Publications

- "Low Temperature Heat Capacity of Nonmagnetic Rare Earth Molybdenum Chalcogenides," R.W. McCallum, L.D. Woolf, R.N. Shelton and M.B. Maple, Journal de Physique Supplement <u>C-6</u>, 359 (1978).
- "Interaction Between Superconductivity and Magnetism in the Pseudoternary System (Lu_{1-x}Ho_x)Rh₄B₄," M.B. Maple, H.C. Hamaker, D.C. Johnston, H.B. MacKay and L.D. Woolf, Journal of the Less-Common Metals <u>62</u>, 251 (1978).
- "Anomalous Pressure Dependence of the Superconducting Transition Temperature of Dilute Alloys of LaSn₃ Containing Light Rare Earth Impurities," L.E. DeLong, M.B. Maple, R.W. McCallum, L.D. Woolf, R.N. Shelton and D.C. Johnston, Journal of Low Temperature Physics <u>34</u>, 445 (1979).
- 4. "Superconducting and Normal State Properties of ErRh₄B₄ and LuRh₄B₄," L.D. Woolf, D.C. Johnston, H.B. MacKay, R.W. McCallum, and M.B. Maple, Journal of Low Temperature Physics <u>35</u>, 651 (1979).
- "Specific Heat Anomalies at the Lower Critical Temperature in Re-entrant Ferromagnetic Superconductors," H.B. MacKay, L.D. Woolf, M.B. Maple and D.C. Johnston, Physical Review Letters <u>42</u>, 918 (1979).
- "Possible Observation of the Coexistence of Superconductivity and Long-Range Magnetic Order in NdRh₄B₄,"
 H.C. Hamaker, L.D. Woolf, H.B. MacKay, Z. Fisk and M.B. Maple, Solid State Communications <u>32</u>, 139 (1979).
- "Coexistence of Superconductivity and Antiferromagnetic Order in SmRh₄B₄," H.C. Hamaker, L.D. Woolf, H.B. MacKay, Z. Fisk and M.B. Maple, Solid State Communications <u>32</u>, 289 (1979).
- "Low Temperature Heat Capacity and ac Magnetic Susceptibility of the Re-entrant Ferromagnetic Superconductor Ho_{1.2}Mo₆S₈," L.D.Woolf, M. Tovar, H.C. Hamaker and M.B. Maple, Physics Letters <u>71A</u>, 137 (1979).
- 9. "Low Temperature Heat Capacity of Rare Earth Molybdenum Sulfides," L.D. Woolf, M. Tovar, H.C. Hamaker and M.B. Maple, Physics Letters <u>74A</u>, 363 (1979).
- "Superconducting and Normal State Properties of Dilute Alloys of LaSn₃ Containing Nd Impurities," L.E. DeLong, M. Tovar, L.D. Woolf, M.B. Maple and D.C. Johnston, Journal of Low Temperature Physics <u>38</u>, 119 (1980).
- "Low Temperature Magnetic Properties of HoRh₄B₄," H.R. Ott, L.D. Woolf, M.B. Maple and D.C. Johnston, Journal of Low Temperature Physics <u>39</u>, 383 (1980).
- "Superconductivity, Long-Range Magnetic Order and Crystal-Field Effects in RERh₄B₄ Compounds," M.B.
 Maple, H.C. Hamaker, L.D. Woolf, H.B. MacKay, Z. Fisk, W. Odoni and H.R. Ott, <u>Crystalline Electric Field</u>

and Structural Effects in f-Electron Systems, eds. J.E. Crow, R.P. Guertin and T.W. Mihalisin, (Plenum Press, New York, 1980), p.533.

- "A New Family of Ternary Intermetallic Superconducting/Magnetic Stannides," J.P. Remeika, G.P. Espinosa, A.S. Cooper, H. Barz, J.M. Rowell, D.B. McWhan, J.M. Vandenberg, D.E. Moncton, Z. Fisk, L.D. Woolf, H.C. Hamaker, M.B. Maple, G. Shirane and W. Thomlinson, Solid State Communications <u>34</u>, 923 (1980).
- "Coexistence of Superconductivity and Long-Range Antiferromagnetic Order in Gd_{1.2}Mo₆Se₈," M.B. Maple,
 L.D. Woolf, C.F. Majkrzak, G. Shirane, W. Thomlinson and D.E. Moncton, Physics Letters <u>77A</u>, 487 (1980).
- "Spiral Magnetic Fluctuations Near the Superconductor-to-Ferromagnet Transition in ErRh₄B₄," D.E. Moncton,
 D.B. McWhan, P.H. Schmidt, G. Shirane, W. Thomlinson, M.B. Maple, H.B. MacKay, L.D. Woolf, Z. Fisk and D.C. Johnson, Physical Review Letters <u>45</u>, 2060 (1980).
- "Ferromagnetism in the RERh₄B₄ Compounds," H.B. MacKay, L.D. Woolf, M.B. Maple and D.C. Johnston, Journal of Low Temperature Physics <u>41</u>, 639 (1980).
- "Coexistence of Superconductivity and Long-Range Magnetic Order in TmRh₄B₄," H.C. Hamaker, H.B. MacKay, L.D. Woolf, M.B. Maple, W. Odoni and H.R. Ott, Physics Letters <u>81A</u>, 91 (1981).
- "Transition from Antiferromagnetism to Ferromagnetism in the Superconducting Pseudoternary System (Sm₁, xEr_x)Rh₄B₄," L.D. Woolf and M.B. Maple, <u>Ternary Superconductors</u>, eds. G.K. Shenoy, B.D. Dunlap and F.Y. Fradin (North Holland, New York, 1981), p. 181.
- "Reentrant Superconductivity in the Rhodium and Osmium Ternary Stannide Compounds," S.E. Lambert, Z. Fisk, H.C. Hamaker, M.B. Maple, L.D. Woolf, J.P. Remeika and G.P. Espinosa, <u>Ternary Superconductors</u>, eds. G.K. Shenoy, B.D. Dunlap and F.Y. Fradin (North Holland, New York, 1981), p. 247.
- "Neutron Scattering Studies of the Magnetic Transitions in the Ternary Alloy System Er_{1-x}Ho_xRh₄B₄," H.A. Mook, M.B. Maple, Z. Fisk, D.C. Johnston and L.D. Woolf, <u>Ternary Superconductors</u>, eds. G.K. Shenoy, B.D. Dunlap and F.Y. Fradin (North Holland, New York, 1981), p. 179.
- "Observation of the Coexistence of Superconductivity and Long-Range Magnetic Order in TmRh₄B₄," H.C. Hamaker, H.B. MacKay, M.S. Torikachivili, L.D. Woolf, M.B. Maple, W. Odoni and H.R. Ott, Journal of Low Temperature Physics <u>44</u>, 553 (1981).
- "Multiple Phase Transitions in Rare Earth Tetraborides at Low Temperatures," Z. Fisk, M.B. Maple, D.C. Johnston and L.D. Woolf, Solid State Communications <u>39</u>, 1189 (1981).
- "Occurrence of Antiferromagnetic Ordering Above the Superconducting Transition in Ho (Ir_{0.7}Rh_{0.3})₄B₄," L.D.
 Woolf, S.E. Lambert, M.B. Maple, H.C. Ku, W. Odoni and H.R. Ott, Physica B+C <u>108</u>, 761 (1981).

- "The Upper Critical Magnetic Field of Gd_{1.2}Mo₆Se₈," S.E. Lambert, L.D. Woolf and M.B. Maple, Physica B+C <u>108</u>, 1225 (1981).
- "Interpretation of Specific Heat and Spontaneous Magnetization Anomalies at the Re-entrant Superconducting-Ferromagnetic Transition in (Ho_{0.6}Er_{0.4})Rh₄B₄," L.D. Woolf, D.C. Johnston, H.A. Mook, W.C. Koehler, M.B. Maple and Z. Fish, Physica B+C (1982).
- "HoRh₄B₄: A Model Mean-Field Ferromagent," H.R. Ott, G. Keller, W. Odoni, L.D. Woolf, M.B. Maple, D.C. Johnston and H.A. Mook, Physical Review B <u>25</u>, 477 (1982).
- "Neutron Scattering Study of the Magnetic Transition in (Ho_{1-x}Er_x)Rh₄B₄ Alloys," H.A. Mook, W.C. Koehler,
 M.B. Maple, Z. Fisk, D.C. Johnston and L.D. Woolf, Physical Review B <u>25</u>, 373 (1982).
- 28. "Superconductivity, Magnetism and Their Mutual Interaction in Ternary Rare Earth Rhodium Borides and Some Ternary Rare Earth Transition Metal Stannides," M.B. Maple, H.C. Hamaker and L.D. Woolf, Chapter 4 in <u>Superconductivity in Ternary Compounds II</u>, eds. M.B. Maple and O. Fischer (Springer Verlag, Berlin, 1982).
- 29. "Transport and Magnetic Properties in the Coexistence Region of Magnetic Superconductors," H.R. Ott, W. Odoni, H.C. Hamaker, M.B. Maple and L.D. Woolf, the Proceedings of the Fourth Conference on Superconductivity in d- and f-Band Metals, Karlsruhe, Germany, June 28-30, 1982.
- 30. "Neutron Scattering Studies of the Magnetic Ordering in Ternary Rare Earth Compounds," H.A. Mook, S.K. Sinha, G.W. Crabtree, D.G. Hinks, M.B. Maple. Z. Fisk, D.C. Johnston, L.D. Woolf and H.C. Hamaker, published in the Proceedings of the Fourth Conference on Superconductivity in d- and f-Band Metals, Karlsruhe, Germany, June 28-30, 1982.
- "Superconductivity and Magnetism in the Ho_{1-x}Er_xRh₄B₄ Alloy System," H.A. Mook, W.C. Koehler, S.K. Sinha, G.W. Crabtree, D.G. Hinks, M.B. Maple, Z. Fisk, D.C. Johnston, L.D. Woolf and H.C. Hamaker, Journal of Applied Physics <u>53</u>, 2614 (1982).
- 32. "Mean Field Behavior of the Reentrant Superconducting Ferromagnetic Transition in the (Ho_xEr_{1-x})Rh₄B₄ and (Ho_xLu_{1-x})Rh₄B₄ Pseudoternary Systems," L.D. Woolf, Physics Letters <u>93A</u>, 419 (1983).
- "Investigation of the Occurrence of Superconductivity Below the Antiferromagnetic Transition in Ho(Ir_{0.7}Rh_{0.3})₄B₄," L.D. Woolf, S.E. Lambert, M.B. Maple, F. Acker, H.C. Ku, W. Odoni and H.R. Ott, Journal of Low Temperature Physics <u>51</u>, 117 (1983).
- 34. "Transport and Magnetic Properties of Layered Rare Earth Disilicides," L.D. Woolf, Solid State Communications <u>47</u>, 519 (1983).
- "Transition From Antiferromagnetism to Ferromagnetism in the Superconducting Mixed Ternary System (Sm₁.
 xEr_x)Rh₄B₄, S.E. Lambert, L.D. Woolf and M.B. Maple, Journal of Low Temperature Physics <u>54</u>, 177 (1984).

- "Observation of Bulk Superconductivity in EuMo₆S₈ under Pressure," M. Decorex, S.E. Lambert, M.S. Torikachvili, M.B. Maple, R.P. Guertin, L.D. Woolf and R. Bailiff, Physical Review Letters <u>52</u>, 1563 (1984).
- "Electrical Transport Properties of Benzene Derived Graphite Fibers," L.D. Woolf, J. Chin, Y.R. Lin-Liu and Hi Skezi, Physical Review B <u>30</u>, 861 (1984).
- 38. "Unusual Oscillatory Magnetoresistance of Mesophase-Pitch-Derived Graphite Fibers," L.D. Woolf, Proceedings of Symposium I, Materials Research Society Meeting, November 26-30, 1984, Boston, MA, Extended Abstracts: Graphite Intercalation Compounds by P.C. Eklund, M.S. Dresselhaus, G. Dressenhaus (Materials Research Society, Pittsburgh, 1984). p. 180
- "Bulk Properties of Pressure Induced Superconductivity in EuMo₆S₈, M. Decoroux, S.E. Lambert, M.B. Maple,
 L.D. Woolf, R. Bailiff and S. Fischer, Journal of Low Temperature Physics <u>60</u>, 149 (1985).
- 40. "Unusual Magnetoresistance of Mesophase-Pitch-Derived Graphite Fibers," L.D. Woolf, H. Ikezi and Y.R. Lin-Liu, Solid State Communications <u>54</u>, 49 (1985).
- "Optimum Efficiency of Single and Multiple Band Gap Cells in Thermophotovoltaic Energy Conversion," L.D. Woolf, Solar Cells <u>19</u>, 19 (1986-7).
- "Optimum Efficiency of Single and Multiple Band Gap Cells in TPV Energy Conversion," L.D. Woolf, Proc.
 18th IEEE Photovoltaic Specialists Conference, p. 1731 (1985).
- "Resistive Anomalies and Phase Transitions in Potassium Intercalated Benzene-Derived Graphite Fibers," R.B. Olsen, B.W. McQuillan, J. Chin and L.D. Woolf, Physical Review B <u>33</u>, 5730 (1986).
- 44. "Theoretical and Experimental Investigation of Variable Band Gap Cells in Thermophotovoltaic Energy Conversion," by L.D. Woolf, J.C. Bass, and N.B.Elsner, Proceedings of the 32nd International Power Sources Symposium 9-12, June 1986, p. 101.
- 45. "Solar Photothermophotovoltaic Energy Conversion," L.D. Woolf, Proc. 19th IEEE Photovoltaic Specialists Conference, p. 427, 1987.
- 46. "Solar Photothermophotovoltaic Energy Conversion", L.D. Woolf, Proc. 22nd IECEC, p.88 (1987).
- "High Efficiency GaAs-Based Cells for Thermophotovoltaic Generators," L.D. Woolf, J.N. Smith, Jr. and D.M. Duggan, Proc. 22nd IECEC, p. 264 (1987).
- "Research and Development of Electrical Insulators for Thermionic Applications," J.D. Dobson, F.W. Clinard, Jr. and L.D. Woolf, Proc. 5th Symposium of Space Nuclear Power Systems, Albuquerque, NM, January 11-14, 1968.

- 49. "Novel Preparation Methods for High Tc Oxide Superconductors," W.J. Nellis and L.D. Woolf, Materials Research Society Bulletin, January, 1989, Vl. 14, No. 1 pp. 63-66.
- 50. "Continuous Fabrication of High-Temperature Superconductor Coated Metal Fiber and Multifilamentary Wire," L.D. Woolf, W.A. Raggio, F.E. Elsner, M.V. Fisher, R.B. Stephens, T.L. Figueroa, C.H. Shearer, J.D. Rose, K.M. Schaubel, R.A. Olstad, T. Ohkawa, D.M. Dugger, M. DiMartino and R.L. Fagaly, Applied Physics Letters <u>58</u>, 534-536 (1991).
- 51. "Development of High Temperature Superconductor Coated Metal Fiber and Multifilamentary Wire," L.D. Woolf, F.E. Elsner, W.A. Raggio, S.S. Pak, T.L. Figueroa, J.D. Rose, R.B. Stephens, R.A. Olstad and T. Ohkawa, Advances in Superconductivity IV, Proc. of the 4th International Symposium on Superconductivity (ISS '91) October 14-17, 1991, Tokyo, edited by H. Hayakawa and N. Koshizuka, Springer Verlag, Tokyo, 1992.
- 52. "Development of High Temperature Superconductor Coated Metal Fiber and Multifilamentary Wire," L.D. Woolf, F.E. Elsner, W.A. Raggio, S.S. Pak, T.L. Figueroa, J.D. Rose, R.B. Stephens, R.A. Olstad and T. Ohkawa, Proc. of the 7th U.S. Japan Workshop on High-Field Superconducting Materials, Wires and Conductors and Standard Procedures for High Field Superconducting Wires Testing, Fukuoka, Japan, ed by K. Yamafugi and M. Suenaga, October 21-23, 1991.
- 53. "Development of High Temperature Superconductor Files and Multifilamentary Wire," L.D. Woolf, F.E. Elsner, W.a. Raggio, T.L. Figueroa, R.B. Stephens, R.a. Olstad and T. Ohkawa, HTS Materials, Bulk Processing and Bulk Applications, ed by C.W. Chu, W.K. Chu, P.H. Hor and K. Salama, Proc. of the 1992 TCSUH Workshop. Houston, Texas, 27-28 February 1992, World Scientific, Singapore, 1992.
- 54. "Fabrication of Long Length Bi-2223 Superconductor Tape Using a Continuous Electrophoretic Coating Process," Lawrence D. Woolf, Terry L. Figueroa, Robert A. Olstad, Fred E. Elsner and T. Ohkawa, IEEE Transactions on Applied Superconductivity Vol. 5, No. 2, June 1995 pp. (1287 - 1289.
- 55. "Fabrication of Long Length Bi-2223 Superconductor Tape Using Continuous Electrophoretic Deposition on Round and Flat Substrate," L.D. Woolf, T.L. Figueroa, R.A. Olstad, F.E. Elsner, and T. Ohkawa, J. of Electronic Materials <u>23</u>, 1797 (1995).
- 56. "General Atomics Enhances Pre-College Science Education," L.D. Woolf, and T.D. Gulden, MRS Bulletin, July 1995, p. 48-49. Vol. 20, No. 7.
- 57. "Materials Science Teaching Module as Adjunct to General Chemistry," T. D. Gulden, K. P. Norton, H. H. Streckert, L. D. Woolf, J. A. Baron, S. C. Brammer, D. L. Ezell, and R. D. Wynn, J. Chem. Ed <u>74</u>, 785 (1997).
- 58. "Graphite Pencil Line for Exploring Resistance," L.D. Woolf and H.H. Streckert, The Physics Teacher <u>34</u>, 440 (1996).

- "High Rate Melt Texturing of Nd_{1-x}Ba_{2-x} Cu₃O₇₋₅ Type Superconductors," K. Salama, A.S. Parikh and L. Woolf, Applied Physics Letter <u>68</u>, 1993 (1996).
- "A Novel Approach to High Rate Melt Texturing in 123 Superconductors," K. Salama, A.S. Parikh, P. Putnam and L. Woolf, Proceedings of the 10th Anniversary HTS Workshop on Physics, Materials and Applications, Houston, Texas, March 12-16, 1996; eds B. Batlogg, C. W. Chu, W. K. Chu, D. U. Gubser, and K. A. Muller, p. 155 (World Scientific, 1996).
- 61. "Improved Compositions for Melt Pressing REBa₂Cu₃O_y," L.D. Woolf, S.S. Pak and T.L. Figueroa, Superconductor Science and Technology <u>9</u>, 1105-1108 (1996).
- <u>The Line of Resistance: Using a Graphite Pencil to Explore the Electrical Properties of Materials and Circuits</u>, L. D. Woolf, The Institute for Chemical Education, 1997.
- "Coated-Wire-In-Tube Processing of Silver/Bismuth-2223 Superconductors," S. E. Dorris, N. Ashcom, T. Truchan, N. Vasanthamohan, D. A. Burlone, and L. D. Woolf, Proc. Super. Symp. 99th Ann. Mtg. Am. Cer. Soc., Cincinnati, OH, May 4-7 (1997).
- "Coated-Wire-In-Tube Processing of Silver/Bismuth-2223 Superconductors," S. E. Dorris, N. Ashcom, T. Truchan, N. Vasanthamohan, D. A. Burlone, and L. D. Woolf, Proc. of the 8th U.S.-Japan Workshop on High-Temperature Superconductors, Tallahassee, FL, Dec. 8-10, 1997.
- 65. <u>An Exploration of Materials Science</u>, L. D. Woolf et al., The Institute for Chemical Education, 1998.
- 66. "Confusing Color Concepts Clarified," L. D. Woolf, The Physics Teacher <u>37</u>, 204 (1999). Color wheels appear on the cover of the magazine.
- 67. "California Political Science Education," L. D. Woolf, American Physical Society Forum on Education newsletter, Summer 2005, 8-10.
- 68. Workshops and lessons about the physics underlying Color Mixing, the Incandescent Light Bulb, Graphite Pencil DC Circuits, Safe Driving, and The Seasons-http://www.sci-ed-ga.org/modules-by Dr. Larry Woolf, Websights Column of The Physics Teacher, Volume 44, October 2006, p. 479
- 69. "Multiple smatterings of insight: 10 years of interaction with Craig Bohren," L. D. Woolf, Journal of Nanophotonics, Vol. 4, 041595 (2010).
- "From the Chair," L. D. Woolf, American Physical Society Forum on Education newsletter, Summer 2010, p. 2-3.
- 71. "From the Chair," L. D. Woolf, American Physical Society Forum on Education newsletter, Fall 2010, p. 2.

- 72. "From the Chair," L. D. Woolf, American Physical Society Forum on Education newsletter, Spring 2011, p.2.
- 73. "Preparing Physics Graduate Students for Careers in Industry", Lawrence Woolf, American Physical Society Forum on Education newsletter, Spring 2013, p. 21-23.
- 74. "Phys21 Physics Education for the 21st Century," Douglas Arion and Lawrence Woolf, APS News, February 2017, p.8.