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Under the auspices of the United Engineering Foundation, Davos, Switzerland, August 8-13, 1999.

32. "The Mathematics of the Polymorphous Coherent Potential Approximation" J. S. Faulkner, presented at the 2001 TMS Annual Meeting: Hume-Rothery Award Symposium, "Electronic Structure and Alloy Properties" February 12, 2001.

33. "SHORT-RANGE ORDER PARAMETERS IN FCC BINARY ALLOYS," J. S. Faulkner, Silvia Pella, Aurelian Rusanu, and Yevgeniy Puzyrev. Third International Alloy Conference, IAC3, Estoril, Portugal, June 30-July 5, 2002.

34. "Mean field approximations for the electronic states in disordered alloys," J. S. Faulkner, Silvia Pella, Aurelian Rusanu, Yevgeniy Puzyrev, Th. Leventouri, G. M. Stocks, and B. Ujfalussy, a paper presented at the Third International Workshop on Electron Correlations and Materials Properties, Kos, Greece, July 4-9, 2004, organized by Mikael Ciftan, Antonios Gonis, Nicholas Kioussis.

35. "Atomic displacements in alloys" Yevgeniy Puzyrev and J. S. Faulkner, invited talk presented at the Fourth International Alloy Conference (IAC-4), June 26-July 1 (2005), Kos, Greece.

36. "Green's function for a single scatterer", J. S. Faulkner, Y. Wang, A. Rusanu and G. M. Stocks, International Symposium and Workshop on Electron Correlations and Materials Properties of Alloys and Compounds, 9-13 July, Porto Heli, Greece.

SEMINARS

1. The University of Florida, Gainesville, Florida, December 1960.

2. The Oak Ridge National Laboratory, Oak Ridge, Tennessee, April 1962.

3. The Tennessee Academy of Science Meeting, Tusculum College, Johnson City, Tennessee, April 1964.

4. Florida Atlantic University, Boca Raton, Florida, April 1965.

5. The Ohio State University, Columbus, Ohio, April 1966.

6. Auburn University, Auburn, Alabama, December 1967.

7. The University of Georgia, Athens, Georgia, March 1968.

8. The University of Tennessee, Knoxville, Tennessee, April 1968.

9. Florida Atlantic University, Boca Raton, Florida, June 1968.

10. The University, Sheffield, England, November 1968.

11. The University, Leeds, England, February 1969.
12. The University, Sheffield, England, (2 seminars) February 1969.
13. The University, Athens, Greece, March 1969.
14. Aarhus University, Aarhus, Denmark, April 1969.
15. Chalmers Institute of Technology, Gothenburg, Sweden, (2 seminars) April 1969.
16. Norwegian Technical University, Trondheim, Norway, (2 seminars) April 1969.
17. Technical University of Helsinki, Otaniemi, Finland, April 1969.
18. University of Turku, Turku, Finland, April 1969.
19. University of Oulu, Oulu, Finland, April 1969.
20. Universito Degli Studi-Romo, Rome, Italy, May 1969.
21. Universito de Pisa, Pisa, Italy, May 1969.
22. Katholieke Universitiet, Nijmegen, Netherlands, May 1969.
23. Der Vrije Universitiet, Amsterdam Netherlands, May 1969.
24. Aerospace Research Laboratory, Dayton, Ohio, December 1969.
25. Battelle Memorial Institute, Columbus, Ohio, January 1970.
26. Florida Atlantic University, Boca Raton, Florida, February 1970.
27. The Oak Ridge National Laboratory, Oak Ridge, Tennessee, March 1970.
28. The University of Louisville, Louisville, Kentucky, November 1970.
29. Aerospace Research Laboratory, Dayton, Ohio, April 1971.
30. The Louisiana State University, Baton Rouge, Louisiana, October 1972.
31. The Oak Ridge National Laboratory, Oak Ridge, Tennessee, April 1973.
32. The Oak Ridge National Laboratory, Oak Ridge, Tennessee, March 1974.
33. The Los Alamos Scientific Laboratory, Los Alamos, New Mexico, July 1981.
34. John Hopkins University, Baltimore, Maryland, November 1981.

35. The Oak Ridge National Laboratory, Oak Ridge, Tennessee, August 1982.
36. Henry Krumb School of Mines, Columbia University, New York, New York, November 1983.
37. North Carolina State University, Raleigh, North Carolina, March 1984.
38. University of Bristol, United Kingdom, July 1985.
39. Institut fuer Festkoerperforschung der Kernforschungsanlage, Juelich, West Germany, May and June 1985.
40. Max Planck Institut fuer Festkoerperforschung, Stuttgart, West Germany, October 1985.
41. Technische Universitaet, Vienna, Austria, October 1985.
42. Institut fuer Nukleare Festkoerperforschung, Kernforschungszentrum, Karlsruhe, West Germany, January 1986.
43. SERC Daresbury Laboratory, Warrington, United Kingdom, February 1986.
44. The National Technical University of Athens, Greece, April 1986.
45. Materials Laboratory, General Electric Research Laboratory, Schenectady, N. Y., October 14, 1986.
46. Physics Department, University of Miami, November 6, 1986.
47. Naval Research Laboratory, November 13, 1986.
48. Materials Research Laboratory, University of Florida, February 5, 1987.
49. MARTECH, Florida State University, February 20, 1987.
50. Pratt-Whitney Research Center, October 19, 1987.
51. Broward Section, IEEE, Dania, March 10, 1988.
52. Physics Department, University of Florida, September 26, 1988.
53. Sigma Xi, Florida Atlantic University, October 10, 1989.
54. Physics Department, University of Miami, December 21, 1989.
55. Foundation for Research and Technology-Hellas, Crete, June 28, 1990.
56. Physics Department, University of Athens, Greece, July 4, 1990.

57. Physics Department, University of Athens, Greece, August, 1991 .
58. Physics Department, Polytechnical University of Greece, June, 1992.
59. Physics Department, University of Crete, Heraklion, Crete, Greece, July, 1992.
60. Physics Department, Florida Atlantic University, Florida, March, 1993.
61. Physics Department, University of Athens, Greece, June, 1994.
62. Physics Department, Florida Atlantic University, Florida, February, 1995.
63. Physics Department, Florida Atlantic University, Florida, September, 1995.
64. Physics Department, Florida Atlantic University, Florida, September, 1999.
65. Physics Department, Florida Atlantic University, Florida, September, 2002.
66. Physics Department, Florida Atlantic University, Florida, November, 2012

CONTRIBUTED TALKS

1. "Electron Energy Bands of One-Dimensional Random Alloys." J. S. Faulkner and J. Koringa, APS Meeting, Washington, D.C., April 1959.
2. "One-Dimensional Random Alloys," J. S. Faulkner, Washington Meeting of American Physical Society, April 27-30, 1964.
3. "Development in the Band Theory of Disordered Systems," J. S. Faulkner, Meeting of the Southeastern Section of American Society, Charlottesville, Virginia, November 1, 1965.
4. "Korringa-Kohn-Rostoker Band Theory Calculations," H. W. Joy, J. S. Faulkner, and H. L. Davis, International Symposium on Atomic Molecular and Solid State Theory arranged by University of Florida, Sanibel Island, Florida, January 16-21, 1967.
5. "Detailed Band Theory Calculations on Metallic Copper Using a Constant Energy Search," H. L. Davis, H. W. Joy, and J. S. Faulkner, American Physical Society Meeting, New York, January 30-February 2, 1967.
6. "Energy Band Calculations Using the KKR Method," J. S. Faulkner, H. L. Davis, and H. W. Joy, American Physical Society Meeting, Chicago, Illinois, March 27-30, 1967.

7. "Effect of Hydrostatic Pressure on the Fermi Surface of Metallic Copper," H. L. Davis, H. W. Joy, and J. S. Faulkner, American Physical Society Meeting, Washington, D.C., April 24-27, 1967.
8. "Constant Energy Surface for Aluminum by the Korringa-Kohn-Rostoker Method," J. S. Faulkner and H. L. Davis, American Physical Society Meeting, Berkeley, California, March 18-21, 1968.
9. "Effect of Uniaxial Tension on the Fermi Surface of Metallic Copper," H. L. Davis and J. S. Faulkner, American Physical Society Meeting, Berkeley, California, March 18-21, 1968.
10. "Two Particle Scattering Terms in Perturbation Theory of Electronic States in Disordered Systems," J. S. Faulkner, American Physical Society Meeting, Dallas, Texas, March 23-26, 1970.
11. "A Simple Method for Symmetrizing KKR Band Theory Calculations," J. S. Faulkner, Meeting of the American Physical Society, Cleveland, Ohio, March 29-April 1, 1971.
12. "Adding Group Theory to KKR Band Theory Programs for FCC and BCC Structures," J. S. Faulkner and P. W. Milonni, International Symposium on Quantum Chemistry and Solid State Physics, Sanibel Island, Florida, January 1972.
13. "Electronic Densities of States of Ag-Pd Alloys Using the Coherent Potential Approximation," G. M. Stocks, R. W. Williams, and J. S. Faulkner, Ninth Annual Solid State Physics Conference, Manchester, England, January 4-6, 1972.
14. "Electronic Densities of States of Ag-Pd Alloys," G. M. Stocks, R. W. Williams, and J. S. Faulkner, American Physical Society Meeting, Atlantic City, New Jersey, March 27-30, 1972.
15. "Comments on the Coherent Potential Approximation for Dilute Alloys," J. S. Faulkner, American Physical Society Meeting, Atlantic City, New Jersey, March 27-30, 1972.
16. "KKR Band Structure Calculations for Complex Crystals," J. S. Faulkner, American Physical Society Meeting, San Diego, California, March 19-22, 1973.
17. "Studies on Disordered Systems Using Clusters of Muffin Tin Potentials," J. S. Faulkner, G. S. Painter, W. H. Butler, and W. A. Coghlan, Conference on Disordered Metallic Systems, Strasbourg, France, September 10-15, 1973.
18. "Electronic States of Sub-Stoichiometric Compounds," J. S. Faulkner, G. S. Painter, and W. H. Butler, American Physical Society Meeting, Philadelphia, March 25-28, 1974.

19. "Multiple Scattering Cluster Calculations of the Densities of States of Some Transition Metal Compounds," G. S. Painter, J. S. Faulkner, W. H. Butler, and W. A. Coghlan, American Physical Society, Philadelphia, March 25-28, 1974.
20. "Electronic States of Sub-Stoichiometric Compounds and Application to Palladium Hydride," J. S. Faulkner, American Physical Society Meeting, Denver, Colorado, March 31-April 3, 1975.
21. "Exact Spectral Density Function for a One-Dimensional Model of an Amorphous Solid," D. G. Hall and J. S. Faulkner, International Conference on Structures and Excitations of Amorphous Solids, Williamsburg, Virginia, March 25-27, 1976; American Physical Society Meeting, Atlanta, March 29-April 1, 1976.
22. "A Band Theory Calculation of the Fermi Surface of Technetium," J. S. Faulkner, American Physical Society Meeting, Atlanta, March 29-April 1, 1976.
23. "Spectral Density Functions for Amorphous Systems," D. G. Hall and J. S. Faulkner, Conference on Neutron Scattering, Gatlinburg, Tennessee, June 6-10, 1976.
24. "Krein's Theorem and Cluster Calculations," J. S. Faulkner, American Physical Society Meeting, Washington, D. C., March 27-30, 1978.
25. "Linearizing the KKR Band Theory Equation," J. S. Faulkner, American Physical Society Meeting, Chicago, Illinois, March 18-22, 1979.
26. "Electrical and Thermal Resistivities: Solutions to the Boltzmann Equation for Electrons in Metals," F. J. Pinski, P. B. Allen, W. H. Butler, and J. S. Faulkner, Poster Session, American Physical Society, Columbus, Ohio, October 8-9, 1979.
27. "New Formulas for Calculating Properties with the KKR-CPA: Algebraical," J. S. Faulkner and G. M. Stocks, American Physical Society, New York, March 24-28, 1980.
28. "New Formulas for Calculating Properties with the KKR-CPA: Numerical," G. M. Stocks and J. S. Faulkner, American Physical Society, New York, March 24-28, 1980.
29. "Pivoted Multiple-Scattering Equations and Band Theory," J. S. Faulkner, American Physical Society, Phoenix, Arizona, March 16-20, 1981.
30. "Pivoted Multiple-Scattering Equations and Band Theory Including the Shape of the Unit Cell," J. S. Faulkner, American Physical Society, Dallas, Texas, March 8-12, 1982.
31. "Non-Muffin-Tin Effects in Transition Metals," D. M. Nicholson and J. S. Faulkner, American Physical Society, Detroit, Michigan, March 26-30, 1984.
32. "An Algebraic Improvement to the Quadratic KKR Formalism," J. S. Faulkner and D. M. Nicholson, American Physical Society, New Orleans, Louisiana, March 21-25, 1988.

33. "Study of Crystal Impurities with the Quadratic KKR Method," A. N. Andriotis and J. S. Faulkner, Fourth Panhellenic Conference on Solid State Physics, Athens, Greece, September 20-23, 1988 Proceedings p. 435.
34. "Impurity Calculations Based on the Quadratic-Korringa-Kohn-Rostoker Formalism," J. S. Faulkner and A. N. Andriotis, American Physical Society, Saint Louis, Missouri, March 20-24, 1989.
35. "The growth habits of the polycrystalline Y-Ba-Cu-O superconductors". Th. Leventouri, M. Calamiotou, V. Perdikatsis and J. S. Faulkner, American Physical Society, Saint Louis, Missouri, March 20-24, 1989.
36. "The Quadratic Korringa-Kohn-Rostoker Band Theory Method Applied to Complex Lattices," J. S. Faulkner, Y. Wang, E. A. Horvath, and D. M. Nicholson, American Physical Society, Anaheim, California, March 12-16, 1990.
37. "New Studies of the Bulk Orientation in the YBCO Superconductor." Th. Leventouri, E. Liarokapis, J. S. Faulkner, F. D. Medina, L. Martinez, M. Calamiotou, V. Perdicsis, B. D. Landreth, Y. S. Hascicek and L. R. Testardi. Bull. of the APS, **35**, No 3, 632, (1990).
38. "Studies of the Bulk Orientation in Y and Bi superconducting phases" Th. Leventouri, O. Papageorgiou, E. Liarokapis, J. S. Faulkner, H. Lu, M. Calamiotou, N. Guskos, L. Martinez, V. Perdicsis, B. D. Landreth. Garmisch-Partenkirchen, May 9-11, 1990: ICMC 90 Topical conference. High-temperature superconductors.
39. "Structure and Properties of Bulk Oriented $\text{YBa}_2\text{Cu}_3\text{O}_x$ " Th. Leventouri, E. Liarokapis, J. S. Faulkner, M. Calamiotou, V. Perdicsis, Y. S. Hascicek, L. D. Testardi. Strasburg, France, May 29-June 1, 1990: European MRS Spring meeting.
40. "Bulk Texture Detection by Raman Spectroscopy", DARPA workshop on 'HTS Bulk Technology Development: Formulating a Strategy Leading to Defense and Commercial Applications.' Santa Fe, New Mexico, January 31-February 1, 1991.
41. "Accelerating the quadratic Korringa-Kohn-Rostoker Band Theory Method" E. A. Horvath, J. S. Faulkner and D. M. Nicholson, American Physical Society, Cincinnati, Ohio, March 18-22, 1991.
42. "Applications of the quadratic Korringa-Kohn-Rostoker method to band theory calculations for complex crystals" Y. Wang, J. S. Faulkner, and D. M. Nicholson, American Physical Society, Cincinnati, Ohio, March 18-22, 1991.
43. "Calculations on the single-site potential for the Korringa-Kohn-Rostoker coherent potential approximation from an extended Green's function." Y. Wang, J. S. Faulkner, G. M. Stocks, and D. M. Nicholson, American Physical Society, Indianapolis, Indiana, March 16-20, 1992.

44. "The Direct Monte Carlo Method for Calculating Alloy Phases," J. S. Faulkner, Eva. A. Horvath, Yang Wang, and G. M. Stocks, NATO-ASI, Rhodes Greece, June 21-July 3, 1992.
45. "Impurity calculations with the quadratic Korringa-Kohn-Rostoker band theory technique," A. N. Andriotis, J. S. Faulkner, and Yang Wang, European Research Conference on "ELECTRONIC STRUCTURE OF SOLIDS: At the Computational Leading Edge," Clare College, Cambridge, Sept. 12-17, 1992.
46. "Upologismoiv se crustuvllou" me prosmeivxei" me thn deutero Bavqmia prosevggish th" meqovdon tw n Korringa-Kohn-Rostoker," A. N. Andriotis, J. S. Faulkner, and Yang Wang, VII Panhellenic Conference on Solid State Physics, Sept. 23-26, 1992, Ioannina, Greece.
47. "The scattering matrices for a non-spherical scalar-relativistic potential," J. S. Faulkner, American Physical Society, Pittsburgh, Pennsylvania, March 21-25, 1994.
48. "Observations on the Screened Korringa-Kohn-Rostoker Method," Nassrin Y. Moghadam, G Malcolm Stocks, B. Ujfalussy, J. S. Faulkner, American Physical Society, Detroit, March 17-21, 1997.
49. "Calculations with the Polymorphous Coherent Potential Approximation (PCPA)" J. S. Faulkner *Alloy Research Center and Department of Physics, Florida Atlantic University, Boca Raton, FL 33431*, B. Ujfalussy, N. Y. Moghadam, and G. M. Stocks *Metals and Ceramics Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37830*, Yang Wang, *Pittsburgh Supercomputing Center, Pittsburgh, PA 15213*. American Physical Society, Atlanta, GA, March 20-26, 1999

TECHNICAL REPORTS

1. "The form of Exact Solutions to Schroedinger's Equation and Problems in Magnetism," J. S. Faulkner, Report 29, Quantum Theory Project, Gainesville, Florida (August 1962).
2. "A Note on the Variational Principle," J. S. Faulkner, Report 33, Quantum Theory Project, Gainesville, Florida (November 1962).
3. "Adding Group Theory to KKR Band Theory Programs for FCC and BCC Structures," J. S. Faulkner and P. W. Milonni, ORNL-TM-3589 (November 1971).
4. "Theoretical Studies of Metallic Alloys," Progress Report, June 1989-December 1989. J. S. Faulkner and L. T. Wille, DOE/ER/ 45392-1.
5. "Theoretical Studies of Metallic Alloys," Progress Report, January 1990-December 1990. J. S. Faulkner and L. T. Wille, DOE/ER/ 45392-2.

6. "Theoretical Studies of Metallic Alloys," Progress Report, June 1, 1989 - July 24, 1991. J. S. Faulkner and L. T. Wille, DOE/ER/ 45392-3.
7. "Total energy calculations for metals, alloys, and ceramics," Yang Wang, G. M. Stocks, D. M. Nicholson, and J. S. Faulkner, Final report for SURA/ORAU/ORNL summer cooperative program, 1991.
8. "Total energy and phase diagram calculations for binary alloys," Yang Wang, J. S. Faulkner, G. M. Stocks, and D. M. Nicholson, Final report for SURA/ORAU/ORNL summer cooperative program, 1992.
The Polymorphous Coherent Potential Approximation:
A New Theory for Metallic Alloys
9. "The Polymorphous Coherent Potential Approximation: A New Theory for Metallic Alloys," J. S. Faulkner, Final report for SURA/ORAU/ORNL summer cooperative program, 2001.
10. "Studies Leading to a New Theory for Metallic Alloys," J. S. Faulkner, Final report for SURA/ORAU/ORNL summer cooperative program, 2002.
11. "Electronic and Structural Properties of Metallic Alloys," J. S. Faulkner, Final report for SURA/ORAU/ORNL summer cooperative program, 2003.
11. "Electronic and Structural Properties of Metallic Alloys," J. S. Faulkner, Final report for SURA/ORAU/ORNL summer cooperative program, 2004.