. Bur. Stand.* **56**, 1.
- MARCHI, R. P., and EYRING, H. (1964). *J. phys. Chem. Ithaca* **68**, 221.
- MARCKMANN, J. P., and WHALLEY, E. (1964). *J. chem. Phys.* **41**, 1450.
- MARGENAU, H. (1939). *Rev. mod. Phys.* **11**, 1.
- and MYERS, V. W. (1944). *Phys. Rev.* **66**, 307.
- MCCLELLAN, A. L. (1963). *Dipole moments*. Freeman, San Francisco.
- McMILLAN, J. A., and LOS, S. C. (1965). *Nature, Lond.* **206**, 806.
- McWEENY, R., and OHNO, K. A. (1960). *Proc. R. Soc. A* **255**, 367.
- MEGAW, H. D. (1934). *Nature, Lond.* **134**, 900.
- MEIBOOM, S. (1961). *J. chem. Phys.* **34**, 375.
- MERWIN, H. E. (1930). *Int. crit. Tabl.* **7**, 17.
- MILLS, I. M. (1963). *Infra-red spectroscopy and molecular structure* (ed. M. DAVIES). Elsevier, London.

- MOCCIA, R. (1964). *J. chem. Phys.* **40**, 2186.
- MOELWYN-HUGHES, E. A. (1964). *Physical chemistry*, 2nd edn. Macmillan, New York.
- MOORE, C. E. (1949). Atomic energy levels, *National Bureau of Standards Circular* 467, Vol. 1.
- MORGAN, J., and WARREN, B. E. (1938). *J. chem. Phys.* **6**, 666.
- MOROKUMA, K., and PEDERSEN, L. (1968). *J. chem. Phys.* **48**, 3275.
- MOSKOWITZ, J. W., and HARRISON, M. C. (1965). *J. chem. Phys.* **43**, 3550.
- MULLER, N. (1965). *J. chem. Phys.* **43**, 2555.
- and REITER, R. C. (1965). *J. chem. Phys.* **42**, 3265.
- MYSELS, K. J. (1964). *J. Am. chem. Soc.* **86**, 3503.
- NAGLE, J. F. (1966). *J. math. Phys.* **7**, 1484.
- NARTEN, A. H., DANFORD, M. D., and LEVY, H. A. (1966). *Oak Ridge National Laboratory Report ORNL-3997*.
- — — (1967). *Discuss. Faraday Soc.* **43**, 97.
- NÉMETHY, G., and SCHERAGA, H. A. (1962). *J. chem. Phys.* **36**, 3382.
- — — (1964). *J. chem. Phys.* **41**, 680.
- NOWAK, E. S., and GROSH, R. J. (1961). *A.E.C. Technical Report ANL-6508*.
- — — and LILEY, P. E. (1961 a). *J. Heat Transfer* **83C**, 1.
- — — — (1961 b). *J. Heat Transfer* **83C**, 14.
- OCKMAN, N. (1958). *Adv. Phys.* **7**, 199.
- OLIVER, G. D., and GRISARD, J. W. (1956). *J. Am. chem. Soc.* **78**, 561.
- ONSAGER, L. (1936). *J. Am. chem. Soc.* **58**, 1486.
- and DUPUIS, M. (1960). *Rc. Scu. int. Fis. 'Enrico Fermi'* **10**, 294.
- — — (1962). *Electrolytes* (ed. B. PESCE). Pergamon Press, London.
- and RUNNELS, L. K. (1963). *Proc. natn. Acad. Sci. U.S.A.* **50**, 208.
- ORTTUNG, W. H., and MEYERS, J. A. (1963). *J. phys. Chem. Ithaca* **67**, 1905.
- ORVILLE-THOMAS, W. J. (1957). *Q. Rev. chem. Soc.* **11**, 162.
- OSTER, G. (1948). *Chem. Rev.* **43**, 319.
- and KIRKWOOD, J. G. (1943). *J. chem. Phys.* **11**, 175.
- OWEN, B. B., MILLER, R. C., MILNER, C. E., and COGAN, H. L. (1961). *J. phys. Chem. Ithaca* **65**, 2065.
- WHITE, J. R., and SMITH, J. S. (1956). *J. Am. chem. Soc.* **78**, 3561.
- OWSTON, P. G. (1958). *Adv. Phys.* **7**, 171.
- PALEVSKY, H. (1966). *J. Chim. phys.* **63**, 157.
- PAPOUŠEK, D., and PLÍVA, J. (1964). *Colln Czech. chem. Commun. Engl. Edn* **29**, 1973.
- PARTINGTON, J. R. (1928). *The composition of water*. Bell, London.
- PAULING, L. (1935). *J. Am. chem. Soc.* **57**, 2680.
- (1940). *The nature of the chemical bond*, 2nd edn. Cornell, Ithaca, New York.
- (1959). In *Hydrogen bonding* (ed. D. HADZI). Pergamon Press, London.

- PAULING, L. (1960). *The nature of the chemical bond*, 3rd edn. Cornell, Ithaca, New York.
- and MARSH, R. E. (1952). *Proc. natn. Acad. Sci. U.S.A.* **38**, 112.
- PERRAM, J. W., and LEVINE, S. (1967). *Discuss. Faraday Soc.* **43**, 131.
- PETERSON, S. W., and LEVY, H. A. (1957). *Acta crystallogr.* **10**, 70.
- PIMENTEL, G. C., and McCLELLAN, A. L. (1960). *The hydrogen bond*. Freeman, San Francisco.
- PISTORIUS, C. W. F. T., PISTORIUS, M. C., BLAKEY, J. P., and ADMIRAAL, L. J. (1963). *J. chem. Phys.* **38**, 600.
- PITZER, K. S. (1953). *Quantum chemistry*. Prentice-Hall, Englewood Cliffs, New Jersey.
- and POLISSAR, J. (1956). *J. phys. Chem. Ithaca* **60**, 1140.
- PITZER, R. M. (1966). Private communication.
- and MERRIFIELD, D. P. (1966). Private communication from Professor Pitzer.
- PLÍVA, J. (1958). *Colln Czech. chem. Commun. Engl. Edn* **23**, 1839.
- POPLE, J. A. (1950). *Proc. R. Soc. A* **202**, 323.
- (1951). *Proc. R. Soc. A* **205**, 163.
- SCHNEIDER, W. G., and BERNSTEIN, H. J. (1959). *High-resolution nuclear magnetic resonance*. McGraw-Hill, New York.
- POSENER, D. W. (1960). *Aust. J. Phys.* **13**, 168.
- POWELL, R. W. (1958). *Proc. R. Soc. A* **247**, 464.
- POWLES, J. G. (1953). *J. chem. Phys.* **21**, 633.
- RHODES, M., and STRANGE, J. H. (1966). *Molec. Phys.* **11**, 515.
- PRICE, W. C., and SUGDEN, T. M. (1948). *Trans. Faraday Soc.* **44**, 108.
- RAMPOLLA, R. W., MILLER, R. C., and SMYTH, C. P. (1959). *J. chem. Phys.* **30**, 566.
- RAMSEIER, R. O. (1967). *J. appl. Phys.* **38**, 2553.
- REID, C. (1959). *J. chem. Phys.* **30**, 182.
- REISLER, E., and EISENBERG, H. (1965). *J. chem. Phys.* **43**, 3875.
- RICE, S. A., and GRAY, P. (1965). *The statistical mechanics of simple liquids*. Interscience, New York.
- ROBINSON, R. A., and STOKES, R. H. (1959). *Electrolyte solutions*. Butterworths, London.
- ROENTGEN, W. K. (1892). *Ann. Phys. Chim. (Wied.)* **45**, 91.
- ROOTHAAN, C. C. J. (1951). *Rev. mod. Phys.* **23**, 69.
- ROSSINI, F. D., KNOWLTON, J. W., and JOHNSTON, H. L. (1940). *J. Res. natn. Bur. Stand.* **24**, 369.
- WAGMAN, D. D., EVANS, W. H., LEVINE, S., and JAFFE, I. (1952). Chemical thermodynamic properties, *National Bureau of Standards Circular* 500.
- ROWLINSON, J. S. (1949). *Trans. Faraday Soc.* **45**, 974.
- (1951a). *Trans. Faraday Soc.* **47**, 120.
- (1951b). *J. chem. Phys.* **19**, 827.
- (1954). *Q. Rev. chem. Soc.* **8**, 168.

- RUSCHE, E. W., and GOOD, W. B. (1966). *J. chem. Phys.* **45**, 4667.
- RUSHBROOKE, G. S. (1962). *Introduction to statistical mechanics*. Clarendon Press, Oxford.
- SAKAMOTO, M., BROCKHOUSE, B. N., JOHNSON, R. G., and POPE, N. K. (1962). *J. phys. Soc. Japan*, **17**, Supp. B-II, 370.
- SALEM, L. (1960). *Molec. Phys.* **3**, 441.
- SAMOILOV, O. YA. (1965). *Structure of aqueous electrolyte solutions and the hydration of ions*. Consultants Bureau, New York.
- SÄNGER, R., and STEIGER, O. (1928). *Helv. phys. Acta* **1**, 369.
- SCATCHARD, G., KAVANAGH, G. M., and TICKNOR, L. B. (1952). *J. Am. chem. Soc.* **74**, 3715.
- SCHIFFER, J., and HORNIG, D. F. (1967). Private communication.
- SCHNEIDER, W. G., BERNSTEIN, H. J., and POPLE, J. A. (1958). *J. chem. Phys.* **28**, 601.
- SCHULTZ, J. W., and HORNIG, D. F. (1961). *J. phys. Chem. Ithaca* **65**, 2131.
- SEARCY, A. W. (1949). *J. chem. Phys.* **17**, 210.
- SELWOOD, P. W. (1956). *Magnetochemistry*. Interscience, New York.
- SENIOR, W. A., and THOMPSON, W. K. (1965). *Nature, Lond.* **205**, 170.
- SHARP, W. E. (1962). The thermodynamic functions for water in the range -10 to 1000 °C and 1 to 250 000 bars, *Report of the Lawrence Radiation Laboratory, University of California UCRL-7118*.
- SHATENSHTEIN, A. I., YAKOVLEVA, E. A., ZVYAGINTSEVA, E. N., VARSHAVSKII, YA. M., ISRAILEVICH, E. J., and DYKHNO, N. M. (1960). *Isotopic water analysis*, 2nd edn. United States Atomic Energy Commission translation AEC-tr-4136.
- SHIBATA, S., and BARTELL, L. S. (1965). *J. chem. Phys.* **42**, 1147.
- SIMPSON, J. H., and CARR, H. Y. (1958). *Phys. Rev.* **111**, 1201.
- SINGH, S., MURTHY, A. S. N., and RAO, C. N. R. (1966). *Trans. Faraday Soc.* **62**, 1056.
- SINGWI, K. S., and SJÖLANDER, A. (1960). *Phys. Rev.* **119**, 863.
- SJÖLANDER, A. (1965). In *Thermal neutron scattering* (ed. P. A. EGELSTAFF). Academic Press, New York.
- SLATER, J. C. (1939). *Introduction to chemical physics*. McGraw-Hill, New York.
- SLIE, W. M., DONFOR, A. R., and LITOVITZ, T. A. (1966). *J. chem. Phys.* **44**, 3712.
- SMITH, A. H., and LAWSON, A. W. (1954). *J. chem. Phys.* **22**, 351.
- SMITH, D. W. G., and POWLES, J. G. (1966). *Molec. Phys.* **10**, 451.
- SMYTH, C. P. (1955). *Dielectric behavior and structure*. McGraw-Hill, New York.
- STEPHENS, R. W. B. (1958). *Adv. Phys.* **7**, 266.
- STEVENSON, D. P. (1965). *J. phys. Chem. Ithaca* **69**, 2145.
- (1968). In *Structural chemistry and molecular biology* (ed. A. RICH and N. DAVIDSON). Freeman, San Francisco.
- STEVENSON, M. J., and TOWNES, C. H. (1957). *Phys. Rev.* **107**, 635.
- STIMSON, H. F. (1955). *Am. J. Phys.* **23**, 614.
- STOCKMAYER, W. H. (1941). *J. chem. Phys.* **9**, 398.

- STOKES, R. H., and MILLS, R. (1965). *International encyclopedia of physical chemistry and chemical physics*, vol. 3, p. 74. Pergamon Press, Oxford.
- SWENSON, C. A. (1965). *Spectrochim. Acta* **21**, 987.
- TAFT, R. W., and SISLER, H. H. (1947). *J. chem. Educ.* **24**, 174.
- TAMMANN, G. (1900). *Annln Phys.* **2**, 1.
- TAYLOR, M. J., and WHALLEY, E. (1964). *J. chem. Phys.* **40**, 1660.
- THOMAS, M. R., SCHERAGA, H. A., and SCHRIER, E. E. (1965). *J. phys. Chem. Ithaca* **69**, 3722.
- TILTON, L. W. (1935). *J. Res. natn. Bur. Stand.* **14**, 393.
- and TAYLOR, J. K. (1938). *J. Res. natn. Bur. Stand.* **20**, 419.
- TOYAMA, M., OKA, T., and MORINO, Y. (1964). *J. molec. Spectrosc.* **13**, 193.
- TRAPPENIERS, N. J., GERRITSMAN, C. J., and OOSTING, P. H. (1965). *Phys. Lett.* **18**, 256.
- TREACY, E. B., and BEERS, Y. (1962). *J. chem. Phys.* **36**, 1473.
- TRUBY, F. K. (1955). *Science* **121**, 404.
- TSUBOI, M. (1964). *J. chem. Phys.* **40**, 1326.
- TSUBOMURA, H. (1954). *Bull. chem. Soc. Japan* **27**, 445.
- VAND, V., and SENIOR, W. A. (1965). *J. chem. Phys.* **43**, 1878.
- VAN ECK, C. L. VAN P., MENDEL, H., and FAHRENFORT, J. (1958). *Proc. R. Soc. A* **247**, 472.
- VAN THIEL, M., BECKER, E. D., and PIMENTEL, G. C. (1957). *J. chem. Phys.* **27**, 486.
- VDOVENKO, V. M., GURIKOV, YU. V., and LEGIN, E. K. (1966). *J. struct. Chem.* (translation of *Zh. strukt. Khim.*) **7**, 756.
- — — (1967). *J. struct. Chem.* (translation of *Zh. strukt. Khim.*) **8**, 14, 358, 538.
- VEDAM, R., and HOLTON, G. (1968). *J. Acoust. Soc. Am.*, **43**, 108.
- VEDDER, W., and HORNIG, D. F. (1961). *Adv. Spectrosc.* **2**, 189.
- VEGARD, L., and HILLESUND, S. (1942). *Avh. norske Vidensk. Akad. Oslo* No. 8, 1.
- VERWEY, E. J. W. (1941). *Recl Trav. chim. Pays-Bas Belg.* **60**, 887.
- VIDULICH, G. A., EVANS, D. F., and KAY, R. L. (1967). *J. phys. Chem. Ithaca* **71**, 656.
- WADA, G. (1961). *Bull. chem. Soc. Japan*, **34**, 955.
- WAGMAN, D. D., EVANS, W. H., HALOW, I., PARKER, V. B., BAILEY, S. M., and SCHUMM, R. H. (1965). *National Bureau of Standards Technical Note* 270-1.
- WALDSTEIN, P., and RABIDEAU, S. W. (1967). *J. chem. Phys.* **47**, 5338.
- WALDSTEIN, P., RABIDEAU, S. W., and JACKSON, J. A. (1964). *J. chem. Phys.* **41**, 3407.
- WALL, T. T., and HORNIG, D. F. (1965). *J. chem. Phys.* **43**, 2079.
- WALRAFEN, G. E. (1964). *J. chem. Phys.* **40**, 3249.
- (1966). *J. chem. Phys.* **44**, 1546.
- (1967a). *J. chem. Phys.* **47**, 114.
- (1967b). Private communication. Subsequently published in *J. chem. Phys.* **48**, 244 (1968).

- WALRAFEN, G. E. (1968a). Private communication, to be published.
- (1968b). In *Equilibria and reaction kinetics in hydrogen bonded solvent systems* (ed. A. K. COVINGTON). Taylor and Francis, London. In press.
- WANG, J. H. (1965). *J. phys. Chem. Ithaca* **69**, 4412.
- ROBINSON, C. V., and EDELMAN, I. S. (1953). *J. Am. chem. Soc.* **75**, 466.
- WATANABE, K., and JURSA, A. S. (1964). *J. chem. Phys.* **41**, 1650.
- WAXLER, R. M., WEIR, C. E., and SCHAMP, H. W. (1964). *J. Res. natn. Bur. Stand.* **68A**, 489.
- WEIR, C., BLOCK, S., and PIERMARINI, G. (1965). *J. Res. natn. Bur. Stand.* **69C**, 275.
- WEISSMANN, M. (1966). *J. chem. Phys.* **44**, 422.
- BLUM, L., and COHAN, N. V. (1967). *Chem. Phys. Lett.* **1**, 95.
- and COHAN, N. V. (1965). *J. chem. Phys.* **43**, 119.
- WESTON, R. E. (1962). *Spectrochim. Acta* **18**, 1257.
- WHALLEY, E. (1957). *Trans. Faraday Soc.* **53**, 1578.
- (1958). *Trans. Faraday Soc.* **54**, 1613.
- (1967). Private communication.
- and DAVIDSON, D. W. (1965). *J. chem. Phys.* **43**, 2148.
- — and HEATH, J. B. R. (1966). *J. chem. Phys.* **45**, 3976.
- — — (1968). *J. chem. Phys.* **48**, 2362.
- WHITTEN, J. L., ALLEN, L. C., and FINK, W. H. (1966). Private communication from Dr. Whitten and Dr. Fink.
- WICKE, E. (1966). *Angew. Chem. (Int. edn)* **5**, 106.
- WILLIAMS, D. (1966). *Nature, Lond.* **210**, 194.
- WILSON, A. H. (1957). *Thermodynamics and statistical mechanics*. Cambridge University Press, Cambridge.
- WILSON, E. B., DECIUS, J. C., and CROSS, P. C. (1955). *Molecular vibrations*. McGraw-Hill, New York.
- WILSON, G. J., CHAN, R. K., DAVIDSON, D. W., and WHALLEY, E. (1965). *J. chem. Phys.* **43**, 2384.
- WILSON, W. (1959). *J. Acoust. Soc. Am.*, **31**, 1067.
- WOESSNER, D. E. (1964). *J. chem. Phys.* **40**, 2341.
- WONHAM, J. (1967). *Nature, Lond.* **215**, 1053.
- WORKMAN, E. J., TRUBY, F. K., and DROST-HANSEN, W. (1954). *Phys. Rev.* **94**, 1073.
- WORLEY, J. D., and KLOTZ, I. M. (1966). *J. chem. Phys.* **45**, 2868.
- WYMAN, J., and INGALLS, E. N. (1938). *J. Am. chem. Soc.* **60**, 1182.
- ZAREMBOVITCH, A., and KAHANE, A. (1964). *C. r. hebd. Séanc. Acad. Sci. Paris* **258**, 2529.
- ZEMANSKY, M. W. (1957). *Heat and thermodynamics*. McGraw-Hill, New York.
- ZIMMERMANN, R., and PIMENTEL, G. C. (1962). *Advances in molecular spectroscopy* (ed. A. MANGINI), p. 762. Macmillan, New York.