

- Coenen, M., Über die Hoch-Tief-Umwandlung von Quarz, *Silicates Ind.*, **28**, 147, 1963.
- Cohen, L. H., and W. Klement, High-low quartz inversion: Determination to 35 kilobars, *J. Geophys. Res.*, **72**, 4245, 1967.
- Flory, P. J., Theory of elastic mechanisms in fibrous proteins, *J. Am. Chem. Soc.*, **78**, 5222, 1956.
- Forsbergh, P. W., Piezoelectricity, electrostriction and ferroelectricity, *Handbuch der Physik*, **17**, 264, 1956.
- Garland, C. W., Generalized Pippard equations, *J. Chem. Phys.*, **41**, 1005, 1964.
- Gibbs, J. W., On the equilibrium of heterogeneous substances, in *Collected Works of J. Willard Gibbs*, Yale University Press, New Haven, 1906.
- Gibson, R. D., The influence of pressure on the high-low inversion of quartz, *J. Phys. Chem.*, **32**, 1197, 1928.
- Goranson, R. W., 'Flow' in stressed solids: An interpretation, *Bull. Geol. Soc. Am.*, **51**, 1023, 1940a.
- Goranson, R. W., Physics of stressed solids, *J. Chem. Phys.*, **8**, 323, 1940b.
- Green, H. W., Quartz: Extreme preferred orientation produced by annealing, *Science*, **157**, 1444, 1967.
- Hoffer, A., Discussion of paper by W. Barclay Kamb, 'The thermodynamic theory of nonhydrostatically stressed solids,' *J. Geophys. Res.*, **66**, 2600, 1961.
- Hughes, A. J., and A. W. Lawson, Cylindrical approximation and the α - β quartz transition, *J. Chem. Phys.*, **36**, 2098, 1962.
- Ida, Y., Thermodynamic theory of nonhydrostatically stressed solid involving finite strain, *J. Geophys. Res.*, **74**, 3208, 1969.
- Ito, K., Thermodynamics of nonhydrostatically stressed solids with geologic applications, *J. Fac. Sci. Univ. Tokyo*, **16**(2), 347, 1966.
- Jay, A. H., The thermal expansion of quartz by X-ray measurement, *Proc. Roy. Soc. London, A*, **142**, 237, 1933.
- Kamb, W. B., Theory of preferred crystal orientation developed by crystallization under stress, *J. Geol.*, **67**, 153, 1959.
- Kamb, W. B., The thermodynamic theory of nonhydrostatically stressed solids, *J. Geophys. Res.*, **66**, 259, 1961a.
- Kamb, W. B., Author's reply to discussions of the paper 'The thermodynamic theory of nonhydrostatically stressed solids,' *J. Geophys. Res.*, **66**, 3985, 1961b.
- Keith, M. L., and O. F. Tuttle, Significance of variation in the high-low inversion of quartz, *Am. J. Sci., Bowen Vol.*, **203**, 1952.
- Khlapova, A. N., X-ray data on the α - to β -quartz phase transition, *Soviet Phys.-Cryst., English Transl.*, **7**, 458, 1963.
- Klement, W., and L. H. Cohen, High-low quartz inversion: Thermodynamics of the lambda transition, *J. Geophys. Res.*, **73**, 2249, 1968.
- Kumazawa, M., A note on the thermodynamic theory of nonhydrostatically stressed solids, *J. Geophys. Res.*, **66**, 3981, 1961.
- Kumazawa, M., A fundamental thermodynamic theory on nonhydrostatic field and on the stability of mineral orientation and phase equilibrium, *J. Earth Sci. Nagoya Univ., Japan*, **2**(2), 145, 1963.
- MacDonald, G. J. F., Thermodynamics of solids under nonhydrostatic stress with geologic applications, *Am. J. Sci.*, **255**, 266, 1957.
- MacDonald, G. J. F., Orientation of anisotropic minerals in a stress field, *Geol. Soc. Am. Mem.*, **79**, 1, 1960.
- MacDonald, G. J. F., Discussion of paper by W. Barclay Kamb, 'The thermodynamic theory of nonhydrostatically stressed solids,' *J. Geophys. Res.*, **66**, 2599, 1961.
- Majumdar, A. J., H. A. McKinstry, and R. Roy, Thermodynamic parameters for the α - β quartz and α - β cristobalite transitions, *J. Phys. Chem. Solids*, **25**, 1487, 1964.
- Mayer, G., Recherches expérimentales sur une transformation du quartz, *Rappt. Comm. Energie At. (France) No. 1330*, 101 pp., 1960.
- McLellan, A. G., A thermodynamical theory of systems under nonhydrostatic stress, *J. Geophys. Res.*, **71**, 4341, 1966.
- McLellan, A. G., The chemical potential in thermodynamic systems under nonhydrostatic stress, *Proc. Roy. Soc., A*, **307**, 1, 1968.
- Mikheeva, L. F., and O. A. Shustin, Rotation of the plane of polarization in quartz near the phase-transition temperature, *Soviet Phys.-Cryst., English Transl.*, **9**, 347, 1964.
- Moser, H., Messung der wahren spezifischen Wärme von Silber, Nickel, β -Messing, Quarzkristall und Quarzglas zwischen +50 und 700°C nach einer verfeinerten Methode, *Physik Z.*, **21**, 737, 1936.
- Nye, J. F., *Physical Properties of Crystals*, 322 pp., Oxford University Press, Oxford, 1957.
- Perrier, A., and R. de Mandrot, Elasticité et symétrie du quartz aux températures élevées, *Mem. Soc. Vaudoise Sci. Nat.*, **7**, 333, 1923.
- Pippard, A. B., Thermodynamic relations applicable near a lambda-transition, *Phil. Mag.*, **1**, 473, 1956.
- Pippard, A. B., *The Elements of Classical Thermodynamics*, 165 pp., Cambridge University Press, 1957.
- Raleigh, C. B., and M. S. Paterson, Experimental deformation of serpentinite and its tectonic implications, *J. Geophys. Res.*, **70**, 3965, 1965.
- Riecke, E., Über das Gleichgewicht zwischen einem festen, homogen, deformierten Körper und einer flüssigen Phase, *Ann. Physik*, **54**, 731, 1895.
- Semenchenko, V. K., Phase transformations and critical phenomena in anisotropic phases, *Soviet Phys.-Cryst., English Transl.*, **2**, 139, 1957.
- Semenchenko, V. K., Thermodynamic stability and phase transformations in crystals, *Soviet Phys.-Cryst., English Transl.*, **9**, 521, 1965.

- Shapiro, S. M., and H. Z. Cummins, Critical opalescence in quartz, *Phys. Rev. Letters*, **21**, 1578, 1968.
- Sinel'nikov, N. N., A vacuum adiabatic calorimeter and some new data on the β - α transition for quartz, *Dokl. Akad. Nauk SSSR*, **92**, 369, 1953.
- Standards on Piezoelectric Crystals*, 49 IRE 14. S1, Institute of Radio Engineers, New York, 1378, 1949.
- Strelkov, P. G., G. I. Kosourov, and B. N. Samoilov, Dilatometer dla obratsov malykh razmerov (Dilatometer for small size samples), *Izv. Akad. Nauk SSSR, Ser. Fiz.*, **17**, 383, 1953.
- Thomas, L. A., and W. A. Wooster, Piezocrescence—The growth of Dauphiné twinning in quartz under stress, *Proc. Roy. Soc. Lon., A*, **208**, 43, 1951.
- Timoshenko, S., and J. N. Goodier, *Theory of Elasticity*, 506 pp., McGraw-Hill, New York, 1951.
- Troccaz, M., C. Berger, M. Richard, and L. Eyraud, Étude de la transformation de phase $\alpha \rightleftharpoons \beta$ de la variété «phosphoquartz» de l'orthophosphate d'aluminium AlPO_4 , *Bull. Soc. Chim. France*, **11**, 4256, 1967.
- Verhoogen, J., The chemical potential of a stressed solid, *Trans. Am. Geophys. Union*, **32**, 251, 1951.
- Yakovlev, I. A., L. F. Mikheeva, and T. S. Velichkina, The molecular scattering of light and the α - β transformation in quartz, *Soviet Phys.-Cryst., English Transl.*, **1**, 91, 1956.
- Yoder, H. S., High-low quartz inversion up to 10,000 bars, *Trans. Am. Geophys. Union*, **31**, 827, 1950.
- Young, R. A., Mechanism of the phase transition in quartz, *Air Force Office Sci. Res. Final Rept. 2569*, 156 pp., Washington, D. C., 1962.
- Young, R. A., Physical properties of quartz at and near the transition (abstract), *Proc. 12th Nat. Conf. on Clay and Clay Minerals*, Pergamon, 83, 1964.
- Zubov, V. G., and M. M. Firsova, Elastic properties of quartz near the α - β transition, *Soviet Phys.-Cryst., English Transl.*, **7**, 374, 1962.

(Received April 24, 1969.)