

RESUME

GREGORY KOZLOWSKI

Business address

Wright State University, Physics Department
Dayton, Ohio 45435
(937) 775-3433

CAREER OBJECTIVES (academic or research)

Research
MATERIALS SCIENCE
MAGNETISM AND SUPERCONDUCTIVITY

Teaching
PHYSICS, MATERIALS SCIENCE, THEORETICAL PHYSICS AND MATHEMATICS

EDUCATION

M.Sc. PHYSICS, WROCLAW UNIVERSITY, WROCLAW, POLAND (1964).

Ph.D. PHYSICS, POLISH ACADEMY OF SCIENCES, WROCLAW, POLAND (1969).

D.Sc. PHYSICS, WROCLAW UNIVERSITY, WROCLAW, POLAND (1975).

CAMBRIDGE UNIVERSITY, DEPARTMENT OF METALLURGY AND MATERIALS
SCIENCE, ENGLAND (1976-1977).

PERSONAL DATA

Born September 17, 1942 in Uhnów, Poland
Married (wife-Urszula), three children
(daughter - Dominika 33, son - Peter 28, step-son – Scott 21)
Excellent health.

IMMIGRATION STATUS

US Citizen.

PROFESSIONAL EXPERIENCE

1989 to 1999

AFRL/PRPS, MLPO and MLMR, WRIGHT-PATTERSON AFB, DAYTON, OHIO 45433
NRC Senior Fellow (1989-92), Senior Research Scientist (1993-97), IPA (1997-99)
Duties include research in superconductivity [critical current density, pinning, microstructure (X-ray diffraction pattern analysis, SEM, metallurgical optical microscopy), preparation of new materials (bulk, tape, wires), measurements of mechanical properties (e.g., Young modulus, toughness), magnetic measurements (d.c. magnetization, a.c.susceptibility), relaxation effects].

WRIGHT STATE UNIVERSITY, PHYSICS
DEPARTMENT, DAYTON, OHIO 45435
Adjunct and Research Associate Professor : Duties include teaching undergraduate and graduate courses. Supervisor of 6 M.Sc. theses.

1988 to 1989 - UNIVERSITY OF HOUSTON,
DEPARTMENT OF MECHANICAL ENGINEERING,
HOUSTON, TEXAS 77004
Senior Research Scientist: Duties include research in superconductivity (critical current density, surface resistance, pinning, microstructure, ac losses in high temperature superconductors, preparation of new materials and measurements of its mechanical properties).
Supervisor of 1 M.Sc. thesis.

1984 to 1988 - WAGNER COLLEGE
Assistant Professor: Duties include teaching higher level undergraduate courses (physics, mathematics, and computer applications) and research (fundamental properties of superconductors and magnetic materials)

1983 to 1984 - DEPARTMENT OF PHYSICS, UNIVERSITY OF
ALBERTA, EDMONTON, CANADA
Distinguished Visitor and Visiting
Professor
Duties included teaching graduate level courses and research (coexistence of

superconductivity and magnetism, magneto-resistance of antiferromagnets)

1968 to 1983 - POLISH ACADEMY OF SCIENCES, INSTITUTE FOR LOW TEMPERATURE AND STRUCTURE RESEARCH, WROCLAW, POLAND

Professor

Research (magnetic domain structure, phase transitions in magnetic materials, materials studies-magnets and superconductors, surface impedance and ac-losses in superconductors, technology of superconducting wires and applications of quantum magnetometers to medicine and geology), teaching graduate level courses.

Supervisor of 10 M.Sc. and 6 Ph.D. theses, member of international committees, chairman of international conferences, chairman of Superconductivity Department (1978-1983).

1964 to 1968 - UNIVERSITY OF WROCLAW, INSTITUTE OF PHYSICS, WROCLAW, POLAND

Graduate Teaching Assistant

Duties included teaching undergraduate and graduate level courses, student counseling, grading exams and related academic responsibilities.

OTHER EXPERIENCE

- 1981 Kernforschungszentrum Karlsruhe,
Karlsruhe, Germany
- Centre de Recherches sur les Tres Basses
Temperatures, CNRS, Grenoble, France
Visiting Professor: Superconductivity
- 1985 Ames Laboratory, Ames, Iowa 50011
Visiting Professor: Superconductivity
- 1987 Polytechnic University, Department of
Physics, Brooklyn, NY 11201
Visiting Scholar: Superconductivity
(August) - Dr. E.L. Wolf
- 1988 University of Houston, Department of
Physics, Houston, TX 77004
Visiting Scholar: Superconductivity
(January) - Dr. P. Chu.

PUBLICATIONS – 100 papers in refereed journals and proceedings.

PATENTS AND INVENTIONS - Shielded-core reactor fault current limiter: AF INV 20179.

Process of making neodymium gallate as a surface barrier for melt-processed YBCO conductor with nickel sheath: AF INV.

Process for transforming pure 211 into a superconducting matrix of 123 with fine and homogeneously dispersed 211 inclusions: US Patent no. H1399.

MAJOR AWARDS - Polish National Prize 1981.

COMPUTER LANGUAGES - BASIC, FORTRAN, PASCAL, C.

FOREIGN LANGUAGES - Polish, Russian.

PROFESSIONAL ORGANIZATIONS

American Physical Society
The New York Academy of Sciences
Materials Research Society.

Prof. Dr. G. Kozlowski

LIST OF PUBLICATIONS

1. **Kozlowski G., Zietek W.J.,**
Theoretical determination of domain width of simple-honeycomb domain structures.
J. Appl. Phys., 36, 2162 (1965).
2. **Kozlowski G., Zietek W.J.,**
On the stability of certain models of regular domain structures of uniaxial ferromagnets.
Acta Phys. Polon., 39, 261 (1966).
3. **Kozlowski G., Matlak M.,**
Molecular field approximation for ferromagnets with monoionic anisotropy.
Acta Phys. Polon., 31, 759 (1967).
4. **Klamut J., Kozlowski G.,**
The influence of the domain structure on the transition temperature in uniaxial ferromagnets.
Proc. Phys. Soc., 93, 517 (1967).
5. **Klamut J., Kozlowski G.,**
Local transition temperatures for magnetic crystals with domain structure.

Acta Phys. Polon., 33, 743 (1968).

6. **Kozłowski G.,**
The influence of the domain structure on the Curie temperature in uniaxial ferromagnets with monoionic anisotropy.
Bull. Acad. Polon. Sci., Ci III, 16, 245 (1968).
7. **Klamut J., Kozłowski G.,**
The influence of the temperature on the Bloch wall thickness.
Acta Phys. Polon., 35, 966 (1968).
8. **Kozłowski G., Biegala L., Krzeminski S.,**
The approximate ground state of two-sublattice uniaxial ferri- and antiferrimagnets with transversal magnetic field.
Acta Phys. Polon., A39, 417 (1971).
9. **Kozłowski G.,**
The influence of the field direction on the magnetic phases of a uniaxial two-sublattice antiferromagnet.
I. Ground states energies, critical fields and magnetizations.
Acta Phys. Polon., A43, 333 (1971).
10. **Kozłowski G., Zietek W.J., Zietak K.,**
Theory of the thickness-dependence of the domain width in regular layer-like domain structures of uniaxial ferromagnets.
Acta Phys. Polon., A43, 87 (1972).
11. **Kozłowski G.,**
The stability of the field-induced magnetic phase of a uniaxial antiferromagnet at zero temperature.
Phys. Lett., 35A, 359 (1971).
12. **Biegala L., Kozłowski G.,**
Effective formula for the spin-wave-vacuum energy correction in magnetic crystals with equivalent sublattices.
Phys. Lett., 43A, 185 (1972).
13. **Kozłowski G.,**
Influence of the field direction on the phase diagram of uniaxial antiferromagnets.
International Conference on Magnetism, 22-28 August 1973, Moscow, USSR.
14. **Kozłowski G.,**
The influence of the field direction on the magnetic phases of a uniaxial two-sublattice antiferromagnet.
II. Magnetic susceptibilities and phase transitions.
Acta Phys. Polon., A46, 565 (1974).
15. **Kozłowski G.,**
Influence of the field direction on the spin wave energy spectrum of a uniaxial two-sublattice antiferromagnet.
Acta Phys. Polon., A47, 183 (1975).
16. **Kozłowski G.,**
Influence of the field direction on the thermodynamic properties of a uniaxial two-sublattice antiferromagnet. I. General formulae.
Acta Phys., Polon., A47, 493 (1975).

17. **Kozłowski G.,**
Influence of the field direction on the thermodynamic properties of a uniaxial two-sublattice antiferromagnet. II. Thermodynamic calculations.
Acta Phys. Polon., A48, 201 (1975).
18. **Kalva Z., Kozłowski G., Veltrusky I.,**
Spin waves and magnetocaloric effect in two-sublattice antiferromagnet.
Phys. Lett., A57, 75 (1976).
19. **Kozłowski G., Prystasz W.,**
Influence of the field direction and single-ion anisotropy on the phases diagram of a uniaxial antiferromagnet.
Comm. on Phys., 3, 9 (1977).
20. **Kalva Z., Veltrusky I., Biegala L., Kozłowski G.,**
Spin waves and magnetocaloric effect in two-sublattice antiferromagnet.
Czech. J. Phys., A38, 183-191 (1978).
21. **Krzyszton T., Kozłowski G., Tekiel P.,**
Influence of the superconductivity on the critical magnetic fields in a uniaxial antiferromagnet.
Acta Phys. Polon., A56, 31 (1979).
22. **Krzyszton T., Kozłowski G., Tekiel P.,**
Surface impedance of antiferromagnetic superconductor.
Phys. Lett., A73, 41 (1979).
23. **Kozłowski G., Tekiel P.,**
Distribution of the current density in the cylindrical sample of the type II superconductor.
Phys. Lett., A69, 451 (1979).
24. **Kasperczyk J., Kozłowski G., Tekiel P.,**
Magnetic induction vector in ferromagnetic superconductor with domain structure.
Phys. Lett., A71, 273 (1979).
25. **Kasperczyk J., Kozłowski G., Romejko H., Tekiel P.,**
Domain structure parameters in a uniaxial ferromagnetic superconductor.
Acta Phys. Polon., A57, 17 (1980).
26. **Kozłowski G., Tekiel P., Zaleski A. J.,**
Current distribution in type II superconductor with normal inclusions.
Phys. Stat. Sol., (a), 59, K75 (1980).
27. **Ciszek M., Kozłowski G., Tekiel P., Gijsbertse E.A., van de Klundert L.J.H.,**
A.c. loss minimum in type II superconductors.
Phys. Lett., A77, 271 (1980).
28. **Prystasz W., Kozłowski G.,**
The influence of a homogeneous external magnetic and single-ion orthorhombic anisotropy on the stable spin configurations in the two-sublattice Neel-type antiferromagnet.
Acta Phys. Polon., A57, 205 (1980).
29. **Kozłowski G., Krzyszton T., Tekiel P.,**
Lower critical field of type II antiferromagnetic superconductor.
Phys. Stat. Sol., (b), 133, K23 (1980).

30. **Kozłowski G., Tekiel P.,**
Influence of transport current on change of order parameter in type II superconductors near H_{c2} .
Phys. Stat. Sol., (b), 98, K163 (1980).
31. **Kozłowski G., Krzyszton T., Tekiel P.,**
Behaviour of antiferromagnetic superconductor near H_{c1} .
Ternary Superconductors, eds. Shenoy, Dunlap, Fradin; Elsevier North Holland, Inc.; 275-276 (1981).
32. **Kasperczyk J., Kozłowski G., Tekiel P.,**
Coexistence of magnetic domain structure and superconductivity.
Ternary Superconductors, eds. Shenoy, Dunlap, Fradin; Elsevier North Holland, Inc.; 281 (1981).
33. **Ciszek M., Kozłowski G., Tekiel P.,**
Occurrence of a.c. loss minimum in type II superconductors.
Phys. Stat. Sol., (a) 64, K35 (1981).
34. **Ciszek M., Kozłowski G., Tekiel P.,**
Influence of surface layer and trapped flux on minimum a.c. losses in superconductors.
IEEE Trans. on Magn., Mag-17, 975 (1981).
35. **Kasperczyk J., Kozłowski G., Tekiel P.,**
Mixed-state in type II ferromagnetic superconductor.
Sol. State Commun., 44, 663 (1982).
36. **Kozłowski G., Rogacki K.,**
Magnetocaloric effect and spin waves in two-sublattice antiferromagnetic superconductors.
Phys. Stat. Sol., (b) 114, K5-K9 (1982).
37. **Kopec T.K., Kozłowski G.,**
On the zero-temperature critical behaviour of the quantum X-Y model in a transverse magnetic field.
Phys. Lett. 95A, 104 (1983).
38. **Kopec T.K., Kozłowski G.,**
On the multi-critical behavior of a ferromagnetic superconductor.
J. Phys. F: Met. Phys. 13, L137 (1983).
39. **Sulkowski C., Rogacki K., Kolodziejczyk A., Kozłowski G., Chmista J.,**
Magnetoresistance and critical field measurements on the magnetic superconductors Y_4Co_3 .
J. Phys. F: Met. Phys. 13, 2147 (1983).
40. **Kopec T.K., Kozłowski G.,**
Fluctuation-induced first order phase transition in ferromagnetic superconductors.
J. Phys. F.: Met. Phys. 14, 2649 (1984).
41. **Matsumoto H., Umezawa H., Whitehead J.P., Kozłowski G.,**
Magnetism and superconductivity.
Physica 136A. 354-360 (1984).
42. **Ali Naushad, Woods S.B., Kozłowski G., Rojek A.,**
Magnetoresistance of GdRhSn.
J.Phys. F: Met. Phys. 15, 155-160 (1985).
43. **Kozłowski G., Matsumoto H., Umezawa H., Whitehead J.P., Mancini F., Huang C.Y., Olsen C.E., Maple M.B., Hamaker H.C., Torikachvili M.S.,**

- Anomalies in the surface impedance penetration depth in ferromagnetic superconductors.
Sol. State Commun. 54, 221-225 (1985).
44. **Ali Naushad, Woods S.B., Kozłowski G., Rojek A.,**
Resistivity and magnetoresistance of superconducting $\text{YbRh}_{1.4}\text{Sn}_{4.6}$.
J. Phys. F: Met. Phys. 15, 1547-1554 (1985).
 45. **Kozłowski G., Matsumoto H., Umezawa H., Teshima R., Whitehead J.P., Rogacki K.,**
Magneto-caloric effect in ferromagnetic superconductor.
Sol. State Commun. 54, 679-682 (1985).
 46. **Kozłowski G., Ali Naushad, Woods S.B., Rojek A.,**
Magnetoresistance of antiferromagnet with uniaxial anisotropy.
Sol. State Commun. 54, 249-251 (1985).
 47. **Rogacki K., Poppe U., Pobell F., Kozłowski G.,**
Magneto-caloric effect in antiferromagnetic superconductors.
Sol. State Commun. (1986).
 48. **Rojek A., Sulkowski C., Zygmunt A., Kozłowski G.,**
Low-temperature properties of antiferromagnetic Gd-Rh-Sn compound.
phys.stat.sol.(b) 134, 125-129 (1986).
 49. **Ali Naushad, Datars W.R., Kozłowski G., Woods S.B.,**
Resistivity and Hall effect in Y-Co.
J.Phys.F: Met. Phys. 17, 143-151 (1987).
 50. **Hou M.K., Huang C.Y., Maple M.B., Torikachvili M.S., Kozłowski G.,**
Penetration depths of antiferromagnetic superconductors: Nd-Rh-B and Sm-Rh-B.
Sol. State Commun. 65, 895-897 (1988).
 51. **Berg P., Kozłowski G.**
Numerical calculations of imaginary susceptibility in the intergrain region of granular superconductors.
Modern Phys. Lett. 3, 1163 (1989).
 52. **Kozłowski G., Chen X.Y.,**
Hysteretic ac losses in high-temperature superconductors.
Appl.Phys.Lett. 54, 386-388 (1989).
 53. **Kozłowski G., Maartense I., Spyker R.L., Leese R.E., Oberly C.E.,**
Critical current density enhancement in Y-Ba-Cu-O -silver composite superconductor.
Physica C 173, 195 (1991).
 54. **Kozłowski G., Rele S., Lee D.F., Salama K.,**
Grain growth enhancement in silver doped Y-Ba-Cu-O superconductor.
J.Mater.Sci.36, 1056 (1991).
 55. **Ciszek M., Tekiel P., Kozłowski G.,**
Influence of surface layer on AC losses minimum in type II superconductor.
Supercond.Sci.Technol. 1, 360 (1989).
 56. **Oberly C.E., Kozłowski G., Gooden C.E., Lenard R.X., Sarkar A.K., Maartense I., Ho J.C.,**
Principles of application of high temperature superconductors to electromagnetic launch technology.
IEEE Transactions on Magnetics, 27, 509-514 (1991).

57. **Sarkar A.K., Kozlowski G., Maartense I.,**
Superconductive properties of the Y-Ba-Cu-O superconductor.
J.Am.Ceram.Soc.73, 3110 (1990).
58. **Kozlowski G., Sarkar A.K., Maartense I., Spyker R.L., Leese R.E., Oberly C.E.,**
Enhancement of flux pinning by non-superconducting precipitates in the Bi-Pb-Sr-Ca-Cu-O system.
Physica C (1991).
59. **Chelluri B., Barber J., Johnson D., Clements N., Spyker R.L., Sarkar A.K., Kozlowski G.,**
High-temperature superconducting vector switch.
J.of Appl.Phys. 69, 4910-4912 (1991).
60. **Kozlowski G., Sarkar A.K., Oberly C.E., Spyker R.L., Maartense I., Leese R.E., Ho J.C.,**
Metal-clad superconducting tapes with high critical current density in the YBCO and BPSCCO systems.
Proceedings of the 26th IECEC91 Conference 4, 509 (1991).
61. **Kozlowski G., Oberly C.E., Maartense I., Leese R.E., Ho J.C.,**
Bi-based high temperature superconducting tapes by cold rolling method.
IEEE Transactions on Magnetics 37, 890-893 (1991).
62. **Kozlowski G., Oberly C.E., Ho J.C., Leese R.E.,**
Aspects of forming metal clad melt-processed Y-Ba-Cu-O tapes.
IEEE Transactions on Magnetics 37, 901-904 (1991).
63. **Kenny N., Shrout T.R., Rodriguez F., Oberly C.E., Kozlowski G., Maartense I., Spyker R.L., Ho J.C.,**
Evaluation of Y-Ba-Cu-O tubes prepared by tape casting and subsequent rate-controlled sintering.
Proceedings of the 26th IECEC91 Conference 4, 493 (1991).
64. **Spyker R.L., Kozlowski G., Oberly C.E.,**
Measurement of transport critical current of Y-Ba-Cu-O using inductive method.
IEEE Transactions on Magnetics 37, 1093-1095 (1991).
65. **Spyker R.L., Kozlowski G., Oberly C.E., Leese R.E.,**
Impedance change measurements of a superconducting shielded-core reactor.
Proceedings of the 26th IECEC91 Conference 4, 560 (1991).
66. **Kozlowski G., Oberly C.E., Leese R.E., Ho J.C.,**
Melt-processed YBCO/Ag composite tapes with nickel cladding.
Advances in Cryogenic Engineering (Materials), 38A, 859 (1992).
67. **Kozlowski G., Hansley D., Oberly C.E., Ho J.C., Cao X.W., Spyker R.L., Leese R.E.,**
Systematic study of Ni-doping effect on melt-processed YBCO superconductor.
Advances in Cryogenic Engineering (Materials), 38A, 977 (1992).
68. **Spyker R.L., Kozlowski G., Oberly C.E., Leese R.E.,**
Characterization of a superconducting shielded-core reactor.
Advances in Cryogenic Engineering, 37A, 481 (1991).
69. **Kozlowski G., Sarkar A.K., Oberly C.E., Spyker R.L., Maartense I., Peterson T.L., Ho J.C.,**
Study of relaxation effects in the lead-doped Bi-Sr-Ca-Cu-O system.
Advances in Cryogenic Engineering (Materials), 38A, 1147 (1992).

70. **Spyker R.L., Kozlowski G., Oberly C.E., Ho J.C.,**
Study of magnetic flux trapped in YBCO+5wt%Ag superconducting composite.
Advances in Cryogenic Engineering (Materials), 38A, 973 (1992).
71. **Ho J.C., Wu C.Y., Kozlowski G., Oberly C.E., Spyker R.L.,**
Electrical resistivity and differential thermal analyses
of Ca-Pb-O doped Bi(Pb)-Sr-Ca-Cu-O superconductors.
Advances in Cryogenic Engineering (Materials), 38A, 1139 (1992).
72. **Oberly C.E., Kozlowski G., Fingers R.T.,**
Implications of high temperature superconductors for power generator.
Advances in Cryogenic Engineering (Materials), 38A, 479 (1992).
73. **Kozlowski G., Maartense I., Hansley D., Oberly C.E., Ho J.C.,**
Magnetic properties of melt-processed Ni-substituted YBCO.
Physica C 185-189, 2459-2460 (1991).
74. **Spyker R.L., Kozlowski G.,**
Degradation of melt-processed Y-Ba-Cu-O in the presence of moisture.
J.of Appl.Phys. 73, 6492-6494 (1991).
75. **Sarkar A.K., Tang J.Y., Cao X.W., Ho J.C., Kozlowski G.,**
Role of Ca-Pb-O during the formation of 2223 phase in the Bi(Pb)-Sr-Ca-Cu-O system.
Mat.Res.Bull. 37, 1-8 (1992).
76. **Maartense I., Sarkar A.K., Kozlowski G.,**
Effects of quenching on the superconductive properties of the YBCO(124) system.
Physica C 181, 25-29 (1991).
77. **Chelluri B., Locker J., Barber J., Kozlowski G., Spyker R.,**
High temperature superconducting vector switch.
Proceedings of the 26th IECEC91 Conference 4, 555 (1991).
78. **Kenny N., Shrout T.R., Rodriguez F., Oberly C.E., Kozlowski G., Maartense I., Spyker R.,**
Evaluation of Y-Ba-Cu-O tubes by tape casting and subsequent rate-controlled sintering.
Advances in Cryogenic Engineering (Materials), 38A, 867 (1992).
79. **Oberly C.E., Kozlowski G., Gooden C.E., Lenard R.X., Sarkar A.K., Maartense I., Ho J.C.,**
Principle of application of high temperature superconductors to electromagnetic launch technology.
80. **Chen I., Liu F., Ren Y., Weinstein R., Kozlowski G., Oberly C.E.,**
Quasi-permanent magnets of high temperature superconductor: temperature dependence.
Appl. Phys. Lett. 62, 3366-3368 (1993).
81. **Kozlowski G., Endres W.E.,**
The role of platinum in multi-processed Y-Ba-Cu-O superconductor with Y₂BaCuO₅ additions.
Advances in Cryogenic Engineering - Materials, 40A, 221 (1994).
82. **Pavate V., Williams L.B., Kvam E.P., Kozlowski G., Endres W., Oberly C.E.,**
Identification and correlation of microstructural defects with flux pinning in Ni-doped melt-textured Y-Ba-Cu-O.
Appl. Phys. Lett. 65, 246-248 (1994).
83. **Kozlowski G., Svobodny T.,**
Stability of growing front of Y-Ba-Cu-O superconductor in the presence of Pt and CeO₂ additions

Appl. Phys. Lett. 67, 288-290 (1995).

84. **Kozlowski G., Svobodny T.,**
Stability analysis of a model for the defect structure of Y-Ba-Cu-O.
Phys. Rev. B53, 9396-9399 (1996).
85. **Kozlowski G., Varanasi C., Maartense I., Oberly C.E.,**
Use of high density 211 substrates in the melt processing of Y-Ba-Cu-O bars with high transport critical current.
Physica C 276, 197-201 (1997).
86. **Fingers R.T., Kozlowski G.,**
Microstructure and magnetic properties of Fe-Co alloys.
J. of Appl.Phys. 81, 4110-4111 (1997).
87. **Varanasi C., Biggers R.R, Maartense I., Peterson T.L., Solomon J., Moser E.K., Dempsey D., Busbee J.D., Liptak D., Kozlowski G., Nekkanti R., Oberly C.E.**
YBCO-Ag thick films deposited by pulsed laser ablation.
Physics C 297, 262-268 (1998).
88. **Varanasi C., Biggers R.R, Maartense I., Dempsey D., Peterson T.L., Solomon J., McDaniel J., Kozlowski G., Nekkanti R., Oberly C.E.**
Pulsed laser deposition of Nd-doped YBCO films for coated conductor applications.
Proceedings of MRS Spring Meeting, San Francisco, CA, April 13-19, 1998.
89. **Busbee J.D., Biggers R.R., Dempsey D.V., Kozlowski G., Maartense I.**
Examination of YBCO thin films during the cooldown processing.
Proceedings of FACSS98, Austin, TX, October 11-16, 1998.
90. **Busbee J.D., Biggers R.R., Kozlowski G., Maartense I., Jones J.G., Dempsey D.V.**
Investigation of in-situ Raman spectra for the control of pulsed laser deposition of YBCO thin film superconductors.
Eng. Appl. of Artificial Intelligence, 13, 589-596 (2000).
91. **Jones J.G., Biggers R.R., Busbee J.D., Dempsey D.V., Kozlowski G.**
Image processing plume fluence for superconducting thin film depositions.
Eng. Appl. of Artificial Intelligence, 13, 597-601 (2000).
92. **Nekkanti R.M., Seetharaman V., Brunke L.B., Maartense I., Dempsey D.V., Kozlowski G., Tomich D., Biggers R.R., Peterson T.L., Barnes P.N., Oberly C.E.**
Development of nickel alloy substrates for YBCO coated conductor applications.
IEEE Transactions on Applied Superconductivity, 11, 3321-3324 (2001).
93. **Biggers R.R., Kozlowski G., Jones J., Dempsey D.V., Kleismit R.A., Maartense I., Busbee J.D., Peterson T.L.**
Process control and pulsed laser deposition of materials.
Integrated Ferroelectrics, 28, 201-211 (2000).
94. **Jones J.G., Biggers R.R., Boss N.C., Busbee J.D., Dempsey D.V., Kozlowski G.**
Image processing plume fluence for process control of pulsed-laser thin-film depositions.
Artificial Intelligence in Real-Time Control 2000. eds. I.J. Rudas and J.K. Tar, publ. Elsevier Science, 2000, p. 113-118.
95. **Feldmann D.M., Reeves J.L., Polyanskii A.A., Kozlowski G., Biggers R.R., Nekkanti R.M., Maartense I., Tomsic M., Barnes P.N., Oberly C.E., Peterson T.L., Babcock S.E., Larbalestier**

D.C.

Influence of nickel substrate grain structure on YBCO supercurrent connectivity in deformation-textured coated conductors.
Appl. Phys. Lett. 77, 2906-2909 (2000).

96. **Kim Ilwon, Barnes P.N., Goyal A., Barnett S.A., Biggers R.R., Kozlowski G., Varanasi C., Maartense I., Nekkanti R.M., Peterson T.L., Haugan T., Sambasivan S.**
Growth of YBCO thin films on TiN(001) and CeO₂-coated TiN surfaces.
Physica C, 377, 227-234 (2002).
97. **Murai K., Hori J., Fujii Y., Shaver J., Kozlowski G.**
Study of magnetic flux pinning and flux jumps for polycrystalline MgB₂.
Cryogenics (2004) - 19 pages.
98. **Kleismit R.A., Kozlowski G., Kazimierczuk M.K., Riechers R.G., Mast D.B.**
Local complex permittivity characterization of materials using evanescent microscopy.
J. of Appl. Phys. (2004) – 15 pages.
99. **Mullin P., Kozlowski G.**
Optical absorption spectra for arbitrary shaped nanoparticles.
Physica C (2004) – 7 pages.
100. **Kleismit R.A., Kozlowski G., Biggers R.R., Maartense I., Kazimierczuk M.K., Riechers R.G., Mast D.B.**
Characterization of local dielectric properties of YBCO using evanescent microscopy.
IEEE Transactions on Applied Superconductivity (2004) – 4 pages – in press.

CONFERENCE PRESENTATIONS (1999-2004)

1. **Kozlowski G., Biggers R.R., Maartense I., Peterson T.L., Dempsey D.V., Jones J.G., Busbee J.D., Kleismit R.A., Nekkanti R.M., McDaniel J., Barnes P.N., Oberly C.E., Tomsic M., White M., Sarkar A.**
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