

Curriculum Vitae

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Ph.D.: 1963 University of California, Los Angeles

Positions:

1998- Visiting Professor, Dept. of Earth and Space Sciences, University of California, Los Angeles
1971-98 Professor, Dept. of the Geophysical Sciences, University of Chicago
1968-71 Associate Professor, University of Chicago
1964-68 Assistant Professor, University of Chicago
1963-64 Instructor, University of Chicago

Honors:

Senior Fellow, Mineralogical Society of America
Plenary Lecturer, 5th European Conference on Experimental Mineralogy, Petrology, and Geochemistry (1994)
Fellow, American Geophysical Union (1989)
20th Hallimond Lecturer, British Mineralogical Society (1988)
Norman L. Bowen Award, American Geophysical Union (1984)

Professional Activities:

Co-Editor-in-Chief, Journal of Geology (1983-97)
International Mineralogical Association, Working Group on Thermodynamics, Geothermometry and Geobarometry (1979-97)
Editorial Board, Springer-Verlag Scientific Publications (1979-97)
Associate Member, Committee on South Asian Studies, University of Chicago (1982-97)
Fellows Committee, American Geophysical Union (1993-96)
Co-Organizer, Symposium on Metamorphism and Magmatism, Precambrian 195 Conference (Montreal, 1995)
Co-Organizer, Journal of Geology Centennial Symposium (1992)
Councilor, Mineralogical Society of America (1985-88)
Co-convenor, Indo-U.S. Workshop on The Deep Crust of South India (Bangalore, 1988)
Chairman, Roebling Medal Committee, Mineralogical Society of America (1986)
Associate Editor, American Mineralogist (1981-83)
Mineralogical Society of America Award Committee (1981)
Co-Editor, Thermodynamics of Minerals and Melts, Springer-Verlag, 1981, (with A. Navrotsky and B. Wood)
Co-Editor, George C. Kennedy Volume, J. Geophys. Res., v. 85-B, 1980 (with A. Boettcher)

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Robert C. Newton

1. Melting and polymorphism of indium antimonide at high pressures (with A. Jayaraman and G.C. Kennedy). *Nature* 191, 1288-1290, 1961.
2. The effect of pressure on the electromotive force of a platinum-bismuth thermocouple (with G.C. Kennedy). *J. Geophys. Res.* 66, 1491-1493, 1961.
3. The fusion curves of the alkali metals up to 50 kilobars (with A. Jayaraman and G.C. Kennedy). *J. Geophys. Res.* 67, 2559-2566, 1962.
4. Etude de l'effet des hautes pressions sur les structures du diamant et du blende de zinc fusion et polymorphisme (with A. Jayaraman and G.C. Kennedy). *Proceedings of the First International Conference on Diamonds*, Paris, 1962.
5. The fusion curve and polymorphic transitions of caesium at high pressures (with G.C. Kennedy and A. Jayaraman). Reprint from "The Physics and Chemistry of High Pressures," 128-132, 1962.
6. The upper three-phase region in the system $\text{SiO}_2\text{-H}_2\text{O}$ (with G.C. Kennedy, G.J. Wasserburg and H.C. Heard). *Am. J. Sci.* 260, 501-521, 1962.
7. Fusion curve and polymorphic transitions of cesium at high pressures (with G.C. Kennedy and A. Jayaraman). *Phys. Rev.* 126, 1363-1366, 1962.
8. Solid-liquid and solid-solid phase transitions in some pure metals at high temperatures and pressures (with G.C. Kennedy). In W. Paul, Ed., *Solids Under Pressure*. Academic Press, 163-178, 1962.
9. Fusion curves and polymorphic transitions of the Group III elements - aluminium, gallium, indium and thallium - at high pressures (with A. Jayaraman, W. Klement, Jr. and G.C. Kennedy). *Inter. J. Phys. Chem. Solids* 24, 7-18, 1963.
10. Some equilibrium reactions in the join $\text{CaAl}_2\text{Si}_2\text{O}_8\text{-H}_2\text{O}$ (with G.C. Kennedy). *J. Geophys. Res.* 68, 2967-2983, 1963.
11. The thermal stability of zoisite. *J. Geol.* 73, 431-441, 1965.
12. Kyanite-sillimanite equilibrium at 750°C. *Science* 151, 1222-1225, 1966.
13. Kyanite-andalusite equilibrium from 700° to 800°C. *Science* 153, 170-172, 1966.
14. The status and future of high static-pressure geophysical research. *Advances in High Pressure Research*. Academic Press, London and New York, 195-263, 1966.

15. Some calc-silicate equilibrium relations. *Am. J. Sci.* 264, 204-222, 1966.
16. BeO in pegmatite cordierite. *Mineral. Mag.* 35, 920-927, 1966.
17. Phase relations, resistivity, and electronic structure of cesium at high pressures (with A. Jayaraman and J.M. McDonough). *Phys. Rev.* 159, 527-533, 1967.
18. Investigations concerning the breakdown of albite at depth in the earth (with J.V. Smith). *J. Geol.* 75, 268-286, 1967.
19. Thermal stability of chloritoid at high pressure and relatively high oxygen fugacity (with J. Ganguly). *J. Petrol.* 9, 441-466, 1968.
20. Aragonite crystallization from strained calcite at reduced pressures and its bearing on aragonite in low-grade metamorphism (with J.R. Goldsmith and J.V. Smith). *Contrib. Mineral. Petrol.* 22, 335-348, 1969.
21. Some high-pressure hydrothermal experiments on severely ground kyanite and sillimanite. *Am. J. Sci.* 267, 278-284, 1969. .
22. P-T-X relations in the system $\text{CaCO}_3\text{-MgCO}_3$ at high temperatures and pressures (with J.R. Goldsmith). *Am. J. Sci.* 267-A, 160-190, 1969.
23. Petrology at high pressure and temperature. *Nature* 224, 314-317, 1969.
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26. Accumulation of olivine in rock 12040 and other basaltic fragments in the light of analysis and syntheses (with A.T. Anderson and J.V. Smith). *Proc. Second Lunar Sci. Conf.* 1, 575-582, 1971.
27. An interlaboratory comparison of piston-cylinder pressure calibration using the albite breakdown reaction (with W. Johannes, P.M. Bell, H.K. Mao, A.L. Boettcher, D.W. Chipman, J.F. Hays and R. Seifert). *Contrib. Mineral. Petrol.* 32, 24-38, 1971.
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31. An experimental determination of the alkali feldspar solvus (with J.R. Goldsmith). In W.S. MacKenzie and J. Zussman, Eds., *The Feldspars*, 337-359, 1974.
32. Silicate-nitrate compounds: high pressure synthesis and stability of a nitrate scapolite (with J.R. Goldsmith and P.B. Moore). *Am. Mineral.* 59, 768-774, 1974.
33. A calorimetric investigation of the stability of anhydrous magnesium cordierite with application to granulite facies metamorphism (with T.V. Charlou and O.J. Kleppa). *Contrib. Mineral. Petrol.* 44, 295-311, 1974.
34. The role of solution calorimetry in the study of mineral equilibria (with O.J. Kleppa). *Fortsch. Mineral.* 52, 3-20, 1975.
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 53. Ancient crustal metamorphism at low $P(\text{H}_2\text{O})$: Charnockite formation at Kabbaldurga, South India (with A.S. Janardhan and J.V. Srinath). *Nature* 278, 511-514, 1979.
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- 900°C and 1000°C in the system CaO-MgO-Al₂O₃-SiO₂, and at 900°C with natural garnet and olivine (with D.M. Jenkins). *Contrib. Mineral. Petrol.* 68, 407-419, 1979.
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67. Thermodynamics of the garnet-plagioclase- Al_2SiO_5 -quartz geobarometer (with H.T. Haselton). In R.C. Newton., A. Navrotsky and B.J. Wood, Eds., Thermodynamics of Minerals and Melts. Springer-Verlag, 131-147, 1981.
68. The transformation of amphibolite facies gneiss to charnockite in southern Karnataka and northern Tamil Nadu, India (with A.S. Janardhan and E.C. Hansen). Contrib. Mineral. Petrol. 79, 130-149, 1982.
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95. Fluids in granulite facies metamorphism: A comparative oxygen isotope study on the South India and Adirondack high-grade terrains (with J. Jiang and R.N. Clayton). *J. Geol.* 96, 517-533, 1988.
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- Dharwar Craton. In M.H. Salisbury and D.M. Fountain, Eds., Exposed cross sections of the continental crust. Netherlands: Kluwer Acad. Publishers, 305-326, 1990.
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 109. An overview of charnockite. *Precamb. Res.* 55, 399-405, 1992.
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 111. Experimental melting of hydrous low-K tholeiite: Evidence on the origin of Archaean cratons (with K.T. Winther). *Bull. Geol. Soc. Denmark* 39, 213-228, 1991.
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- experimental phase equilibrium measurements and high temperature solution calorimetry (with H. Zhu and O.J. Kleppa). *Am. Mineral.* 79, 136-146, 1994.
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 122. Differentiation of Late Archean crust in the Eastern Dharwar Craton, KrishnagiriSalem area, South India (with E.C. Hansen, A.S. Janardhan and Sheila Lindenburg). *J. Geol.* 103, 629-651, 1995.
 123. Experimental determination of the reactions: Magnesite + Quartz = Enstatite + CO_2 and Magnesite = Periclase + CO_2 and enthalpies of formation of enstatite and magnesite (with A.M. Koziol). *Am. Mineral.* 80, 1252-1260, 1995.
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